Reference Committee D

Report(s) of the Board of Trustees

20 Guardianship and Conservatorship Reform

Report(s) of the Council on Science and Public Health

02 Addressing Social Determinants of Health Through Closed Loop Referral Systems
03 Protections Against Surgical Smoke Exposure
04 Condemning the Universal Shackling of Every Incarcerated Patient in Hospitals
06 Fragrance Regulation (Resolution 501-A-24)
07 Addressing the Health Issues Unique to Minority Communities in Rural Areas

Resolutions

401 Reducing Pickleball-Related Ocular Injuries
402 Protecting In-Person Prison Visitations to Reduce Recidivism
403 Promoting Evidence-Based Responses to Measles and Misuse of Vitamin A
404 Improving Public Awareness of Lung Cancer Screening and CAD in Chronic Smokers
405 Health Warning Labels on Alcoholic Beverage Containers
406 Call for Study: Should Petroleum-Powered Emergency Medical Services (EMS) Vehicles in Urban Service Areas be Replaced by Renewably-Powered Electric Vehicles?
407 Sleep Deprivation as a Public Health Crisis
408 Removing Artificial Turf in Schools, Parks, and Public Places
409 Guidelines for Restricting Cell Phones in K-12 Schools
410 Hate Speech is a Public Health Concern
411 Protecting Access to mRNA Vaccines
412 Supporting inclusive long-term care facilities
413 Preservation of Public Funding for Physicians and Hospitals Providing LGBTQ+ Care
414 Expanding Sexually Transmitted Infection Care for Persons with Unstable or No Housing
415 Promoting Child Welfare and Communication Rights in Immigration Detention
416 Culturally and Religiously Inclusive Food Options
417 Updating Alcohol Health Warning Labels to Reflect Evidence-Based Health Risks and Supporting National Labeling and Signage Policy Reform
418 AMA Study on Plastic Pollution Reduction
419 Advocating for Universal Summer Electronic Benefit Transfer Program for Children (SEBTC)

420 Study of Plant-Based & Lab-Grown Meat
421 Mitigating Air and Noise Pollution from Aviation in Minority Communities Disproportionately Impacted and Vulnerable Communities
422 Protecting the Integrity of the U.S. Healthcare System from Misinformation and Policy
423 Requiring Universal Vaccine reporting to a National Immunization Registry and Access to a National Immunization Information System
424 Supporting the Integration of Blood Pressure Variability Data in Electronic Medical Records
425 Alcohol Consumption and Health
426 Addressing Patient Safety and Environmental Stewardship of Single-Use and Reusable Medical Devices
427 Elevate Obesity as a Strategic Objective
428 Public Health Implications of US Food Subsidies
429 Addressing the Health Consequences of Microplastics in Humans
430 Addressing the Health Impacts of Ultraprocessed Foods
431 Alcohol & Breast Cancer Risk
432 Support for Long-Term Sequelae of Pregnancy
433 Clinical Lactation Care
434 Breast Cancer Risk Reduction

REPORT OF THE BOARD OF TRUSTEES

B of T Report 20-A-25

Subject: Guardianship and Conservatorship Reform

Presented by: Michael Suk, MD, JD, MPH, MBA, Chair

Referred to: Reference Committee D

At the 2024 Annual Meeting, the House of Delegates referred Resolution 402-A-24 for a report back at the 2025 Annual Meeting. Resolution 402-A-24 states:

> RESOLVED, that our American Medical Association support federal and state efforts to collect anonymized data on guardianships and conservatorships to assess the effects on medical decision making and rates of abuse (New HOD Policy); and be it further
>
> RESOLVED, that our AMA study the impact of less restrictive alternatives to guardianships and conservatorships including supported decision making on medical decision making, health outcomes, and quality of life. (Directive to Take Action)

BACKGROUND

According to the U.S. Department of Justice, "guardianship should be a last resort because it removes the individual's legal rights and restricts the person's independence and self-determination.[i]" Less restrictive alternatives to guardianships include supported decision-making, delegating health care decision-making to a person chosen by the individual in advance (advance directives), delegating financial decision-making to a person named in advance (financial power of attorney; trust), and a court order authorizing a specific action (such as a health care consent), instead of appointing a guardian whose authority continues over time.[ii] Additionally, medical proxies, living wills, and protective arrangements as specified in the Uniform Guardianship, Conservatorship, and Other Protective Arrangements Act (the "Uniform Guardianship Act") are terms for other less restrictive alternatives to guardianships in the health care setting.[iii]

Due in part to high-profile celebrity cases that illustrate the significant barriers to modifying or overturning a guardianship, there is a nationwide push towards guardianship reform and less restrictive alternatives to guardianships which place more decision-making powers in the hands of the individual or the protected person. In 2022, the Fourth National Guardianship Summit adopted the Uniform Guardianship Act and its provisions regarding less restrictive alternatives and training on alternatives for judges, lawyers and other interested parties.[iv]

The Uniform Guardianship Act provides evidence-based procedures and best practices for guardian appointments. However, the Uniform Guardianship Act has not been adopted by all 50 states. A majority of states require courts to consider whether guardianship is necessary, whether the respondent's needs or interests could be protected by less restrictive means, or both.

Though all 50 states and the District of Columbia have laws regarding guardianship and conservatorship,[v] the legal framework and terminology vary from state to state. Even the scope of a guardianship may vary, with some guardianships focused only on the individual's personal interests and others focused on the individual's property interests (e.g., financial assets). Some address both aspects.

Requirements for proving that a guardianship is absolutely necessary vary among the 50 states, with the highest level of proof being "beyond a reasonable doubt.[vi]" This is the least used standard, with only New Hampshire applying this standard.[vii] Most states apply a "clear and convincing evidence" standard, which is lower than the "beyond a reasonable doubt" standard but higher than the "preponderance of the evidence" standard, the lowest of the three.[viii] To add to the complexity, some states apply a different standard to overturn or rescind a guardianship than the standard that was used to establish the guardianship.[ix]

The decision-making standards for guardians also vary among the states. Most states use the "substitute judgment" standard which requires the guardian to substitute the protected person's values and desires for their own to make decisions about the protected person, and by extension, to discern the protected person's personal values and wishes.[x] The "best interest" standard is similarly used by many states and requires that the guardian make decisions by reference to the guardian's belief about what is the general best interest of the protected person.[xi] Less restrictive approaches attempt to preserve the will, preferences, and rights of the individual, and these include the "maximum self-reliance standard" and the "least restrictive standard."[xii] Finally, it should be noted some states are silent on the applicable decision-making standard for guardians.

There are other relevant factors that could affect the impact of a guardianship on a protected person's medical decision-making, health outcomes, and quality of life, as compared to a person with a less restrictive alternative. For example, states also vary in their qualifications and monitoring requirements for appointed guardians.

Finally, data about guardianships, conservatorships, and less restrictive alternatives are not uniformly collected. This is in part due to the lack of consistency in definitions regarding guardianships and less restrictive alternatives, including what would be considered a less restrictive alternative. There also does not appear to be a well-known mechanism to collect data, anonymized or not, on the outcomes on medical decision-making and quality of life as a result of these arrangements. The highly sensitive nature of the proceedings demands confidentiality, and such restrictions could make data collection and interpretation difficult. There are few if any organized databases that contain statewide data on guardianships, or on less restrictive alternatives to guardianships. This information is not often collected, and when it is collected, it is stored at the county level. These factors are all significant barriers to a well-designed study.

RELEVANT CURRENT AMA POLICY

Current AMA Policy H-140.845, "Encouraging the Use of Advance Directives and Health Care Powers of Attorney," supports the use of a Durable Power of Attorney for Health Care (DPAHC) and an Advance Directive (AD). It further supports a national public health priority to "educate the public as to the importance of having a DPAHC/AD and to encourage patients to work with their physicians to complete a DPAHC/AD."

DISCUSSION

The AMA is supportive of efforts to standardize laws concerning the establishment, modification, or termination of a guardianship. High-profile celebrity cases have highlighted existing challenges for individuals to overturn or modify guardianships. To the extent possible, guardianships should be limited in scope and duration, with clear pathways to modify or overturn a guardianship. In the meantime, less restrictive alternatives to guardianship should be favored and guardianships should be viewed as the last resort.

There are inconsistent standards for what constitutes a guardianship, when a guardianship should be established, what decision-making standard should be applied, and how guardians are vetted or appointed. These factors make it difficult to study the impact of less restrictive alternatives to guardianships and conservatorships on medical decision making, health outcomes, and quality of life. Additionally, due to the unclear scope of guardianships in general (since some guardianships address financial interests only and some are a mix of both personal and financial interests), data collection and interpretation in this area may be impractical or otherwise overly burdensome. Though a study may not be feasible or recommended, the AMA encourages more extensive data collection efforts at the state level.

The AMA is supportive of actions that promote increased clarity on when guardianships should be instituted, what conditions should prompt modifications to the guardianship, and when a guardianship should be rescinded or terminated. Similarly, in the health care setting, promoting the use of less restrictive alternatives such as advance directives and health care powers of attorneys should continue to be promoted.

Due to an uneven legal landscape of different standards, terminology, and requirements, combined with inadequate data collection practices on the state level, and the inability to procure a reliable dataset from a reputable source, the Board believes it would not be feasible to complete a well-designed study to consider the impact on medical decision-making, health outcomes, and quality of life, when less restrictive alternatives to guardianships in the health care setting are used. It is likely that such a study would confirm what is already well-supported – that guardianships should be considered a last resort.

The Board encourages state and federal efforts to define and promote less restrictive alternatives to guardianships such as those detailed in the Uniform Guardianship Act. Our AMA is better positioned to support efforts to enact legislation like the Uniform Guardianship Act that preserves the will, preferences, and rights of the protected individual, especially as it relates to medical decisions that directly affect the individual's health outcomes and quality of life.

RECOMMENDATIONS

The Board of Trustees recommends that the following recommendations be adopted in lieu of Resolution 402-A-24, and the remainder of the report be filed:

1. That our AMA encourages efforts to standardize laws concerning the establishment, modification, or termination of a guardianship, and favors less restrictive alternatives to guardianship, which should be viewed as a last resort. (New HOD Policy)

2. That Policy H-140.845, "Encouraging the Use of Advance Directives and Health Care Powers of Attorney" be reaffirmed.

AMA Policy H-140.845, "Encouraging the Use of Advance Directives and Health Care Powers of Attorney,"

Our AMA will:
(1) encourage health care providers to discuss with and educate young adults about the establishment of advance directives and the appointment of health care proxies;
(2) encourage nursing homes to discuss with resident patients or their health care surrogates/decision maker as appropriate, a care plan including advance directives, and to have on file such care plans including advance directives; and that when a nursing home resident patient's advance directive is on file with the nursing home, that advance directive shall accompany the resident patient upon transfer to another facility;
(3) encourage all physicians and their families to complete a Durable Power of Attorney for Health Care (DPAHC) and an Advance Directive (AD);
(4) encourage all medical schools to educate medical students and residents about the importance of having a DPAHC/AD before becoming severely ill and encourage them to fill out their own DPAHC/AD;
(5) along with other state and specialty societies, work with any state that has technical problems with their DPAHC/AD to correct those problems;
(6) encourage every state medical association and their member physicians to make information about Living Wills and health care powers of attorney continuously available in patient reception areas;
(7) (a) communicate with key health insurance organizations, both private and public, and their institutional members to include information regarding advance directives and related forms and (b) recommend to state Departments of Motor Vehicles the distribution of information about advance directives to individuals obtaining or renewing a driver's license;
(8) work with Congress and the Department of Health and Human Services to (a) make it a national public health priority to educate the public as to the importance of having a DPAHC/AD and to encourage patients to work with their physicians to complete a DPAHC/AD and (b) to develop incentives to individuals who prepare advance directives consistent with our current AMA policies and legislative priorities on advance directives;
(9) work with the Centers for Medicare and Medicaid Services to use the Medicare enrollment process as an opportunity for patients to receive information about advance health care directives; (10) continue to seek other strategies to help physicians encourage all their patients to complete their DPAHC/AD; and
(11) advocate for the implementation of secure electronic advance health care directives.

Fiscal Note: Less than $500

---

[i] https://www.justice.gov/elderjustice/guardianship-less-restrictive-options (Last access February 24, 2025)
[ii] *Id.*
[iii] *Id.*
[iv] https://www.americanbar.org/content/dam/aba/administrative/law_aging/2022-sdm-lst-rstctd-altntvs.pdf (Accessed February 17, 2025)
[v] https://www.americanbar.org/content/dam/aba/administrative/law_aging/2019-adult-guardianship-statutory-table-of-authorities.pdf (Accessed February 10, 2025)
[vi] Kelly, JD, LLM, Annemarie M., Lewis B. Hershey, PhD, MA, Christina N. Marsack-Topolewski, PhD, LMSW, *A 50-State Review of Guardianship Laws: Specific Concerns for Special Needs Planning, Journal of Financial Service Professionals*, Vol. 75, No. 1, pp 59-79, 61, January 2021.
[vii] *Id.*
[viii] *Id.*
[ix] *Id.*
[x] Kelly, JD, LLM, Annemarie M., Lewis B. Hershey, PhD, MA, Christina N. Marsack-Topolewski, PhD, LMSW, *A 50-State Review of Guardianship Laws: Specific Concerns for Special Needs Planning, Journal of Financial Service Professionals*, Vol. 75, No. 1, pp 59-79, 69, January 2021.
[xi] *Id.*
[xii] *Id.*

REPORT 2 OF THE COUNCIL ON SCIENCE AND PUBLIC HEALTH (A-25)
Addressing Social Determinants of Health Through Closed Loop Referral Systems
(Reference Committee D)

EXECUTIVE SUMMARY

BACKGROUND. American Medical Association (AMA) Policy D-165.932 "Addressing Social Determinants of Health Through Closed Loop Referral Systems," as adopted by the House of Delegates (HOD), asked that our AMA study the effectiveness and best practices of closed loop referral systems in addressing social determinants of health.

METHODS. English language articles were selected and reviewed from searches of PubMed and Google Scholar using the search terms "closed loop referral system", "United States Core Data for Interoperability," "closed loop referral system AND social determinants of health (SDOH)" and "United States Core Data for Interoperability AND SDOH". Additional articles were identified by manual review of the reference lists of pertinent publications. Web sites managed by government agencies; applicable organizations were also reviewed for relevant information.

DISCUSSION. There is compelling evidence that links social risks—such as food, housing, transportation, or economic insecurity—to health care outcomes, which encourages health care practices to consider how to improve patients' social conditions. As a result, health care practices report screening patients for at least one health-related social need (HRSN). For many health care practices, the next step is providing patients with a referral to community-based organizations (CBOs) to address social needs. A closed loop referral platform can allow for efficient communication and coordination between health care professionals and CBOs. It helps ensure patient data and information are communicated to the right individuals at the right time, allowing for review, action, acknowledgment, and documentation. The platform facilitates referrals from health care professionals to CBOs and enables them to report back on whether the patient's HRSNs were addressed.

CONCLUSION. Studies have shown that barriers to implementing closed loop referral systems include technology (electronic referral, response and feedback), processes (effectiveness, efficiency), organizational (management, policy and planning, rules and regulations), and patient-centered individual characteristics (social capital, transportation, awareness, attitude, satisfaction, and social influence). The recommendations of the report are based on best practices to implement closed loop referral systems such as: (1) establishment of collaborative governance for shared decision-making processes, fostering trust, alignment, and transparency among organizations; (2) development of technology linkages between existing platforms to facilitate seamless referrals between organizations and ensure visibility of referral outcomes; (3) integration of regional resource directories into technology infrastructure to ensure resource accessibility/quality; and (4) evaluation of the system's impact on health equity, efficiency, and cost reduction.

REPORT OF THE COUNCIL ON SCIENCE AND PUBLIC HEALTH

CSAPH Report 2-A-25

Subject:	Addressing Social Determinants of Health Through Closed Loop Referral Systems
Presented by:	John T. Carlo, MD, MS, Chair
Referred to:	Reference Committee D

INTRODUCTION

American Medical Association (AMA) Policy D-165.932 "Addressing Social Determinants of Health Through Closed Loop Referral Systems," as adopted by the House of Delegates (HOD), asked that our AMA study the effectiveness and best practices of closed loop referral systems in addressing social determinants of health.

BACKGROUND

Understanding Social Determinants of Health and Health-Related Social Needs

The way communities and individuals experience health and health care is not just based on access to medical services. It is also impacted by other factors that may support or create barriers to health and well-being. At a community level, these factors are referred to as social determinants of health (SDOH) and may also be referred to as "social drivers of health" (See APPENDIX 1 - Key Terms).[1] Examples of SDOH include economic stability, access to quality education and health care, the neighborhood, and built environment.[1] The specific factors that impact individuals directly are called health related social needs (HRSN).[2] Examples of HRSN include lack of stable or affordable housing and utilities, financial strain, lack of access to healthy food, personal safety, and lack of access to transportation.[1] While SDOH and HRSNs often coincide and overlap, the relationship between them can be complex. For example, a household with income below the federal poverty line (which could constitute an individual-level HRSN) that is living in an area with poor economic conditions (a community-level SDOH) is more likely to be exposed to housing that exacerbates health problems like asthma.[1] That household may be unable to afford living in areas with safer housing and may therefore benefit from various forms of housing assistance.[1] In this example, both the HRSN of having low income and the SDOH of living in an area with poor housing quality need to be addressed to holistically improve the household's situation and health outcomes.[1] Addressing SDOH and HRSNs requires implementing sets of policies and interventions involving community partners. Addressing both SDOH and HRSN is an important component of efforts to overcome disparities and achieve health equity for individuals and communities.[2]

A Closer Look at SDOH and HRSN in the U.S.

Systematic and structural inequities such as limited employment and educational opportunities, lack of affordable and safe housing, low availability of nutritious foods, high rates of exposure to environmental health hazards, and inadequate access to health care services, can jeopardize health

and well-being.[3] Disparities resulting from these structural inequities often disproportionately impact historically underserved individuals such as Blacks, Latinx, members of Tribal Nations, Asian Americans and Pacific Islanders and other persons of color; members of religious minorities; lesbian, gay, bisexual, transgender, and queer (LGBTQ+) persons; persons with disabilities; persons who live in rural areas; persons who live in communities with environmental justice concerns; older persons; women and girls; and persons otherwise experiencing persistent poverty.[3] These disparities exist for many health outcomes, including infant and maternal mortality, heart disease, diabetes, hypertension, chronic illness, disability, cancer, mental illness, substance use, and overall life expectancy.[4–6] For instance, the life expectancy for Black Americans is four years shorter than White Americans.[6] People of color have higher rates of diabetes, hypertension, obesity, asthma, and premature death compared to non-Hispanic Whites, due in part to social and economic factors.[6,7] People living in rural areas are more likely than their urban counterparts to die from heart disease, cancer, unintentional injury, chronic lower respiratory disease, and stroke.[6,8] Many of these disparities stem from differences in social and economic circumstances between these demographics.

An important contributor to health disparities is the inequitable distribution of social resources in localities across the country.[6,8] For example, a history of racialized practices and policies—housing discrimination, unequal educational opportunities, disproportionate incarceration rates, inequitable employment practices—has created inequities for many communities.[9] Inadequate access to social and health care services in many areas of the country has led to widening gaps in outcomes.[10] Notably, the cumulative impacts of environmental and climate factors have significant influence on health outcomes. Inequitable access to clean water, clean air, and natural green spaces with tree cover led to disproportionate environmental burdens for many communities.[11] These environmental injustices create new and exacerbate longstanding disparities in health outcomes. People who live in communities with environmental concerns may suffer from poorer health and have shorter life expectancies than those in other communities.[6,11] It is estimated that, on average, clinical care impacts only 20 percent of county-level variation in health outcomes, while SDOH affects as much as 50 percent of health outcomes.[6,8]

METHODS

English language articles will be selected from searches of PubMed and Google Scholar using the search terms “closed loop referral system”, “United States Core Data for Interoperability (USCDI),” “closed loop referral system AND social determinants of health (SDOH)” and “United States Core Data for Interoperability AND SDOH”. Additional articles will be identified by manual review of the reference lists of pertinent publications. Web sites managed by government agencies; applicable organizations will also be reviewed for relevant information.

DISCUSSION

What Is a Closed Loop Referral System?

Closed loop referral systems provide a means for health care professionals to send patient information to a CBO to help address a patient’s needs that are typically better served outside of clinical workflows.[12] A CBO can provide an array of support programs within the community, including services that address a patient's social needs or address underlying causes of poor health outcomes with the goal of positively impacting the patient’s overall health outcome(s).[12] The CBO can then provide feedback on the outcome of that referral to the referring individual/entity.[12] Closed loop referrals depend on an often-overlooked capability for the referral process to originate in a health care setting and progress to a CBO, and then for the CBO to further refer the patient to

another CBO which may be better positioned to help that patient, with the whole care team then being able to follow the referral through that process and any other redirects that may occur.[13] At the core, a closed loop referral process represents a significant shift in the way systems, institutions, clinicians, communities, and families communicate.[13]

Lessons Learned from Early Adopters of Closed Loop Referral Systems

There is a growing body of evidence on the success of closed loop referral systems to improve health.[14] In a recent study examining 16 years of data from different communities, death due to cardiovascular disease, diabetes and influenza declined significantly among communities that expanded multisector networks supporting population health activities.[14,15] The first randomized control trial (RCT) to evaluate health outcomes of a clinic-based pediatric navigation program, demonstrated a significant decrease in reported HRSN and improved children's overall health status, as reported by caregivers.[14,16] An Eastern Massachusetts project of six pediatric practices engaged parents to create and use an online, interactive community resources map, results showed 76 percent of participants were physically active at new places, 57 percent shopped at new locations for groceries; and 71 percent reported they were very satisfied with the information they received.[14,17]

Studies have also looked at the role of the technology in screening and referrals.[14,16,18,19] A 2014 RCT comparing patient disclosure rates for unmet needs between electronic and face-to-face methods found significantly higher disclosure rates when employing electronic formats for sensitive issues (i.e., household violence, substance use) and marginally higher rates when used for less sensitive issues (i.e., financial insecurity, neighborhood and school safety), suggesting that technology has a role to play in solving challenges related to accurately identifying needs.[19] A separate study of youth found the majority willing to participate in a technology-based system for SDOH screening and that nearly half successfully addressed their priority concern.[18]

Care teams and health care organizations (HCOs) involved in implementing HRSN screening and referral programs have reported multiple challenges.[20] HCO staff reported that they were unfamiliar with the social services organizations in their communities or that the compiled lists of community resources were neither complete nor up to date.[20–23] Staff also reported having difficulty sending referrals to non–HCOs.[20,21,24] Many electronic health record (EHR) systems have historically lacked the capacity to document and track the delivery of care coordination services related to HRSN, as well as the outcomes of social services referrals.[20,25] Over the past decade a cluster of technology companies have developed software products to overcome these barriers to medical and social services coordination.[25]

The impetus to invest in closed loop referral technology systems was the result of a desire to be able to address patients' social needs more efficiently.[20,25] This included wanting to have centralized staff lists of community resources, send electronic referrals, and to receive updates on referral outcomes from community partners to improve their capacity to track patients' access to services across settings.[20] Some groups were motivated by external programs or value-based payment reforms that incentivized or required better care coordination with social services.[20] Examples included the Accountable Health Communities Model of the Centers for Medicare and Medicaid Services (CMS) Innovation Center, the CMS State Innovation Models initiative, and New York's Delivery System Reform Incentive Payment program.[20,26–28]

Implementors of closed loop referral systems described three funding sources used to cover platform licenses and implementation costs: grants and other short-term pilot funds, operational funds, and value-based health care transformation dollars.[20] Pilot funds typically originated from

either foundations or demonstration projects sponsored by federal or state governments, such as the federal Accountable Health Communities Model, and State Innovation Model grants.[20,26,28]To facilitate community partners' use of the closed loop referral systems, HCOs either covered the cost of community partner organizations' software licenses or chose platforms that provided the product free of charge to affiliated CBOs.[20]

The most common challenge was recruiting CBOs to use the platforms, which was necessary for HCOs to be notified of referral outcomes.[20,29] HCOs generally attributed recruitment barriers to community partners' lack of resources and incentives.[20,29] Though community partners were almost universally provided with access to the closed loop referral system at no direct cost, implementation required indirect resources—for example, to train staff on using the closed loop referral system or to develop and maintain effective workflows for monitoring and responding to incoming referrals.[29] CBOs did not always have clear incentives for using the closed loop referral system, and the resources required for implementation prevented many organizations, especially very small ones, from adopting closed loop referral system.[20,29] As a result, many of the groups had not been able to track referral outcomes. Introducing a closed loop referral system could prove burdensome if CBOs were asked by different HCOs to use different platforms for different clients.[20,29] One solution was to use a common platform, as is the case in North Carolina.[20,30]

Among HCOs that reported success in recruiting community partners to use the closed loop referral system, three engagement strategies were cited. First, engaging CBOs in the platform selection process helped establish those partners' buy-in.[20,31] For example, one county health department established a coalition of thirty health care and community-based social services organizations.[20,31] The coalition undertook a joint assessment of platform referral functionalities, defined priority functionalities, and invited vendors to demonstrate their platforms. Once a shared platform was selected, subgroups within the larger coalition were assigned tasks such as designing the resource directory, referral system, and coalition wide release of information form.[20,31] Six months into distribution, the organizations started to exchange referrals through the platform, which was faster than most other organizations were able to implement this function.[20,31]

Second, CBOs were more accepting when HCOs clearly explored and articulated the potential benefits of the closed loop referral system during recruitment of CBOs.[20,32] Some HCOs reported that community partners became especially enthusiastic about the closed loop referral system when they learned that it could help them refer their clients to other organizations or health care professionals, in addition to increasing traffic and coordination for incoming referrals from health care systems.[20,32] Another powerful motivator for some CBOs was the potential to formally contract with and be reimbursed by health systems or payers for services rendered to referred patients, which could be more easily documented in the platform.[32]

Third, HCOs that successfully recruited CBOs as partners also described hiring staff to visit the organizations and stay in close contact to build rapport, support ongoing communication and coordination about the technology, and manage problems.[32] In one instance, a HCO had a network coordinator who published a biweekly electronic newsletter that was sent to all referral partners to answer common questions and provide updates about what kinds of programs partner organizations offered and what new organizations had joined the network.[20,32]

Within HCOs, groups described the need to convey the rationale, vision, and goals for better integrating social care and medical care to internal health care end users; to develop workflows that matched the needs and demands of those users; and to monitor and manage staff expectations.[20,31] One health system hosted an internal planning session with designated end users and then developed a project workflow and selected a set of social risk screening questions for

medical assistants to use.[20,31] Once staff started using the platform and were able to see positive effects on patients' lives, they became more enthusiastic about the technology.[20,31] It was also important to name staff champions, who tended to have experience with social interventions, to improve the internal process.[20,31,32] Staff champions could generate momentum when they endorsed the rationale for closed loop referral system adoption: having these champions helped convince other staff to stay involved as the organization worked to fold social risk screening and referral into workflows.[20,31,32]

A third set of challenges was clustered around the legal and privacy barriers to sharing data with external, non–HCOs.[20] This included the lack of clarity about what patient information could be shared, with whom, and how.[20] Overcoming these privacy concerns took longer when data were shared with multiple sectors, because each sector had different requirements for handling confidential data.[20,31–33] For example, substance use treatment programs cannot disclose any patient identities without consent.[20,31–33] One HCO used its platform only internally because the organization's legal department did not authorize sharing any data with external partners.[33] Patient consent protocols also took time to establish. In some cases, organizations have found ways to record consent over the phone or online to streamline the process.[20,32,33] Despite these important challenges, most groups reported overall satisfaction with the platform they had chosen, although implementation was slower than anticipated.[20,32,33]

Even if implementation challenges were overcome, HCOs and their community partners face the challenge of financially sustaining their platforms.[20] Promising models have emerged in places such as New York, where the Delivery System Reform Incentive Payment program financially incentivizes HCOs to establish partnerships with CBOs.[20,26,30] In California and Oregon, organizations that served Medicaid patients used health insurance benefits, bundled payment, and shared savings programs to support social services and build infrastructure to bridge the gap between medical and social care.[20,34] Continued expansion of state Medicaid social risk interventions could be a major driver of increased adoption of these technologies.[20,35] Health information exchanges, funded through a combination of public and private investment, are coming online and hold promise as infrastructure for closed loop referral systems.[14,36] In California, Oregon, New York, Washington, North Carolina and elsewhere, states are building upon previous Medicaid waivers and layering federal opportunities to establish more ambitious partnerships and programs addressing SDOH.[37–42] However, Medicaid waivers are a time-limited sources of innovation to test and pilot approaches for adoption by states, therefore sustainability of these efforts is uncertain.[26,34,39,41,42]

IMPLEMENTATION CONSIDERATIONS FOR CLOSED LOOP REFERRAL SYSTEMS

Localized Needs and Resource Availability

Historically, the U.S. has relied on CBOs to address social needs. With deep roots in the community and constrained geographical focus, CBOs are well-positioned to provide hyperlocal services that are uniquely tailored to a community's needs, yet this also means that addressing HRSN effectively requires an intimate understanding of local community resources and needs.[14,20,32] Each community is unique, with specific social challenges and available support services, which makes standardization difficult. For example, urban areas might have numerous CBOs, whereas resources in rural areas may be limited.[14,32] Service availability can also fluctuate based on state-level funding and policies, particularly under Medicaid.[26,28,39–41] CBOs may overlap in the types of services they provide or differ in which clients they serve or how they accept clients, and their capacity for new clients may also vary greatly.[14,32] The variability in local resources and needs means that a one-size-fits-all approach is impractical. Effective closed loop referrals must be

tailored to the specific context of each community, which requires robust, localized directories and a deep understanding of community assets.[14]

Technological Disparities Among Organizations

The landscape of CBOs addressing HRSN is highly varied, with significant differences in technological capabilities. While some CBOs operate advanced technology platforms capable of seamless data exchange, others rely on paper-based systems.[20,32] The variation in CBO funding means that some organizations can easily support 24/7 connectivity while others may not even be able to answer the phone consistently.[20,32] This disparity poses a fundamental challenge: the assumption that all organizations can conform to a unified standard is unrealistic. Effective patient referrals must navigate these technological gaps, which can vary dramatically across different local contexts.[20,32] For instance, a food pantry might operate on a basic, manual system, making integration with EHRs difficult.[20,32] Conversely, a large CBO might have the infrastructure to handle sophisticated digital referrals but is unable to communicate with less technologically advanced partners.[20,32] This fragmentation requires flexible expectations that can adapt to various levels of technological readiness.

Complexity and Variety of Referrals

Closed loop referrals to address HRSN are inherently complex and diverse.[20,32] Unlike medical referrals, which typically involve a single instance of care, HRSN referrals can range from short-term assistance, such as food vouchers, to long-term programs, such as job training.[20,32] The nature of these referrals varies significantly based on the needs of the individual. For example, a referral for emergency housing might involve multiple touchpoints and require ongoing support, whereas a referral for a one-time utility payment may be resolved quickly.[20,32] The ability to track and manage varied referrals necessitates a sophisticated data language that can represent different types of needs, interventions, durations, and outcomes.

Challenges of Feedback Mechanisms

Closed loop referrals rely on feedback mechanisms that inform referring clinicians about the status of the referral.[12,43] However, this feedback is not always necessary or feasible. Clinicians often express that receiving status updates on every referral can be overwhelming and counterproductive.[43] An emergency medicine clinician who refers the patient to a CBO is unlikely to have a long-term relationship with that patient that would benefit from regular updates, but if that emergency room is part of an accountable care organization, pooling data about referrals and outcomes is highly important.[43] Multiple approaches might be needed to accommodate varied use cases. For example, some use cases might benefit from a system where a clinician can check in on the fulfillment of the referral without being inundated with unnecessary information.[43] This balance requires thoughtful design of feedback systems to ensure they are informative without being burdensome.

Readiness for Standardization

Communicating the identified need, requested resources, and the status of the request requires shared standards. While USCDI v4 introduces many of the communications standards for SDOH, its implementation will take considerable time as EHRs are currently moving toward the required adoption of USCDI v3 (January 2026).[44,45] While essential, the push towards standardization – exemplified by the USCDI v4 – is insufficient on its own. While EHRs are making strides towards adopting these standards, many health systems are not yet ready to fully integrate the social care

components required for addressing HRSN.[43] The health care delivery system is still evolving in its ability to formally represent and manage social needs.[43] A hybrid approach employing both traditional and innovative methods is necessary to bridge the gap between current capabilities and future requirements.[14,43] This includes supporting standards for closed loop referrals and accommodating the existing variability in readiness and infrastructure among CBOs.[14,43]

Grant and Funding Opportunities

Medicaid funding, including utilization of Medicaid 1115 waivers that offer opportunities for SDOH reimbursement, varies significantly across states.[35,40] This leads to a lack of uniformity in funding and support for HRSN initiatives, creates challenges for standardization, and complicates efforts to develop a consistent approach to closed loop referrals.[14,35] Incentivizing the development of closed loop referral systems through grants and funding is crucial. Similar to the Certified Community Behavioral Health Clinic (CCBHC) grants in the behavioral health sector, specific grants for developing HRSN referral capabilities could accelerate progress.[46] These funds would enable CBOs to invest in the necessary technology, infrastructure, and people skills to participate in closed loop referral systems.[14,46]

History of Collaboration and Backbone Organization Support

It can take several years of systematic effort to develop trust, shared vision, leadership structure, measures of success and cross-sector knowledge for successful collaboration.[14,32,43] Lack of funding support for a backbone organization to plan, convene, facilitate shared goals and track success is cited as a barrier to the more rapid development of closed loop referral systems.[14,43] A further complication is that the funding gap for community-wide collaborations can result in individual health care entities developing or purchasing point to point technology systems between one health plan or health system and CBOs.[14,43] Without a community approach, CBOs are concerned about the potential need to connect to multiple technology systems, complicating their ability to partner.[14,43] Finally, there are many competing priorities in the health care arena and investing effort in community collaborations is a more recent trend that may compete with other initiatives.[43]

Privacy, Security and Data Governance

Consent, access to information, data use agreements and data governance are all challenging hurdles to coordinated systems of care and closed loop technology implementation.[47] Capturing signed consent as far upstream as possible facilitates the greatest benefit for closed loop referral systems to exchange all relevant information; however, this requires dedicated attention and resources to implement and maintain.[47,48] Security is a separate and important consideration for closed loop systems to ensure information is protected from any breach.[47–49] Behavioral health information significantly increases the difficulty of sharing information given its specific privacy rules, and when children are the clients, issues of consent are even more challenging.[47–49] Legal questions, systems to obtain consent and other privacy considerations often prove a long and costly barrier and can delay development and implementation.[47–49] Templates for data security and governance could reduce the time and cost to implement health information exchange (HIE).[47–49]

RELATED FEDERAL INITIATIVES

While the following federal initiatives were current as of the time this report was drafted, their continuation under the current Administration is uncertain.

U.S Playbook to Address SDOH

On November 16, 2023, the White House released the "U.S. Playbook to Address Social Determinants of Health," which outlines an initial set of actions that federal agencies are undertaking to support health by improving the social circumstances of individual and communities.[50] These actions were developed to serve as guideposts for other agencies and organizations to engage in efforts to address SDOH and HRSN. This playbook focuses on the following three pillars:

1. Expand Data Gathering and Sharing: Advance data collection and interoperability among health care, public health, social care services, and other data systems to better address SDOH with federal, state, local, tribal, and territorial support.[50]
2. Support Flexible Funding to Address Social Needs: Identify how flexible use of funds could align investments across sectors to finance community infrastructure, offer grants to empower communities to address HRSN, and encourage coordinated use of resources to improve health outcomes.[50]
3. Support Backbone Organizations: Support the development of community backbone organizations and other infrastructure to link health care systems to CBOs. Backbone organizations manage community-based partnerships formed across sectors such as health care, housing, social services care, nutrition assistance, employment training, and economic development to care for populations holistically.[50]

Centers for Medicare & Medicaid Services (CMS)

Though Medicaid rules limit spending on non-medical services, nearly all states have implemented at least some policies or initiatives to address HRSN through their Medicaid programs for various populations.[37] In January 2021, CMS issued a State Health Official letter identifying opportunities for states to better address SDOH under Medicaid and CHIP and to support states with improving outcomes and lowering costs by addressing SDOH.[51] Using a variety of mechanisms, including using section 1905(a) State Plan Authority, Home and Community Based Services (HCBS), section 1115 demonstrations, section 1945 Health, and managed care contract requirements, among others, states are addressing HRSN, including housing-related services and supports, non-medical transportation, home delivered meals, educational services, employment, community integration and social support, and case management (See APPENDIX 2).[51]

Center for Medicare and Medicaid Innovation (CMMI) established the Accountable Health Communities (AHC) Model in 28 locations to promote clinical-community collaboration to address HRSN of Medicare and Medicaid beneficiaries through screening, referral, and community navigation services.[28] The model, which focuses on five core HRSN of housing instability, food insecurity, transportation problems, utility difficulties, and interpersonal violence, found that 15 percent of the nearly 483,000 beneficiaries screened were eligible for navigation services, and more than half of these navigation-eligible beneficiaries reported more than one core HRSN.[52] CMMI is working to incorporate learnings from the AHC model into future models. As part of their Strategy Refresh, CMMI will require all new models to collect and report on data on HRSN and SDOH, as appropriate.[52] In addition, CMS will consider models that aim to address upstream, community-level SDOH.[52]

CMS has also worked to address HRSN and SDOH in the Medicare program. As of 2019, CMS expanded the definition of supplemental benefits in Medicare Advantage (MA) plans to better address SDOH.[53] As of 2019, MA plans can offer a broader array of benefits that are primarily health-related, such as transportation, meal delivery, and adult day care, and as of 2020, plans can offer non-primarily health-related benefits to the chronically ill, such as pest control.[53] In addition,

Medicare ACOs provide high-quality care to Medicare beneficiaries to ensure that patients get the right care at the right time through care coordination.[53] In FY22, CMS also included a request for information in the final Hospital Inpatient Prospective Payment System (IPPS) and Long-Term Care Hospital (LTCH) rule that sought ideas to make reporting of health disparities based on social risk factors and race and ethnicity more comprehensive and actionable.[53] Inclusion of such measures in future payment rules would also build on the work of the CMMI AHC model.[54]

Administration for Community Living (ACL)

ACL funds a nationwide network of aging and disability organizations that provide access to a variety of local community-based services that address social needs.[55] Through this network, ACL provides 150 million home-delivered meals to over 883,000 individuals and 73.6 million congregate meals to more than 1.5 million seniors, funded through the OAA Nutrition Program.[55] In addition to meals, the program provides nutrition screening, assessment, education, and counseling, and provides connections to other in-home and community supports.[55] ACL also provides transportation services through their network, providing more than 20.4 million rides to doctor's offices, grocery stores, pharmacies, senior centers, meal sites, and other critical daily activities.[56]

In addition, ACL's Social Care Referrals Challenge is working to support health care systems and CBOs through health IT solutions.[57] The challenge seeks to cultivate care coordination, including the sharing of standardized data on SDOH, by developing or optimizing interoperable, scalable technology solutions that foster connections between community-based organizations and health care systems.[57] ACL is also supporting the infrastructure of 12 Network Lead Entities, or community hubs, that coordinate the activities of a broader network to efficiently contract health plans and providers to address social needs.[58] Increasingly, CBOs are organizing to form networks, allowing them to deliver a broad scope of services, expand populations served and geographic coverage, build stronger administrative functions, and offer a single point of contracting for payers.[58] As part of their support for their disability network, ACL also offers several grants to enhance the cultural and linguistic competency of the disability network to ensure that all people with disabilities can access ACL-funded programs and services.[58]

The Office of the National Coordinator for Health Information Technology (ONC)

ONC seeks to improve the health and well-being of individuals and communities using technology and health information, including SDOH information, that is accessible when and where it matters most.[59] Advancing the use and interoperability of SDOH data is important to improve the health and well-being of all individuals and communities.[59] ONC is focused on ensuring that both patients and providers understand what capabilities are possible and required by the 21st Century Cures.[59] Standardization of the way in which the data is obtained and exchanged will help providers more easily address non-clinical factors, such as food, housing, and transportation insecurities, which can have a profound impact on a person's overall health.[60] For example, as of March 2022, almost all hospitals and roughly 75 percent of physicians use EHRs certified through the ONC Health IT Certification Program, helping to enable widespread capabilities for the capture, reporting, exchange, and use of granular race and ethnicity data.[60] This functionality will extend to the widespread use of interoperable SDOH data that can be electronically captured, used, and exchanged.[60] ONC works collaboratively with federal partners and the community to advance the electronic exchange and use of SDOH data to help improve individual and population health by guiding the development, dissemination, and adoption of health IT standards; informing the development of policies to overcome SDOH data interoperability challenges and data use; supporting states and local governments as they build the infrastructures for SDOH data; and

driving innovation in care delivery by using health IT tools and standards to integrate SDOH data into workflows.[60]

STATE INITIATIVES IN IMPLEMENTING CLOSED LOOP REFERRAL SYSTEMS

North Carolina. NCCARE 360 is a statewide backbone organization that electronically connects North Carolinians who have unmet social needs to community resources.[61] It allows for feedback and follow-up through a shared technology network provided by Unite Us so that those seeking help are served.[61] The program includes a team of dedicated navigators to support referrals, as well as a community engagement team that works with community-based organizations, social service agencies, health systems, independent providers, and community members to create a statewide, coordinated care network.[61] NCCARE360 is available in all 100 counties across North Carolina and has multiple functionalities including:

- A team of dedicated Navigators with the expertise to support complex NCCARE360 referrals. Navigators support CBOs that are not able to stay with the client through the referral process, as well as self-referrals submitted by individuals through our website.[61]
- A robust statewide resource directory supported by a dedicated resource team at NC 211 who regularly verifies and updates programs and services in the NCCARE360 platform.[61]
- A shared technology platform powered by Unite Us that enables providers to assess for and identify unmet social needs, send and receive secure electronic referrals, and track outcomes.[61]
- Onboarding, training, and technical support provided by Unite Us. The NCCARE360 technology is robust and transformative so all network partners are trained and empowered to use it to better serve their patients and clients.[61]

New York. In 2024, the New York State Department of Health selected organizations to lead the Social Care Network (SCN) in their region.[62] SCN leads are accountable for maintaining a comprehensive network of CBOs that will be responsible for delivering and tracking services addressing HRSN to eligible Medicaid members.[62] Selections included five Unite Us partner organizations that serve nine regions, including Care Compass Collaborative, Health and Welfare Council of Long Island, Healthy Alliance Foundation Inc., Hudson Valley Care Coalition Inc., and Public Health Solutions.[62] Unite Us will serve as the infrastructure for collaboration in each region's network of CBOs, health care professionals, and managed care organizations, which together represent 72 percent of Medicaid members across the state.[62]

Washington. The Seattle Indian Health Board connects thousands of Seattle-area residents to health and social services across the region.[63] Funding from several foundations as well as from government is braided and blended to support the Board's programs.[63] One such program is the Gender-Based Violence programming that provides confidential services to individuals fleeing from or who are survivors of gender-based violence.[63]

New Jersey. In 2020, New Jersey established the Regional Health Hubs program to coordinate provision of person-centered health care.[64] This innovative model establishes a regional network of non-profit organizations that partner with Medicaid and State agencies to reduce health disparities and improve health outcomes by combining robust connections to social services and community resources at both the patient and organizational levels.[64] The state began with establishing four Regional Health Hubs and plans to expand.[64]

California. The California Advancing and Innovating Medi-Cal (CalAIM) Initiative to Support Children and Families Initiative is a series of initiatives and reforms, in which California's Department of Healthcare Services (DHCS) is advancing and innovating Medi-Cal to create a more

coordinated, person-centered, and equitable health system that works for all Californians.[65] The CalAIM Initiative is set to introduce a transformative requirement in 2025 around a "Closed Loop Referral" policy.[65,66] This new referral policy is important to improve care for children under Medi-Cal for Kids & Teens, reduce disparities in children's and maternity care and improve depression screening and mental health follow-up rates.[65,67] Furthermore, this new policy shows promise as a critical tool in overcoming health access challenges that children and youth in foster care disproportionately face.[65,67] There are already several opportunities underway to build out the infrastructure that will be needed to support closed loop referrals.[65] For example, specifically for the rollout of the CalAIM Enhanced Care Management (ECM) and Community Supports benefits, Medi-Cal Managed Care Plans (MCPs) can use Incentive Payment Program (IPP) payments to build out networks of providers, including community health workers, who can support opening and closing referral loops.[65,68]

For primary care providers (PCPs), the recently announced Equity and Practice Transformation (EPT) Payments present opportunities "to advance health equity and reduce COVID-19-driven care disparities by investing in up-stream care models and partnerships to address health and wellness and funding practice transformation.[69]" PCPs can use the EPT payments to build the infrastructure and staffing in their practice for closed loop referrals.[69] Further, MCPs and other interested parties can operationalize closed loop referral policies through memorandums of understanding (MOU) requirements.[70] Specifically, starting in January 2024, MCPs are required to enter MOUs with Third Parties (i.e., various programs and agencies) to facilitate care coordination and information exchange, including WIC agencies, county child welfare departments, and regional centers.[70]

BEST PRACTICES FOR IMPLEMENTATING CLOSED LOOP REFERRAL SYSTEMS

Require Clear Definitions and Standards

The term "closed loop referral" is not consistently understood or used in the same way across sectors, to the extent it is used at all.[71,72] Definitions and standards will be important for closed loop referral policies so that it is clear to all parties involved the role/responsibility of each entity/person, the information and actions that constitute a referral, and the key steps, sequences, and methodologies, that constitute the closing of a referral loop.[71,72] It is also important to identify which types of referrals are the highest priority for tracking and monitoring. These definitional standards need to be consistent statewide and will need to be incorporated into electronic interfaces, workflows, and staffing models across provider types.[71,72] HCOs and CBOs involved in referral loops will need clear directions for how to make referrals and a basic understanding of who is eligible for services that could be available to them.[71,72] Further, these definitions should consistently be codified in formal contracts and agreements, like MOUs, when developing standards and timelines, including processes for expediting closed loop referrals for urgent needs.[71,72]

Leverage Data and Integrate Technology

Data sharing is necessary for closed loop referrals, but data sharing is limited and varied. Experience suggests that "the future of resource database design should center on technology and solutions that strengthen pathways for coordination and communication between health care, community resources and community members."[71,73] Yet, there are many concerns and challenges around data literacy and how referral and service information will be shared in a timely way across systems and referral management platforms and vendors to close referral loops.[73] The field uses many platforms and resource directories for referrals that are not standardized, cohesively linked, up-to-date, or connected, especially with EHR systems or health plan data systems.[20,71,73] As a

result, health care professionals navigate multiple referral systems depending on the patient's needs and what community support services and community partners are available to the patient.[20,71,73] Further, some platforms may not be able to fully capture and/or communicate all stages of a closed loop referral, much less share patient care plans or be used for ongoing quality improvement.[20,71] Patient/family access to their own referral information varies across systems designed towards connecting agencies or institutions, but thoughtful communication modalities and technologies like apps and text-messaging can help close the information gap in some instances.[20,71]

The variation in referral systems creates an unreasonable burden on the health care professionals who are responsible for opening and closing referral loops and may have preferred EHR systems or other data systems they use for their patient/client/member care.[20,71,73] Participants in some studies reported finding referral solutions, such as communicating with external partners through their Microsoft Teams communications platform or using the clinic's EHR system to fax referrals to community mental health providers.[20,71] Interoperable data systems and workflows will require training of health care professionals and staff and providers in community-based organizations on how to use them and ensure appropriate user permissions, and ideally these systems could track all stages of the closed loop referral in as real- time as possible.[20,71] There are also significant concerns about sharing personal identifiable and protected health information with other providers or agencies.[20,71] It should be noted there are initiatives to improve data interoperability such as through Regional Health Information Organizations (RHIO). The goal of RHIO is to oversee the means of information exchange within a geographical area among various provider settings, payers and government agencies.[74] This initiative may be a potential pathway to consider in addressing data interoperability in a closed loop referral system.[74]

Rely On Trusted Partnerships and Referral Pathways

While technology and electronic data-sharing is important for referrals, it does not replace interpersonal work, relationships, and interorganizational networks that are foundational to referrals.[75] Closed loop referrals are most effective in promoting equitable health outcomes when individuals are engaged in a timely manner (i.e., no scheduling delays or geographic barriers to care) and in a meaningful way (i.e., the individual's preferred language, information provided is easy to understand, etc.).[75] Common barriers to closing the referral loop include the lack of collective and consistent use of referral platforms by the entities involved in referrals, as well as challenges finding available and qualified providers and resources (i.e., housing, food, culturally congruent providers, etc.) to refer individuals to.[75]

Health system partnerships with libraries, places of worship, laundromats, barber shops, fire departments, dollar stores, shopping malls, and other local sites offer the chance to connect with families who most need referral and navigation support in places within the community they already trust enough to meet their other basic needs.[76] Health care professionals will need to authentically engage clinics, local CBOs, county agencies, and other partners to support the establishment of effective workflows, data exchanges, legal agreements, and communication channels.[76] Work will need to be done to understand and address the needs and constraints of both the referring clinician and the receiving provider and provide ongoing training, technical assistance, monitoring, and financial resources or incentives to promote closed loop referrals.[76]

Further, it is important to remember that due to the past and ongoing impact of racism in health care, inclusive of systematic segregation, differential medical treatment based on race and ethnicity, and limited resources allocated to people and communities of color, there is wide variability in the availability of and access to local resources in communities.[75] In addition, many areas may lack reliable internet and broadband access needed for electronic referrals and data

sharing.[75] Gaps in service area resources will need to be identified early to make the best use of available providers and map the places where service expansion will be needed.[75]

Training and Ongoing Support

It is critical to establish an efficient and compassionate referral network that meets the needs of individuals.[20,75,77] Best practices for this include assessing the need for initial and ongoing training for health care professionals and providers in CBOs on how to operationalize a closed loop referral system and coaching to foster a patient-centered approach to making referrals.[20,71,77] Operational training equips health care professionals and providers in CBOs with the skills to effectively navigate and utilize referrals in a digital landscape. Understanding the operational intricacies of a digital system, documentation requirements, referral initiation procedures, and tracking mechanisms is vital for ensuring that the referral process is seamless, efficient, and protective of sensitive information.[71,75,77] This training ensures health care professionals and providers in CBOs can use the system proficiently, thereby improving the accuracy, timeliness, and success of referrals they make, ultimately enhancing the quality of care.[71,75,77] Successful referrals are patient-centered, which often require cultural humility, empathetic communication, and a trauma-informed approach.[77] These skills should be integrated into closed loop referral coaching and support for all health care professionals and providers in CBOs.

To ensure referral-making is trauma-informed, health care professionals and providers in CBOs should be coached on how to prioritize creating a safe and supportive environment and respect the patient's autonomy and choices.[71,75,77]Health care professionals and providers in CBOs should understand how to consider the potential triggers and sensitivities related to the referral process, aiming to minimize retraumatization.[71,75,77] A patient-centered approach to referrals also considers the background and circumstances of the patient. Historically, patients of color and varying gender and sexual identities have been discriminated against and disrespected in health care settings.[71,75,77] It is critical that health care providers and staff and providers in community-based organizations understand the disparities that affect these communities and are culturally conscious in how they communicate during the referral process. Furthermore, the closed loop referral process should emphasize and acknowledge that health care professionals and providers in CBOs who are embedded in the community are best situated to make referrals.[71,75,77]

It is also important to note that studies have identified higher physician engagement in addressing HRSN were associated with a greater likelihood of burnout.[78] Specifically, high engagement in addressing HRSN was observed among physicians identifying as women or transgender women, those reporting Black or African American or other race and ethnicity, and those who frequently used non-English languages in patient communication.[78] This could be due to intrinsic factors, with physicians from certain racial and ethnic groups potentially feeling a stronger commitment to addressing HRSN.[78] Importantly, these findings add an additional layer to diversity, equity, and inclusion efforts in medicine by critically considering the "minority tax"—the extra responsibilities that historically marginalized physicians often experience.[78,79] Recognizing patients' ongoing, unmet HRSN without being able to fully address them could potentially lead to a sense of helplessness, contributing to burnout.[78,80] Addressing HRSN necessitates interdisciplinary teamwork, such as HRSN screening often being led by nonphysician staff (i.e., nurses, social workers, and community health workers); therefore, training and education can be incorporated to help physicians effectively collaborate with interprofessional team members to address HRSN for patient populations.[78,81]

Resource and Monitor Referrals

The infrastructure to make closed loop referrals possible will need to be fully resourced and sustained. This goes beyond the high start-up costs of technological platforms or data integration but also applies to the ongoing needs to maintain a workforce (hiring, training, etc.) to manage referrals and ensure there are qualified providers available to receive referrals and deliver referred services.[20,32,71] This will require intentional and ongoing efforts and formalized relationships (i.e., contracts, MOUs, etc.) between health care professionals and community providers, as well as ongoing, cross-sector community reinvestment at state, local, and health system levels that are refined over time to fill in gaps and meet the changing needs of the patient population.[20,32,70,71] Furthermore, data captured on both successful and unsuccessful implementation of closed loop referrals should be used to fund and build local infrastructure to meet the needs of patients.[20,32,71]

EXISTING AMA POLICY

AMA policy H-165.822 "Health Plan Initiatives Addressing Social Determinants of Health," recognizes that social determinants of health encompass more than health care and encourages new and continued partnerships among all levels of government, the private sector, philanthropic organizations, and community- and faith-based organizations to address non-medical, yet critical health needs and the underlying social determinants of health. This policy also states that the AMA supports: continued efforts by public and private health plans to address SDOH in health insurance benefit designs; mechanisms, including the establishment of incentives, to improve the acquisition of data related to social determinants of health, while minimizing burdens on patients and physicians; and research to determine how best to integrate and finance non-medical services as part of health insurance benefit design, and the impact of covering non-medical benefits on health care and societal costs. Further, it encourages coverage pilots to test the impacts of addressing certain non-medical, yet critical health needs, for which sufficient data and evidence are not available, on health outcomes and health care costs.

The AMA has also involved in efforts aimed at improving patients' health by addressing SDOH. This includes but is not limited to being a founding member of the Gravity Project, a Robert Wood Johnson-funded initiative with more than 2,500 participants from organizations and entities representing health care, social services, payers, technology vendors, and government agencies working to develop consensus-driven data standards to support the collection, use and exchange of SDOH data.

CONCLUSION

Responding to compelling evidence that links social risks—such as food, housing, transportation, or economic insecurity—to health care outcomes, health care practices are considering how to improve patients' social conditions.[43,87] Several forces have spurred the momentum to act on evidence linking social risks and health care outcomes including the ongoing shift towards value-based care in the Affordable Care Act and beyond, campaigns advanced by clinician organizations such as the American Academy of Family Physicians, and influential reports by the National Academies of Sciences, Engineering, and Medicine and others.[43,88,89] As a result, health care practices report screening patients for at least one HRSN.[34,43,88] Information on patients' HRSN can be used by health care professionals to gain a deeper understanding of their patients' lives, to adjust patient's care plan (i.e., changes to medications or follow-up schedule), and to improve social conditions.[43,88] For many health care practices, the next step is providing patients with a referral to CBOs to address their social needs.[43,88] Closed loop referral platforms can be used to address this next step by allowing for efficient communication and coordination between health care

professionals and CBOs.[12,13] It ensures that patient data and information are communicated to the right individuals at the right time, allowing for review, action, acknowledgment, and documentation.[12,13] The platform facilitates referrals from health care professionals to CBOs and enables reporting back on whether the patient's HRSN were addressed.[12,13]

There are many factors impacting the success of a closed loop referral system, including: technology (electronic referral, response and feedback), processes (effectiveness, efficiency), organizational (management, policy and planning, rules and regulations), and patient-centered individual characteristics (social capital, transportation, awareness, attitude, satisfaction, and social influence).[14,32,65,71,88] However, efforts have been underway to address these barriers to improve the effectiveness of the closed loop referral systems in improving social and health outcomes. Successful efforts thus far have incorporated four main best practices: (1) establishment of collaborative governance for shared decision-making processes, fostering trust, alignment, and transparency among organizations; (2) development of technology linkages between existing platforms to facilitate seamless referrals between organizations and ensure visibility of referral outcomes; (3) integration of regional resource directories into technology infrastructure to ensure resource accessibility/quality; and (4) evaluation of the system's impact on health equity, efficiency, and cost reduction.[12,14,32,65,71,75] It should be noted that more states are exploring the integration of closed loop referral systems to address SDOH which will continue to shape the best practices needed for successful implementation.[34,62,66,82]

RECOMMENDATIONS

The Council on Science and Public Health recommends that the following be adopted, and the remainder of the report be filed.

1. Our AMA acknowledges closed loop referral systems are a mechanism to address social determinants of health (SDOH) through a community-level, system approach that connects clinicians and the patients they serve to health care services and social support services.
2. Our AMA supports the continued evaluation of closed loop referral systems in addressing SDOH and health-related social needs to identify best practices and improve health outcomes.
3. Our AMA supports continued research to streamline the workflow processes and ensure two-way communication for closed loop referrals between health care systems and community-based organizations to address SDOH and health-related social needs.
4. Our AMA supports: (a) using data to foster hospitals, health insurance, private sector, philanthropic organizations, and community- and faith-based organizations investment in addressing SDOH, (b) reducing barriers to using grants to address SDOH, and (c) promoting federal- and state- initiatives to expand funding for SDOH health-related social needs interventions. (New HOD Policy)

Fiscal Note: less than $1,000

APPENDIX I – Key Terms

There are a few key terms that will be used throughout this report that are important to define because they are often used interchangeably when they have different definitions. These key terms are as follows:

- **Social determinants of health** (SDOH): The conditions in the environments where people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks. SDOH refers to community-level factors.[90] They are sometimes called "social drivers of health."[90]
- **Health-related social needs** (HRSN): Social and economic needs that individuals experience that affect their ability to maintain their health and well-being.[2] They put individuals at risk for worse health outcomes and increased health care use. HRSN refers to individual-level factors such as financial instability, lack of access to healthy food, lack of access to affordable and stable housing and utilities, lack of access to health care, and lack of access to transportation.[2]
- **Health disparities**: Preventable differences in the burden of disease, injury, violence, or opportunities to achieve optimal health, health quality, or health outcomes experienced by disadvantaged populations.[91]
- **Health equity**: The attainment of the highest level of health achievable for all people, where everyone has a fair and just opportunity to attain their optimal health regardless of race, ethnicity, disability, sexual orientation, gender identity, socioeconomic status, geography, preferred language, or other factors that affect access to care and health outcomes.[92]
- **Community-Based Organization** (CBO): A non-profit organization whose members represent a local community and focus on addressing the community's sociocultural conditions and lived experiences.[93] This can include improving the community members' social and health risks.[93]
- **Care Coordination Services**: A model of care approach aimed at connecting individuals to a full range of community health promotion services.[94]

APPENDIX II – CMS Waivers and Demonstration Programs for HRSN

- **Section 1905(a) State Plan Authority**: States have used Section 1905(a) to establish peer support and case management services, which are then used to link beneficiaries to HRSN supports. As of 2018, 19 states indicated that case management is a covered benefit in their program, and 36 indicated that targeted case management is a covered benefit (though this benefit may be provided under section 1915(g)*).[95,96]
- **Home and Community Based Services (HCBS)**: Several states have utilized HCBS to implement housing-related services, including 46 states with section 1915(c) waivers; † four states with section 1915(i) benefits; and eight states with section 1915(k) benefits as of 2021.[97] For example, Minnesota is using section1915(i) state plan authority to provide housing stabilization services to certain individuals that are experiencing homelessness or are at risk of becoming homeless.[98] In their first year, the state reported that they served 7,203 individuals.[97,98]
- **Section 1115 Demonstrations**: As of 2021, 25 states have utilized the flexibility provided by section 1115 demonstrations to address HRSN, such as housing-related services,

nutrition, transportation, and interpersonal violence.[97,98] For example, CMS recently approved an 1115 waiver for California's Medicaid program (Medi-Cal) to launch California Advancing and Innovating Medi-Cal (CalAIM), which seeks to integrate the Medi-Cal program with other social services through a "no wrong door" approach that couples clinical care with Medicaid reimbursable nonmedical services, including housing supports, medical respite, personal care, medically tailored meals, and peer supports.[66] However, as of February 2022, four states have also used section 1115 demonstrations to waive NEMT, a benefit that is typically required.[99]

- **Section 1945 Health Homes**: As of April 2021, there are 37 Health Home models across 21 states and the District of Columbia, all of which must include comprehensive case management, individual and family support, and referrals to community and social services, among other required services.[100]
- **Managed Care Programs**: As of 2018, 37 states have implemented requirements in their managed care contracts related to HRSN and SDOH.[101]

REFERENCES

1. Centers for Medicare & Medicaid Services. Social Drivers of Health and Health-Related Social Needs. https://www.cms.gov/priorities/innovation/key-concepts/social-drivers-health-and-health-related-social-needs
2. U.S. Department of Health and Human Services. HHS Call to Action: Addressing Health-Related Social Needs in Communities Across the Nation. Published online November 2023. chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://aspe.hhs.gov/sites/default/files/documents/3e2f6140d0087435cc6832bf8cf32618/hhs-call-to-action-health-related-social-needs.pdf
3. Singh GK, Daus GP, Allender M, et al. Social Determinants of Health in the United States: Addressing Major Health Inequality Trends for the Nation, 1935-2016. *Int J MCH AIDS*. 2017;6(2):139-164. doi:10.21106/ijma.236
4. Schopfer DW. Rural health disparities in chronic heart disease. *Prev Med*. 2021;152(Pt 2):106782. doi:10.1016/j.ypmed.2021.106782
5. Muennig P, Fiscella K, Tancredi D, Franks P. The Relative Health Burden of Selected Social and Behavioral Risk Factors in the United States: Implications for Policy. *Am J Public Health*. 2010;100(9):1758-1764. doi:10.2105/AJPH.2009.165019
6. Whitman A, De Lew N, Chappel A. Addressing social determinants of health: examples of successful evidence-based strategies and current federal efforts. *Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation, Office of Health Policy,*. Published online April 1, 2022.
7. World Health Organization. Health Equity. https:ljwww.who.int/health-topics/health-equity
8. Hood CM, Gennuso KP, Swain GR, Catlin BB. County Health Rankings. *American Journal of Preventive Medicine*. 2016;50(2):129-135. doi:10.1016/j.amepre.2015.08.024
9. Tsega M. Review of Evidence for Health-Related Social Needs Interventions. https ://www .com monwealthfu nd .org/sites/ defa u lt/fi les/2019-07 /ROI-EVIDENCE-REVIEW-FINAL-VERSI ON. pdf
10. Blue Cross Blue Shield of Massachusetts Foundation. Leveraging the Social Determinants of Health: What Works? Published online June 2015. https://www.bluecrossmafoundation.org/sites/g/files/csphws2101/files/2020- 10/Social Equity Report Final.pdf
11. U.S. Department of Health and Human Services. Building the Evidence Base for Social Determinants of Health Interventions. Published online September 2021. https://aspe.hhs.gov/reports/building-evidence-base-social-determinants-health-interventions
12. The HIMSS Electronic Health Record (EHR) Association. Closed-Loop Referrals for Health-Related Social Needs: Barriers and Recommendations. Published online September 2024. chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.ehra.org/sites/ehra.org/files/Closed-Loop%20Referrals%20for%20Health-Related%20Social%20Needs%20Barriers%20and%20Recommendations%20September%202024.pdf
13. Activate Care. Spotlight on SDOH Data: Closed-Loop Referrals for Health-Related Social Needs. https://blog.activatecare.com/sdoh-data-closed-loop-referrals
14. Nemours Children's Health System. Community Care Coordination Systems: Technology Supports. Published online 2018. chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.movinghealthcareupstream.org/wp-content/uploads/2018/09/FINAL_Nemours_CommCareSysTechSupp-1.pdf

15. Mays GP, Mamaril CB, Timsina LR. Preventable Death Rates Fell Where Communities Expanded Population Health Activities Through Multisector Networks. *Health Affairs*. 2016;35(11):2005-2013. doi:10.1377/hlthaff.2016.0848
16. Gottlieb LM, Hessler D, Long D, et al. Effects of Social Needs Screening and In-Person Service Navigation on Child Health: A Randomized Clinical Trial. *JAMA Pediatr*. 2016;170(11):e162521. doi:10.1001/jamapediatrics.2016.2521
17. Fiechtner L, Puente GC, Sharifi M, et al. A Community Resource Map to Support Clinical–Community Linkages in a Randomized Controlled Trial of Childhood Obesity, Eastern Massachusetts, 2014–2016. *Prev Chronic Dis*. 2017;14:160577. doi:10.5888/pcd14.160577
18. Hassan A, Scherer EA, Pikcilingis A, et al. Improving Social Determinants of Health: Effectiveness of a Web-Based Intervention. *Am J Prev Med*. 2015;49(6):822-831. doi:10.1016/j.amepre.2015.04.023
19. Gottlieb L, Hessler D, Long D, Amaya A, Adler N. A Randomized Trial on Screening for Social Determinants of Health: the iScreen Study. *Pediatrics*. 2014;134(6):e1611-e1618. doi:10.1542/peds.2014-1439
20. Cartier Y, Fichtenberg C, Gottlieb LM. Implementing Community Resource Referral Technology: Facilitators And Barriers Described By Early Adopters: A review of new technology platforms to facilitate referrals from health care organizations to social service organizations. *Health Affairs*. 2020;39(4):662-669. doi:10.1377/hlthaff.2019.01588
21. Hamity C, Jackson A, Peralta L, Bellows J. Perceptions and Experience of Patients, Staff, and Clinicians with Social Needs Assessment. *TPJ*. 2018;22(4S):18-105. doi:10.7812/TPP/18-105
22. Byhoff E, Garg A, Pellicer M, et al. Provider and Staff Feedback on Screening for Social and Behavioral Determinants of Health for Pediatric Patients. *J Am Board Fam Med*. 2019;32(3):297-306. doi:10.3122/jabfm.2019.03.180276
23. Palakshappa D, Vasan A, Khan S, Seifu L, Feudtner C, Fiks AG. Clinicians' Perceptions of Screening for Food Insecurity in Suburban Pediatric Practice. *Pediatrics*. 2017;140(1):e20170319. doi:10.1542/peds.2017-0319
24. Schickedanz A, Hamity C, Rogers A, Sharp AL, Jackson A. Clinician Experiences and Attitudes Regarding Screening for Social Determinants of Health in a Large Integrated Health System. *Medical Care*. 2019;57(Suppl 2):S197-S201. doi:10.1097/MLR.0000000000001051
25. Freij M, Dullabh P, Lewis S, Smith SR, Hovey L, Dhopeshwarkar R. Incorporating Social Determinants of Health in Electronic Health Records: Qualitative Study of Current Practices Among Top Vendors. *JMIR Med Inform*. 2019;7(2):e13849. doi:10.2196/13849
26. Mathematica. Examining New York's Delivery System Reform Incentive Payment demonstration: achievements at the demonstration's midpoint and lessons for other states. 2018. https://www .mathematica.org/our-publicationsand- findings/publications/ examining-new-yorks-deliverysystem- reform-incentive-paymentdemonstration- achievements
27. Centers for Medicare & Medicaid Services. State Innovation Models initiative: general information. https:// innovation.cms.gov/initiatives/ state-innovations/
28. Centers for Medicare, and Medicaid Services. Accountable Health Communities Model. https:// innovation.cms.gov/initiatives/ ahcm/
29. Ross J, Stevenson F, Lau R, Murray E. Factors that influence the implementation of e-health: a systematic review of systematic reviews (an update). *Implementation Sci*. 2016;11(1):146. doi:10.1186/s13012-016-0510-7
30. Wortman Z, Tilson EC, Cohen MK. Buying Health For North Carolinians: Addressing Nonmedical Drivers Of Health At Scale: This article describes initiatives the North Carolina Department of Health and Human Services is implementing to integrate medical and nonmedical drivers of health. *Health Affairs*. 2020;39(4):649-654. doi:10.1377/hlthaff.2019.01583

31. Edmondson AC, Bohmer RM, Pisano GP. Disrupted Routines: Team Learning and New Technology Implementation in Hospitals. *Administrative Science Quarterly*. 2001;46(4):685-716. doi:10.2307/3094828
32. Alley DE, Asomugha CN, Conway PH, Sanghavi DM. Accountable Health Communities — Addressing Social Needs through Medicare and Medicaid. *N Engl J Med*. 2016;374(1):8-11. doi:10.1056/NEJMp1512532
33. Ackerman SL, Sarkar U, Tieu L, et al. Meaningful use in the safety net: a rapid ethnography of patient portal implementation at five community health centers in California. *Journal of the American Medical Informatics Association*. 2017;24(5):903-912. doi:10.1093/jamia/ocx015
34. Alderwick H, Hood-Ronick CM, Gottlieb LM. Medicaid Investments To Address Social Needs In Oregon And California. *Health Affairs*. 2019;38(5):774-781. doi:10.1377/hlthaff.2018.05171
35. Center for Health Care Strategies. Addressing Social Determinants of Health via Medicaid Managed Care Contracts and Section 1115 Demonstrations. Published online December 2018. https://www.chcs.org/media/Addressing-SDOH-Medicaid-Contracts-1115-Demonstrations-121118.pdf
36. DeSalvo K, Haque H. From the ONC desk: HHS and ONC invest $28 million in health information exchange grants. HealthITBUZZ. 2015. https://www.healthit.gov/buzz-blog/from-the-onc-desk/health-information-exchange-grants/
37. Federal Register. Medicaid and Children's Health Insurance Program (CHIP); Medicaid managed care, CHIP delivered in managed care, and revisions related to third party liability: a rule by the Centers for Medicare & Medicaid Services. 2016. https://www.federalregister.gov/documents/2016/05/06/2016-09581/medicaidand-childrenshealth- insurance-program-chip-programs-medicaid-managed-care-chip-delivered.
38. Heflin K. Driving health care innovation through DRISP: state of the states. 2014. https://www.chcs.org/driving-health-care-innovation-through-dsrip/.
39. California Department of Health Care Services. Medi-Cal 2020 demonstration. http://www.dhcs.ca.gov/provgovpart/Pages/medi-cal-2020-waiver.aspx.
40. Oregon Health Authority. 2017-2022 1115 waiver renewal. http://www.oregon.gov/oha/HPA/HP-Medicaid-1115-Waiver/Pages/Waiver-Renewal.aspx.
41. Washington State Health Care Authority. Medicaid transformation. https://www.hca.wa.gov/abouthca/ healthier-washington/medicaid-transformation
42. North Carolina Department of Health and Human Services. North Carolina's proposed program design for Medicaid managed care. https://files.nc.gov/ncdhhs/documents/files/MedicaidManagedCare_ ProposedProgramDesign_REVFINAL_20170808.pdf.
43. Beidler LB, Razon N, Lang H, Fraze TK. "More than just giving them a piece of paper": Interviews with Primary Care on Social Needs Referrals to Community-Based Organizations. *J Gen Intern Med*. 2022;37(16):4160-4167. doi:10.1007/s11606-022-07531-3
44. The Office of the National Coordinator for Health Information Technology. United States Core Data for Interoperability (USCDI). chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.healthit.gov/sites/default/files/page2/2020-03/USCDI.pdf
45. Office of the National Coordinator for Health Information Technology. Health Data, Technology, and Interoperability (HTI-2): Patient Engagement, Information Sharing, and Public Health Interoperability PROPOSED RULE USCDI Version 4. July 2024. chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.healthit.gov/sites/default/files/page/2024-07/HTI-2_ProposedRule_USCDI_v4_508.pdf
46. Substance Abuse and Mental Health Services Adminstration (SAMHSA). Certified Community Behavioral Health Clinics (CCBHCs). https://www.samhsa.gov/communities/certified-community-behavioral-health-clinics

47. Yan AF, Chen Z, Wang Y, et al. Effectiveness of Social Needs Screening and Interventions in Clinical Settings on Utilization, Cost, and Clinical Outcomes: A Systematic Review. *Health Equity*. 2022;6(1):454-475. doi:10.1089/heq.2022.0010
48. Chen M, Tan X, Padman R. Social determinants of health in electronic health records and their impact on analysis and risk prediction: A systematic review. *Journal of the American Medical Informatics Association*. 2020;27(11):1764-1773. doi:10.1093/jamia/ocaa143
49. Kreuter MW, Thompson T, McQueen A, Garg R. Addressing Social Needs in Health Care Settings: Evidence, Challenges, and Opportunities for Public Health. *Annu Rev Public Health*. 2021;42(1):329-344. doi:10.1146/annurev-publhealth-090419-102204
50. DOMESTIC POLICY COUNCIL OFFICE OF SCIENCE AND TECHNOLOGY POLICY. THE U.S. PLAYBOOK TO ADDRESS SOCIAL DETERMINANTS OF HEALTH. Published online November 2023. https://www.whitehouse.gov/wp-content/uploads/2023/11/SDOH-Playbook-4.pdf
51. DEPARTMENT OF HEALTH & HUMAN SERVICES Centers for Medicare & Medicaid Services. SHO# 21-001 RE: Opportunities in Medicaid and CHIP to Address Social Determinants of Health (SDOH). chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.medicaid.gov/federal-policy-guidance/downloads/sho21001.pdf
52. Centers for Medicare & Medicaid Services. Accountable Health Communities Evaluation of Performance Years 1-3 (2017-2020). https://innovation.cms.gov/data-and-reports/2020/ahc-firsteval-rpt-fg
53. Centers for Medicare & Medicaid Services. CMS finalizes Medicare Advantage and Part D payment and policy updates to maximize competition and coverage. April 2019. https://www.cms.gov/newsroom/press-releases/cms-finalizes-medicare-advantage-and-part-dpayment-and-policy-updates-maximize-competition-and
54. Centers for Medicare & Medicaid Services. Fiscal Year (FY) 2022 Medicare Hospital Inpatient Prospective Payment System (IPPS) and Long Term Care Hospital (LTCH) Rates Final Rule (CMS-1752F). April 2021. https://www.cms.gov/newsroom/fact-sheets/fiscal-year-fy-2022-medicare-hospitalinpatient-prospective-payment-system-ipps-and-long-term-care-0
55. Administration for Community Living. Nutrition Services. February 2022. https://acl.gov/programs/health-wellness/nutrition-services
56. Administrative for Community Living. Title III Older Americans Act (OAA) State Performance Report (SPR) and Older Americans Act Performance System (OAAPS). October 2021. https://acl.gov/newsand-events/announcements/older-americans-act-oaa-state-program-performance-report-sprredesign
57. Administration for Community Living. National Survey of OAA Participants. 2019. https://agid.acl.gov/datafiles/NPS/
58. Administration for Community Living. ACL Awards 2021 No Wrong Door Community Infrastructure Grants. September 2021. https://acl.gov/news-and-events/announcements/acl-awards-2021-nowrong-door-community-infrastructure-grants
59. Office of the National Coordinator for Health Information Technology. About ASTP/ONC. https://www.healthit.gov/topic/about-astponc
60. Office of the National Coordinator for Health Information Technology. 2024-2030 Federal Health IT Strategic Plan. chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.healthit.gov/sites/default/files/page/2024-09/ASTP%202024-2030%20Strategic%20Plan_508.pdf
61. About NCCARE 360. Accessed January 24, 2025. https://nccare360.org/about/
62. UniteUs.com. Majority of New York Social Care Networks will Leverage Unite Us to Align with 1115 Medicaid Waiver Goals, Serving Nearly 75% of State Medicaid Members. Accessed January 24, 2025. https://uniteus.com/press/ny-social-care-networks-unite-us-1115-medicaid-waiver-alignment/

63. About Seattle Indian Health Board. January 24, 2025. https://www.sihb.org/about/
64. Camden Health. Regional Health Hub. Accessed January 24, 2025. https://camdenhealth.org/work/regional-health-hub/
65. Children Now. Closing the Loop: Recommendations for Medi-Cal Referral Systems to Support Children and Families. Published online November 2023. https://www.childrennow.org/portfolio-posts/closing-the-loop-recommendations-for-medi-cal-referral-systems-to-support-children-and-families/
66. California Health Care Foundation. CalAIM Explained: A Five-Year Plan to Transform Medi-Cal. 2021. https://www.chcf.org/wp-content/uploads/2021/07/CalAIMExplainedFiveYearPlan.pdf
67. Department of Health Care Services. Medi-Cal for Kids & Teens. https://www.dhcs.ca.gov/services/Medi-Cal-For-Kidsand- Teens/Pages/home.aspx
68. Department of Health Care Services. Incentive Payment Program. https://www.dhcs.ca.gov/Pages/ IncentivePaymentProgram.aspx
69. Department of Health Care Services. Equity and Practice Transformation (EPT) Payment Program Guidance for Primary Care Practices and Medi-Cal Managed Care Plans. August 2023. https://www.dhcs.ca.gov/qphm/Documents/EPTGuidance- for-Primary-Care-Practices-and-Medi-Cal-Managed-Care-Plans.pdf
70. Department of Health Care Services. Memoranda of Understandings Between Medi-Cal Managed Care Plans and Third Party Entities. https://www.dhcs.ca.gov/Pages/MCPMOUS.aspx
71. Seyed-Nezhad M, Ahmadi B, Akbari-Sari A. Factors affecting the successful implementation of the referral system: A scoping review. *J Family Med Prim Care*. 2021;10(12):4364-4375. doi:10.4103/jfmpc.jfmpc_514_21
72. Transforming Clinical Practice Initiative. Closing-the-Loop. https://www.cms.gov/priorities/innovation/files/x/tcpi-san-pp-loop.pdf
73. Heath Leads. Best Practices from the Field: Using Social Determinants of Health Resource and Referral Data to Increase Equitable Access and Connection Rates to Essential Resources. 2021. https://healthleadsusa.org/wp-content/ uploads/2021/06/Best-Practices-from-the-Field-Health-Resource-and-Referral-Data.pdf
74. Rosencrance L. Regional Health Information Organization (RHIO). https://www.techtarget.com/searchhealthit/definition/Regional-Health-Information-Organization-RHIO
75. Iott BE, Eddy C, Casanova C, Veinot TC. More than a Database: Understanding Community Resource Referrals within a Socio-Technical Systems Framework. *AMIA Annu Symp Proc*. 2020;2020:583-592.
76. Hole MK, Letchuman S, Chang A, Berry LL. Community Health Partners in Unexpected Places. *Mayo Clinic Proceedings*. 2023;98(12):1833-1841. doi:10.1016/j.mayocp.2023.07.031
77. Reproductive Health National Training Center. Establishing and Providing Effective Referrals for Clients: A Toolkit for Family Planning Providers. Published online July 2022. , https://rhntc.org/resources/establishing-and-providing-effectivereferrals-clients-toolkit-family-planning-providers
78. Tabata-Kelly M, Hu X, Dill MJ, et al. Physician Engagement in Addressing Health-Related Social Needs and Burnout. *JAMA Netw Open*. 2024;7(12):e2452152. doi:10.1001/jamanetworkopen.2024.52152
79. Campbell KM, Rodríguez JE. Addressing the Minority Tax: Perspectives From Two Diversity Leaders on Building Minority Faculty Success in Academic Medicine. *Academic Medicine*. 2019;94(12):1854-1857. doi:10.1097/ACM.0000000000002839
80. Kung A, Cheung T, Knox M, et al. Capacity to Address Social Needs Affects Primary Care Clinician Burnout. *Ann Fam Med*. 2019;17(6):487-494. doi:10.1370/afm.2470

81. Sandhu S, Xu J, Eisenson H, Prvu Bettger J. Workforce Models to Screen for and Address Patients' Unmet Social Needs in the Clinic Setting: A Scoping Review. *J Prim Care Community Health*. 2021;12:21501327211021021. doi:10.1177/21501327211021021
82. McConnell KJ. Oregon's Medicaid Coordinated Care Organizations. *JAMA*. 2016;315(9):869. doi:10.1001/jama.2016.0206
83. Oregon Health Authority. Oregon's health system transformation 2014 final report. http://www.oregon.gov/oha/Metrics/Documents/2014-Final-Report-June-2015-ADA-Accessible.pdf
84. Oregon Health Authority. Social determinants of health (SDOH) incentive metric. https://www.oregon.gov/oha/hpa/dsi-tc/pages/sdoh-metric.aspx#:~:text=In%20May%202022%2C%20the%20Metrics,social%20needs%20acknowledged%20and%20addressed.
85. AMA. What is value-based care? January 12, 2025. https://www.ama-assn.org/practice-management/payment-delivery-models/what-value-based-care
86. AMA, The National Association of ACOs (NAACOS), AHIP. The Future of Sustainable Value-Based Payment: Voluntary Best Practices to Advance Data Sharing. Published online 2023. https://www.ama-assn.org/system/files/data-sharing-playbook.pdf
87. Aceves B, De Marchis E, Loomba V, Brown EM, Gottlieb LM. Stakeholder perspectives on social screening in US healthcare settings. *BMC Health Serv Res*. 2023;23(1):246. doi:10.1186/s12913-023-09214-z
88. National Academies of Sciences, Medicine Division, and Committee on Integrating Social Needs Care into the Delivery of Health Care to Improve the Nation's Health. *Integrating Social Care into the Delivery of Health Care: Moving Upstream to Improve the Nation's Health.*; 2019.
89. American Academy of Family Physicians. Social Determinants of Health (SDoH): Family Physicians' Role. 2018. https://www.aafp.org/dam/AAFP/documents/patient_care/everyone_project/sdoh-survey-results.pdf
90. U.S Department of Health and Human Services. Social Determinants of Health. https://odphp.health.gov/healthypeople/priority-areas/social-determinants-health
91. Center for Disease and Control. Health Disparities. https://www.cdc.gov/healthy-youth/health-disparities/index.html
92. Centers for Medicare & Medicaid Services. Health Equity. https://www.cms.gov/pillar/health-equity
93. Adebayo OW, Salerno JP, Francillon V, Williams JR. A systematic review of components of community-based organisation engagement. *Health Soc Care Community*. 2018;26(4):e474-e484. doi:10.1111/hsc.12533
94. Centers for Medicare & Medicaid Services. Care Coordination. https://www.cms.gov/priorities/innovation/key-concepts/care-coordination
95. Kaiser Family Foundation. State Health Facts, Medicaid Benefits: Case Management. 2018. https://www.kff.org/other/state-indicator/medicaid-benefits-casemanagement/?currentTimeframe=0&sortModel=%7B%22colId%22:%22Location%22,%22sort%22:%2 2asc%22%7D
96. Kaiser Family Foundation. State Health Facts, Medicaid Benefits: Targeted Case Management. 2018. https://www.kff.org/medicaid/state-indicator/targeted-casemanagement/?currentTimeframe=0&sortModel=%7B%22colId%22:%22Location%22,%22sort%22:%2 2asc%22%7D
97. Medicaid and CHIP Payment and Access Commission. Medicaid's Role in Housing. https://www.macpac.gov/wp-content/uploads/2021/06/Medicaids-Role-in-Housing-1.pdf

98. Corporation for Supportive Housing. Summary of State Actions, Medicaid & Housing Services. August 2021. https://www.csh.org/wp-content/uploads/2021/08/Summary-of-State-Action_-Medicaid-andSupportive-Housing-Services-2021-08.pdf
99. Kaiser Family Foundation. Medicaid Waiver Tracker: Approved and Pending Section 1115 Waivers by State. February 2022. https://www.kff.org/medicaid/issue-brief/medicaid-waiver-tracker-approvedand-pending-section-1115-waivers-by-state/
100. Centers for Medicare & Medicaid Services. Medicaid Health Homes: An Overview. April 2021. https://www.medicaid.gov/state-resource-center/medicaid-state-technical-assistance/health-homeinformation-resource-center/downloads/hh-overview-fact-sheet.pdf
101. Rosenbaum S. How States Are Using Comprehensive Medicaid Managed Care to Strengthen and Improve Primary Health Care. https://www.commonwealthfund.org/publications/issue-briefs/2020/jul/how-states-are-usingcomprehensive-medicaid-managed-care

REPORT 3 OF THE COUNCIL ON SCIENCE AND PUBLIC HEALTH (A-25)
Protections Against Surgical Smoke Exposure
(Resolution 404-A-24)

EXECUTIVE SUMMARY

BACKGROUND. Resolution 404-A-24, "Protections Against Surgical Smoke Exposure," was referred. This resolution called for AMA to support efforts to limit surgical smoke in operation rooms. This report provides a summary of the available evidence on the potential health impacts of surgical smoke, currently available preventive strategies, the landscape of legislative activity to limit surgical smoke, and a summary of potential concerns or barriers to effective prevention.

METHODS. English language reports were selected from searches of the PubMed and Google Scholar databases using the search terms: "surgical smoke" AND "health" as well as "surgical smoke" AND "prevention." Additional searches were performed on both effectiveness and cost concerns of current preventive measures. Legal websites were searched to identify which states have passed legislation on this topic. Additional articles were identified by manual review of the reference lists of pertinent publications. Web sites managed by federal agencies and advocacy organizations were also reviewed for relevant information.

DISCUSSION. Surgical smoke results from the use of energy-generating devices during surgery, including electric knives, ultrasonic scalpels, and lasers, which causes the temperature of tissue to rise to the point of tissue vaporization, released as surgical smoke. Surgical smoke has been estimated to be about 95 percent water vapor and five percent organic byproducts, the latter being responsible for potential adverse exposure risks. Surgical smoke is a health concern as it may contain a number of known health hazards, including benzene, toluene, hydrogen cyanide, formaldehyde, viruses, and bacteria. The potential negative impacts from surgical smoke are severalfold. First, surgical smoke may limit visibility within the operative field, affecting the safety of the surgical operation to some extent if it is not actively cleared. Second, surgical smoke can cause short-term discomfort and potential illness to surgical staff. Depending on the size and types of particles released, surgical smoke can cause acute irritation of the eyes and throat while smaller particles in smoke can settle further in the lungs. Inhalation of particulate matter smaller than 2.5 micrometers (PM2.5) has been associated with increased incidence of asthma, chronic obstructive pulmonary disease, lung cancer, and cardiovascular disease. Lastly, surgical smoke may increase the risk of disease transmission through the presence of viral and bacterial pathogens in the smoke. Despite potential health hazards, there is heterogeneity of findings in the available research, which is partially explained by challenges in understanding the true exposure risk, as it differs by the type of surgery, specialty, profession, and what role an individual has in the operating room. However, there are several preventive measures recommended by multiple organizations that can be employed to reduce risk to personnel, which include the use of smoke evacuation equipment, having appropriate ventilation, and wearing appropriate PPE, which may include surgical masks or N95 respirators.

CONCLUSION. While more research is needed to better understand the potential health impacts associated with surgical smoke, there is currently no known safe level. In taking a public health precautionary principal approach, it is reasonable to take preventive measures even if health hazards are uncertain. Recommended preventative approaches are well known and consistent across multiple organizations. Additionally, increased education on the potential health risks of surgical smoke among health care personnel is needed, as many have not received any sort of training or education on the subject.

REPORT OF THE COUNCIL ON SCIENCE AND PUBLIC HEALTH

CSAPH Report 3-A-25

Subject: Protections Against Surgical Smoke Exposure

Presented by: John T. Carlo, MD, MS, Chair

Referred to: Reference Committee D

INTRODUCTION

Resolution 404-A-24, "Protections Against Surgical Smoke Exposure," was referred. This resolution called for AMA to support efforts to limit surgical smoke in operation rooms. Testimony noted conflicting evidence as well as ergonomic and cost considerations of smoke evacuation technologies. This report provides a summary of the available evidence on the potential health impacts of surgical smoke, currently available preventive strategies, the landscape of legislative activity to limit surgical smoke, and a summary of potential concerns or barriers to effective prevention. While surgical smoke can also be of concern to patients, this report focuses on the issue from an occupational health and safety perspective for health care personnel.

BACKGROUND

Surgical smoke results from the use of energy-generating devices during surgery, including electric knives, ultrasonic scalpels, and lasers, which causes the temperature of tissue to rise to the point of tissue vaporization, released as surgical smoke. Surgical smoke has been estimated to be about 95 percent water vapor and five percent organic byproducts, the latter being responsible for potential adverse exposure risks.[1] Surgical smoke is a health concern as it may contain a number of known health hazards, including benzene, toluene, hydrogen cyanide, formaldehyde, viruses, and bacteria.[2] The potential negative impacts from surgical smoke are severalfold. First, surgical smoke may limit visibility within the operative field, affecting the safety of the surgical operation to some extent if it is not actively cleared. Second, surgical smoke can cause short-term discomfort and potential illness to surgical staff.[3,4] Depending on the size and types of particles released, surgical smoke can cause acute irritation of the eyes and throat while smaller particles in smoke can settle further in the lungs. Inhalation of particulate matter smaller than 2.5 micrometers ($PM_{2.5}$) has been associated with increased incidence of asthma, chronic obstructive pulmonary disease, lung cancer, and cardiovascular disease.[5] Lastly, surgical smoke may increase the risk of disease transmission through the presence of viral and bacterial pathogens in the smoke.[6]

METHODS

English language reports were selected from searches of the PubMed and Google Scholar databases using the search terms: "surgical smoke" AND "health" as well as "surgical smoke" AND "prevention." Additional searches were performed on both effectiveness and cost concerns of current preventive measures. Legal websites were searched to identify which states have passed legislation on this topic. Additional articles were identified by manual review of the reference lists of pertinent publications. Web sites managed by federal agencies and applicable professional and advocacy organizations were also reviewed for relevant information.

DISCUSSION

Health hazards of surgical smoke

There are several different types of energy-generating devices utilized during surgery to cut and cauterize tissue, including electric knives, ultrasonic scalpels, and lasers. The composition of surgical smoke, particle size, and the amount produced is dependent on the device used and the type of tissue where it is employed. For example, the cauterization of solid organs or fat tissue versus muscle tissue has been found to create higher emissions.[7] In one study, much higher levels of ultrafine particulate matter were measured while operating on the liver compared to surgeries involving muscle, adipose tissue, and blood vessels.[3] Additionally, surgical smoke particles with the smallest size, generally less than 0.1 micrometers (μm), are produced by electrocautery, followed by laser tissue ablation (~0.3 μm) and ultrasonic scalpel usage (0.35–6.5 μm).[8] Particle sizes of less than five μm are of more concern as they are respirable, with smaller particles of sizes less than two μm being of the greatest concern as they can penetrate and be deposited deeper in the lungs.[8] Surgical smoke is a health risk for a range of health care staff. The Occupational Safety and Health Administration (OSHA) estimates that around half a million workers, including surgeons, nurses, anesthesiologists, gynecologists, perioperative practitioners, dermatologists, and surgical technologists, are exposed annually to surgical smoke.[9]

Concern over surgical smoke is driven by its composition as it may contain several known health hazards, including chemicals such as hydrogen cyanide, polycyclic aromatic hydrocarbons (PAHs), volatile organic compounds (VOCs – such as benzene, toluene, formaldehyde, etc.), pathogens (viruses and bacteria), and particulate matter.[1] However, the exposure to any of these health hazards may differ by specialty and profession, in terms of the type of surgeries they perform, as well as what role an individual has in the operating room. Additionally, exposure levels differ among staff members depending on where they stand during surgical procedures and the length of working hours. Coupled with the heterogeneity in the study methods used to assess risk and different types of surgery, it remains a challenge to obtain an accurate picture of exposure to surgical smoke to operating staff during procedures. While there have been a predominance of nonhuman studies assessing negative impacts of surgical smoke, human studies have yet to show a direct causal link between surgical smoke exposure and poor health outcomes besides acute irritative symptoms such as headache, eye irritation and watering, and throat irritation and cough.[3,4]

Studies assessing operating staff exposure to various chemicals in surgical smoke illustrate these multiple challenges. For example, there are concerns that surgical smoke contains VOCs such as benzene and formaldehyde, but studies conducted by the National Institute of Occupational Safety and Health (NIOSH) where they sampled surgical theaters found few VOCs. Even when detected, they were at levels below OSHA and NIOSH recommended exposure limit levels.[10] Another study has noted that VOCs were found to be higher during open surgery versus laparoscopic surgery.[3]

Nonetheless, due to the varied components in surgical smoke, there are several different biological mechanisms and pathways impacting health. Potential health impacts from surgical plumes are categorized into four main groups and are summarized below.

Respiratory impacts

There is a potential for ultrafine particles (particles 0.1μm in size) in surgical smoke plumes that can penetrate and be deposited deep in the lungs.[10] Known health impacts of particulate matter (PM) exposure include cardiovascular effects, including heart attacks, heart failure, and strokes, as well as respiratory effects, including asthma attacks and increased respiratory symptoms such as

coughing, wheezing, and shortness of breath.[5] Data from the U.S. Nurses' Health Study, an ongoing prospective cohort that started in 1976 with biennial surveys, have shown that operating room (OR) nurses have a higher risk of chronic obstructive pulmonary disease compared to nurses in administrative positions, but they were equivalent to those working in the emergency department or within in-patient hospital units.[11] From this same study, OR nurses were also found to have lower incidence of asthma compared to those working in administrative positions.[12] On the other hand, other studies have noted OR staff have an increased risk of respiratory diseases, such as sinus problems, allergies, asthma, and bronchitis, compared to the general population.[13]

For PM, direct measurement of smoke in 100 laparoscopic surgeries found unhealthy concentrations of PM 2.5 but the measurement duration was not reported, which restricts comparisons with established standards that are used for other occupational settings or the U.S. Clean Air Act.[3] Multiple studies have found widely variable concentrations of PM levels, some over known Environmental Protection Agency (EPA) limits, others comparable to daily office exposure or lower than outdoor urban or rural environments, and still others found very brief but extremely high peaks in concentrations.[3,14] Another limitation that could explain wide variations in findings on PM levels is that studies examining surgical plumes for ultrafine particles have used devices that are unable to discern between water vapor and PM, a significant design flaw as living tissue has a high-water content.[10] As a whole, these data make it difficult to conclude whether surgical smoke contains levels of PM of concern for OR personnel.

Cancer risk

Several of the compounds found in surgical smoke are known carcinogens, notably benzene, 1,2-dichloroethane, and polycyclic aromatic hydrocarbons (PAHs).[15] In one study, the concentration of PAHs from 10 mastectomies were investigated to estimate cancer risk to surgical staff. Looking at the PAH concentrations within the breathing zones of surgical staff, the study authors found the concentrations to be 20 to 30 times higher than those in regular outdoor environments and thus their cancer risk was significantly higher than the benchmark set by EPA.[16] To note, even though measured PAH concentrations were higher by the surgeon, the anesthetic technologists had a higher cancer risk due to their longer working hours in operation rooms.[16] While the increased cancer risk may be greater than the general population, assessed exposure levels have varied from study to study, with some noting higher concentrations while others have noted they are within acceptable limits.[3] Due to the PM and carcinogenic compounds within surgical smoke, an increased risk of lung cancer is a concern among surgical personnel in the literature. Several studies have aimed to compare the carcinogenic risk of surgical smoke to smoking cigarettes, with comparisons ranging from exposure similar to smoking six cigarettes to inhaling the secondhand smoke of 27 to 30 unfiltered cigarettes a day.[17,18]

The first study on this was published in 1981. Utilizing electrosurgery tools on a canine tongue, smoke condensates was collected in a closed box system to assess the mutagenicity of the smoke using the Ames test (a well-established assay to evaluate the mutagenicity of agents) and found that the smoke from one gram of tissue was equivalent to those from three to six cigarettes in terms of total mutagenicity.[17] More recently, a study by plastic surgeons assessed ablated human and porcine tissue to determine how much tissue was destroyed over five minutes and then reviewed the total electrosurgery time in their operating room over a 44 day period to determine a daily average level of exposure. Using the one gram of tissue equivalency to six cigarettes assumption from the 1981 study, it was concluded that daily electrosurgery produced the equivalent of secondhand smoke of 27-30 unfiltered cigarettes.[18] Although these figures are often cited in the literature to demonstrate the hazards of surgical smoke, several researchers have called these findings into question. They argue that the methods used in the original 1981 study were limited in

that the mutagenicity test was based on smoke produced in a close-system smoke chamber, which is not reflective of the surgical theater environment and exposure, and thus the concluded equivalency is faulty and misleading.[3,10,19]

Importantly, there is no evidence demonstrating that exposure to surgical smoke increases the risk of lung cancer. On the contrary, the Nurse's Health Study cohort, which focused on 87,000 nurses with and without operating room experience in 1984, showed no increase in lung cancer incidence at follow-up nearly 15 years later. In fact, the nurses with the longest operating room experience had significantly less incidence of lung cancer on follow-up, even after controlling for cigarette smoking history.[3]

Infectious diseases

Another concern with surgical smoke is the presence of viral fragments within the plume with some evidence demonstrating RNA or DNA fragments of SARS-CoV-2, human papillomavirus (HPV), hepatitis B, and human immunodeficiency virus (HIV) in surgical smoke.[20] Concern over HPV exposure in surgical smoke has been raised more frequently due to the common use of energy-generating devices in LEEP and anal wart ablative surgeries. While HPV particles have been detected in surgical smoke and inhalation of these particles into the upper airways has been detected, the evidence for transmission is more controversial.[21] The evidence of HPV-related disease in operation room staff following exposure to HPV is largely based on retrospective and survey data, which did not verify findings through confirmatory testing, and a small number of case studies (n = 4).[6] Increased prevalence of HPV infection or HPV-related disease in operating room staff following occupational exposure to surgical smoke has not been convincingly demonstrated.[6]

For example, HPV DNA was detected in nasal epithelial cells of surgeons performing ablative surgery on HPV+ patients much more frequently than surgeons who do not conduct these types of operations. However, with a notable loss of follow-up, all became negative at two years.[21] The highest level of evidence and most cited studies have been case reports of laser surgeons diagnosed with HPV+ laryngeal papillomatosis (n = 1) and tonsillar cancer (n = 2), as well as an operating room nurse with papillomatosis who was frequently exposed to ablative excision of anogenital warts.[3] Another more recent study assessed HPV prevalence among operating room staff using post-surgery nasal swabs to detect whether HPV was present and in greater than 98 percent of samples, no HPV was present. The operating team had used a smoke evacuator system, and an overwhelming majority wore surgical masks, versus N95 masks. In the less than two percent of staff where HPV DNA was detected in nasal swabs, no HPV related disease was detected after 3-6 months of follow-up.[6] Researchers have noted that despite the limited evidence for HPV-related disease risk from surgical smoke, for cases where HPV lesions are to be cauterized, the use of smoke evacuators and/or N95 masks are reasonable precautionary measures.[10]

During the COVID-19 pandemic, concern over the transmissibility of human coronavirus during surgical procedures was also raised. A 2021 study evaluating the existence and infectivity of human coronavirus RNA in surgical smoke found that while viral RNA was present in the smoke, it was not demonstrated to be infectious and the study authors found that surgical masks were able to effectively reduce the amount of viral RNA by at least 99.8 percent.[20] Lastly, there have been no case reports of suspected transmission of HIV or viral hepatitis via surgical smoke.[10] Evidence for concern is solely based on existence of DNA fragments in surgical smoke.

Reproductive outcomes

Female surgeons have been shown to have higher rate of adverse pregnancy outcomes and infertility compared to the general population, but there have been no studies evaluating the direct effects of exposure of surgical smoke on reproductive outcomes.[7] However, other studies have demonstrated negative reproductive health outcomes from various components found in surgical smoke. For example, PM exposure has been linked to low birth weight and preterm labor. Toluene has been associated with cognitive impairment, congenital defects and infertility while benzene has been linked to an increased risk of childhood leukemia. Lastly, 1,2-Dichlorethane is associated with an increased risk of spontaneous abortion and infertility (but in animal studies only).[7] These are just a few of the 45 different chemicals that have been identified in surgical smoke. More research is needed to better understand whether OR exposure to surgical smoke could be related to negative reproductive health outcomes.

Known prevention strategies, evidence of effectiveness, and barriers to implementation

The issue of clinician exposure to surgical smoke was brought to the attention of the OSHA, the primary federal agency responsible for developing protective standards related to health care occupations, nearly 35 years ago but regulations were never formulated on the topic.[22,23] Despite the lack of a federal regulatory standard, OSHA, NIOSH, the American National Standards Institute, ECRI, and the Association of periOperative Registered Nurses (AORN) have developed recommendations on minimizing exposure to surgical smoke in the operating environment.[24–27] AORN has a Go Clear program, a comprehensive surgical smoke-free recognition program for facilities who want to ensure a smoke-free environment.[25] Across guidance documents, the most recommended preventive measure to limit exposure to surgical smoke in the operating rooms is utilizing smoke evacuation equipment to remove smoke near the surgical site where smoke is generated.[28] An operating room smoke evacuation system is designed to capture surgical smoke and includes a capture device (either free standing or fitted over an electrosurgical tool), a vacuum system, and some type of filtration unit capable of capturing contaminants.[1,29] Illustrative examples are provided at the end of this report.

Wearing personal protective equipment (PPE), including standard surgical masks or even N95 respirators and masks containing activated carbon have also been recommended. PPE can provide some level of protection but is not protective against all possible particles contained in surgical smoke, particularly particles less than 0.3 μm (the functional limit of N95 masks).[24] Additionally, having appropriate ventilation in the operation room to avoid any lingering presence of smoke in the operating environment is also recommended.[9] However, NIOSH determined that the Centers for Disease Control and Prevention's (CDC) recommended air exchanges per hour is insufficient on its own for adequate surgical smoke evacuation.[7] Furthermore, in outpatient surgical settings there may be little to no ventilation in comparison to operating rooms, which are required to adhere to specific ventilation requirements.[24] From outside the U.S., the British Association of Dermatologists has called for smoke extractors to be made available in all settings where dermatology surgery takes places and further occupational health research on potential health risks from surgical plumes be conducted.[30]

Due to concerns of increased risk HPV infection and resulting oropharyngeal cancer in health care personnel, HPV vaccination of health care staff exposed to HPV through surgical smoke has been raised as a potential preventative strategy.[31] In the U.S., the American Society for Colposcopy and Cervical Pathology (ACSSP) has recommended the HPV vaccine for individuals working in gynecology routinely exposed to HPV.[32] However, the American College of Obstetricians and Gynecologists and CDC's Advisory Committee on Immunization Practices do not currently have

similar recommendations for health care personnel to receive the HPV vaccine.[33,34] The AMA has sent a letter to the CDC asking them to review the available evidence for recommending the HPV vaccine for health care professionals to prevent health care related infection of HPV.

While implementing smoke evacuation systems is understood to be the most effective strategy for reducing surgical smoke exposure, their use is limited and inconsistent, with one study finding that only about 10 percent of surgeons consistently use them.[35] A number of barriers to implement effective preventive strategies, both at the individual and organizational level, have been identified.[36] At the individual level, barriers to usage include surgeon resistance, impaired surgical view, excessive noise, and lack of education.[7] To illustrate the lack of education among surgical staff, in a 2016 survey of dermatologist residents, nearly 72 percent had not received any education on the potential hazards of electrosurgery smoke during their medical training.[37] In terms of excessive noise, a 2021 study assessed the noise associated with 11 identified surgical smoke evacuators used during dermatologic surgery and found none of them had sound levels greater than the permissible upper limit as recommended by OSHA, and therefore would not be considered an occupational hazard based on a 8-hour exposure.[38]

Even if smoke evacuator noises do not exceed OSHA standards, operating team members may subjectively still find the noise excessive, a distraction, or an annoyance. Perceived excessive noise in the operation room can increase risk for error, by making it difficult to hear critical information or communicate effectively, and thus presents an unsafe environment the patient.[39] However, as the smoke evacuator would only need to be operational during the period in which smoke is being produced by electrosurgery tools, it could be assumed the noise would not be a constant and therefore minimally distracting.

At the organizational or hospital level, barriers include a lack of resources, associated costs with purchases smoke evacuation systems, and insufficient or nonexistent internal policies on the matter.[40] Improving awareness among health care staff around the potential harms of surgical smoke and the protective measures designed to minimize personal harm among health care workers could help improve personal and organizational uptake of appropriate preventive measures.

Legislation

As there is no federal standard or regulation around surgical smoke, some states have passed policy to require surgical smoke evacuation systems. Rhode Island was the first state to pass such a policy in 2018.[24] Based on a review of state laws in the summer of 2024, 18 states have passed surgical smoke legislation. In terms of countries that have passed legislation on this topic, Denmark was the first and remains one of the only countries in the world to pass national legislation requiring employers to install evacuation systems that remove smoke and other harmful substances as close as possible to the source in surgical theaters.[41] To date, there are no evaluation or implementation studies that have assessed the effectiveness or impacts of these state laws on reducing surgical smoke exposure.

AMA POLICY

Existing AMA policy does not address surgical smoke directly but supports the development of regulations to protect workers from occupational carcinogens using the best available scientific data and the protection of medical trainees from potential hazardous exposures.[42]

CONCLUSIONS

While more research is needed to better understand the potential health impacts associated with surgical smoke, there is currently no known safe level. In taking a public health precautionary principal approach, it is reasonable to take preventive measures even if health hazards are uncertain. There are several preventive measures that are recommended by multiple organizations and can be employed to reduce risk to personnel, which include the use of smoke evacuation equipment, having appropriate ventilation, and wearing appropriate PPE, which may include surgical masks or even N95 respirators. Additionally, increased education on the potential health risks of surgical smoke among health care personnel is needed, as many have not received any sort of training or education on the subject.

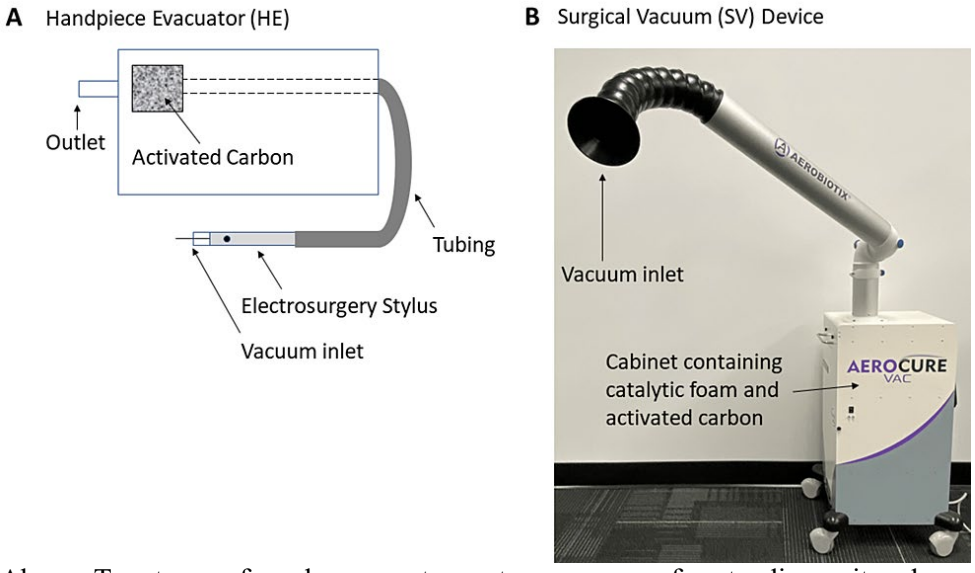
RECOMMENDATIONS

The Council on Science and Public Health recommends that the following be adopted, and the remainder of the report be filed.

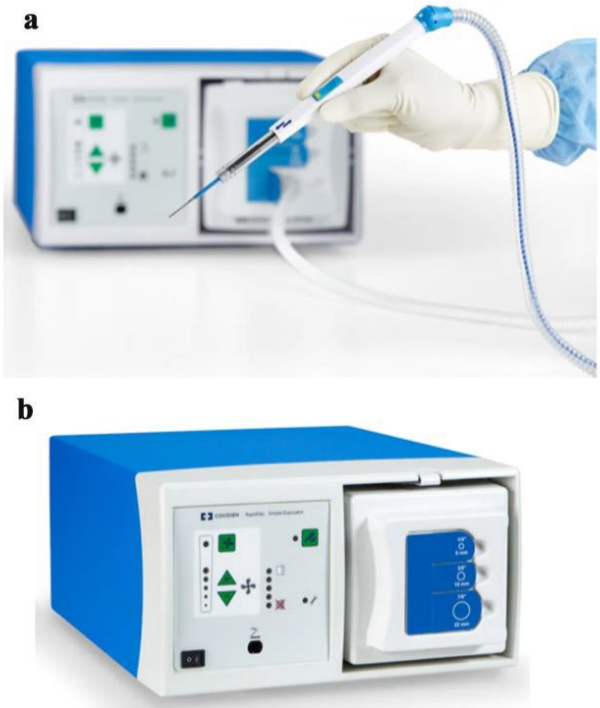
That our American Medical Association:
(1) supports efforts to limit surgical smoke exposure in operating rooms, including where exposure to infectious diseases such as human papillomavirus may occur, using various methods such as smoke evacuators, appropriate ventilation, and/or appropriate personal protective equipment;
(2) recommends education on surgical smoke among medical students and health care professionals that work and/or train in operating rooms to improve awareness of the potential dangers of surgical smoke and preventive measures that can be taken; and
(3) encourages ongoing monitoring, data collection, and longitudinal research into the health impacts of surgical smoke to better inform understanding of potential health risks and evidence-based interventions to reduce risk. (New HOD Policy)

Fiscal Note: less than $1,000

APPENDIX: Examples of Smoke Evacuation Systems. TO NOTE: The AMA does not endorse any specific smoke evacuation device or manufacturer. These are only included as illustrative of different types of systems.



Above: Two types of smoke evacuator systems, one as a freestanding unit and one with the vacuum inlet over the electrosurgery tool.[43]



Smoke evacuation device showing (a) electrosurgical pencil containing capture system surrounding protruding electrode connected to (b) vacuum-driven smoke evacuator with replaceable ULPA filtration unit. ©2020 Medtronic. All rights reserved. Used with permission of Medtronic

Above: Example of a smoke evacuation device with an electrosurgical pencil containing capture system.[1]

REFERENCES

1. Swerdlow BN. Surgical smoke and the anesthesia provider. *J Anesth*. 2020;34(4):575-584. doi:10.1007/s00540-020-02775-x
2. Spruce L. Back to Basics: Protection From Surgical Smoke. *AORN J*. 2018;108(1):24-32. doi:10.1002/aorn.12273
3. Benaim EH, Jaspers I. Surgical smoke and its components, effects, and mitigation: a contemporary review. *Toxicol Sci*. 2024;198(2):157-168. doi:10.1093/toxsci/kfae005
4. Canicoba ARB, Poveda V de B. Surgical Smoke and Biological Symptoms in Healthcare Professionals and Patients: A Systematic Review. *J Perianesthesia Nurs Off J Am Soc PeriAnesthesia Nurses*. 2022;37(1):130-136. doi:10.1016/j.jopan.2021.06.106
5. US EPA O. Particle Pollution Exposure. September 15, 2014. Accessed January 13, 2025. https://www.epa.gov/pmcourse/particle-pollution-exposure
6. Fox-Lewis A, Allum C, Vokes D, Roberts S. Human papillomavirus and surgical smoke: a systematic review. *Occup Environ Med*. 2020;77(12):809-817. doi:10.1136/oemed-2019-106333
7. Anderson M, Goldman RH. Occupational Reproductive Hazards for Female Surgeons in the Operating Room: A Review. *JAMA Surg*. 2020;155(3):243-249. doi:10.1001/jamasurg.2019.5420
8. Hofer V, Kriegel M. Exposure of operating room surgical staff to surgical smoke under different ventilation schemes. *Indoor Air*. 2022;32(1):e12947. doi:10.1111/ina.12947
9. National Institutes of Occupational Safety and Health. Study Finds Healthcare Workers' Exposure to Surgical Smoke Still Common. December 16, 2022. Accessed November 14, 2024. https://archive.cdc.gov/www_cdc_gov/niosh/updates/upd-11-03-15.html
10. Hurst RD, Stewart CL. Hazards of surgical smoke from electrocautery: A critical review of the data. *Am J Surg*. 2024;233:29-36. doi:10.1016/j.amjsurg.2024.02.017
11. Dumas O, Varraso R, Boggs KM, et al. Association of Occupational Exposure to Disinfectants With Incidence of Chronic Obstructive Pulmonary Disease Among US Female Nurses. *JAMA Netw Open*. 2019;2(10):e1913563. doi:10.1001/jamanetworkopen.2019.13563
12. Dumas O, Boggs KM, Quinot C, et al. Occupational exposure to disinfectants and asthma incidence in U.S. nurses: A prospective cohort study - Dumas - 2020 - American Journal of Industrial Medicine - Wiley Online Library. *Am J Ind Med*. 2020;63(1):44-50. doi:https://doi.org/10.1002/ajim.23067
13. Tagle M. Reduction of Surgical Smoke in the Operating Room: Application of the Evidence. *J Pediatr Surg Nurs*. 2020;9(2):49-51. doi:10.1097/JPS.0000000000000244
14. Stewart CL, Raoof M, Lingeman R, et al. A Quantitative Analysis of Surgical Smoke Exposure as an Occupational Hazard. *Ann Surg*. 2021;274(2):306-311. doi:10.1097/SLA.0000000000004920
15. Limchantra IV, Fong Y, Melstrom KA. Surgical Smoke Exposure in Operating Room Personnel: A Review. *JAMA Surg*. 2019;154(10):960-967. doi:10.1001/jamasurg.2019.2515
16. Tseng HS, Liu SP, Uang SN, et al. Cancer risk of incremental exposure to polycyclic aromatic hydrocarbons in electrocautery smoke for mastectomy personnel. *World J Surg Oncol*. 2014;12:31. doi:10.1186/1477-7819-12-31
17. Yoshifumi T, Shigenobu M, Kazuto N, et al. Mutagenicity of smoke condensates induced by CO2-laser irradiation and electrocauterization. *Mutat Res Toxicol*. 1981;89(2):145-149. doi:10.1016/0165-1218(81)90120-8
18. Hill DS, O'Neill JK, Powell RJ, Oliver DW. Surgical smoke – A health hazard in the operating theatre: A study to quantify exposure and a survey of the use of smoke extractor systems in UK plastic surgery units. *J Plast Reconstr Aesthet Surg*. 2012;65(7):911-916. doi:10.1016/j.bjps.2012.02.012

19. Stewart CL. Do we need to reduce surgical smoke? *Ann Transl Med*. 2022;10(24):1304. doi:10.21037/atm-22-5652
20. Yokoe T, Kita M, Odaka T, Fujisawa J, Hisamatsu Y, Okada H. Detection of human coronavirus RNA in surgical smoke generated by surgical devices. *J Hosp Infect*. 2021;117:89-95. doi:10.1016/j.jhin.2021.08.022
21. Palma S, Gnambs T, Crevenna R, Jordakieva G. Airborne human papillomavirus (HPV) transmission risk during ablation procedures: A systematic review and meta-analysis. *Environ Res*. 2021;192:110437. doi:10.1016/j.envres.2020.110437
22. Occupational Safety and Health Administration. Healthcare - Standards. Accessed January 14, 2025. https://www.osha.gov/healthcare/standards
23. Sadler D. Surgical Smoke Legislation Update. *Today Mag*. Published online January 1, 2024. Accessed April 16, 2024. https://ortoday.com/surgical-smoke-legislation-update/
24. The Joint Commission. Alleviating the dangers of surgical smoke. *Quick Saf*. 2020;(56). https://www.jointcommission.org/-/media/tjc/newsletters/quick-safety-56-surgical-smoke-final3.pdf
25. AORN. Center of Excellence in Surgical Safety-Smoke. Aorn.org. Accessed October 7, 2024. https://www.aorn.org/education/education-for-facilities/surgical-safety-center-of-excellence/go-clear-awards
26. Wagner D, Pearcey S, Hudgins CJ, Ulmer BC. Surgical smoke knowledge and practices before and after onset of COVID-19: A national survey of OR personnel. *Perioper Care Oper Room Manag*. 2024;35:100411. doi:10.1016/j.pcorm.2024.100411
27. Occupational Safety and Health Administration. Hospitals - Surgical Suite - Smoke Plume. Accessed January 15, 2025. https://www.osha.gov/etools/hospitals/surgical-suite/smoke-plume
28. Okoshi K, Kobayashi K, Kinoshita K, Tomizawa Y, Hasegawa S, Sakai Y. Health risks associated with exposure to surgical smoke for surgeons and operation room personnel. *Surg Today*. 2015;45(8):957-965. doi:10.1007/s00595-014-1085-z
29. The National Institute for Occupational Safety and Health. Control of smoke from laser/electric surgical procedures. Published online 1996. doi:10.26616/NIOSHPUB96128
30. British Association of Dermatologists. COVID-19: British Association of Dermatologists Position Statement on the Risk of Cancer from Viral Particles in Surgical Plume. Published online April 3, 2021. https://cdn.bad.org.uk/uploads/2022/05/19082127/BAD-Position-statement-on-viral-particles-in-surgical-plume-FINAL.pdf
31. Shemtob L, Asanati K, Jayasekera P. Should healthcare workers with occupational exposure to HPV be vaccinated? *Occup Med*. 2023;73(3):115-116.
32. American Society for Colposcopy and Cervical Pathology. HPV Vaccination - ASCCP. Accessed December 2, 2024. https://www.asccp.org/hpv-vaccination
33. American College of Obstetricians and Gynecologists. Adjuvant Human Papillomavirus Vaccination for Patients Undergoing Treatment for Cervical Intraepithelial Neoplasia 2+. Accessed December 2, 2024. https://www.acog.org/clinical/clinical-guidance/practice-advisory/articles/2023/07/adjuvant-human-papillomavirus-vaccination-for-patients-undergoing-treatment-for-cervical-intraepithelial-neoplasia
34. CDC. ACIP Recommendations: Human Papillomavirus (HPV) Vaccine. ACIP Vaccine Recommendations and Guidelines. September 23, 2024. Accessed January 7, 2025. https://www.cdc.gov/acip-recs/hcp/vaccine-specific/hpv.html
35. Oslock W, Alkhatib J, Nkengbeza L, Vilcassim R, Morris M, Chu D. Air Pollution in the Operating Room: A Call to Embrace Smoke Evacuators. *Ann Surg*. 2024;280(1):23-25. doi:10.1097/SLA.0000000000006260
36. Martyak P, Thornton K. *Surgical Smoke Evacuation Device Implementation: A Quality Improvement Project at Doernbecher Children's Hospital*. Oregon Health and Science University; 2023. https://digitalcollections.ohsu.edu/record/42696?ln=en&v=pdf#files

37. Chapman LW, Korta DZ, Lee PK, Linden KG. Awareness of Surgical Smoke Risks and Assessment of Safety Practices During Electrosurgery Among US Dermatology Residents. *JAMA Dermatol*. 2017;153(5):467-468. doi:10.1001/jamadermatol.2016.5899
38. Grigoryan KV, Kampp JT. Noise Associated With Surgical Smoke Evacuators During Dermatologic Surgery. *Dermatol Surg*. 2020;47(5):726-727. doi:10.1097/DSS.0000000000002543
39. The Joint Commission. Quick Safety Issue 35: Minimizing noise and distractions in the OR and procedural units. August 14, 2017. Accessed January 14, 2025. https://www.jointcommission.orghttps://www.jointcommission.org/resources/news-and-multimedia/newsletters/newsletters/quick-safety/quick-safety-issue-35-minimizing-noise-and-distractions--in-the-or-and-procedural-units/
40. Steege AL, Boiano JM, Sweeney MH. Secondhand smoke in the operating room? Precautionary practices lacking for surgical smoke. *Am J Ind Med*. 2016;59(11):1020-1031. doi:10.1002/ajim.22614
41. Surgical Smoke Coalition. Surgical Smoke Coalition. October 22, 2021. Accessed January 7, 2025. https://surgical-smoke-coalition.com/
42. American Medical Association. H-365.996 Regulation of Occupational Carcinogens. 2023. Accessed January 15, 2025. https://policysearch.ama-assn.org/policyfinder/detail/%22Regulation%20of%20Occupational%20Carcinogens%20H-365.996%22?uri=%2FAMADoc%2FHOD.xml-0-3112.xml
43. Carroll GT, Kirschman DL, Carroll GT, Kirschman DL. Formaldehyde Reduction in an Operating Room Setting: Comparison of a Catalytic Surgical Vacuum Device With a Traditional Smoke Evacuator. *Cureus*. 2023;15. doi:10.7759/cureus.38831

REPORT 4 OF THE COUNCIL ON SCIENCE AND PUBLIC HEALTH (A-25)
Condemning the Universal Shackling of Every Incarcerated Patient in Hospitals
(Reference Committee D)

EXECUTIVE SUMMARY

INTRODUCTION. Resolution 427-A-24, referred by the House of Delegates, asked that our American Medical Association: condemn the practice of universally shackling every patient who is involved with the justice system while they receive care in hospitals and outpatient health care settings; and advocate for the universal assessment of every individual who is involved with the justice system who presents for care, by medical and security staff in collaboration with correctional officers, to determine whether shackles are necessary or may be harmful, and, if restraint is deemed necessary, that the least restrictive alternative to shackling with metal cuffs is used when appropriate; and advocate nationally for the end of universal shackling, to protect human and patient rights, improve patient health outcomes, and reduce moral injury among physicians.

METHODS. English language articles were reviewed from searches of PubMed and Google Scholar using the search terms “shackling in health care settings”, “shackling AND harm to health care professional” and “shackling AND harm”. Additional articles were identified by manual review of the reference lists of pertinent publications. Web sites managed by government agencies such as the Department of Justice; applicable organizations were also reviewed for relevant information such as the National Commission on Correctional Health Care.

DISCUSSION. The United States has the highest incarceration rate in the world. Compared to the general population, individuals with a history of incarceration are in worse mental and physical health. Individuals who are incarcerated typically have high rates of psychiatric conditions, communicable diseases, substance use disorders, and chronic diseases. When medical care required by a person who is incarcerated exceeds the capabilities of the correctional facility’s health system, that individual is transferred to a contracted hospital or, in emergent cases, to the nearest health care institution. Clinicians practicing outside of correctional settings face unique medical, legal, and ethical issues surrounding the care of patients who are incarcerated. One of those challenges is the routine shackling of patients who are incarcerated and seeking care. Shackling policies for patients who are incarcerated are different from hospital restraint policies for patients who are agitated or combative. The latter is governed by Center for Medicare & Medicaid Services guidelines mandating the least restrictive form of restraint and for the shortest duration of time needed to ensure patient and staff safety. In contrast, case reports describe patients who are incarcerated being shackled with metal cuffs indefinitely, even while intubated, paralyzed, disabled, or in labor.

CONCLUSION. This report evaluates the current protocol for shackling of patients who are incarcerated when they are seeking health care, the arguments in support of shackling, and current reforms to ban or limit universal shackling of incarcerated patients. Future reports should examine special considerations for certain incarcerated populations such as older individuals, individuals who are disabled, and individuals in the juvenile justice system. The recommendations encourage health care facilities to develop and implement policies that eliminate or reduce universal shackling of patients who are incarcerated while receiving health care. Recommendations also support allowing health care professionals to communicate to correctional officers about what is medically necessary to provide the standard of care.

REPORT OF THE COUNCIL ON SCIENCE AND PUBLIC HEALTH

CSAPH Report 4-A-25

Subject: Condemning the Universal Shackling of Every Incarcerated Patient in Hospitals

Presented by: John T. Carlo, MD, MS, Chair

Referred to: Reference Committee D

INTRODUCTION

Resolution 427-A-24, referred by the House of Delegates (HOD), asked that our American Medical Association (AMA):

> condemn the practice of universally shackling every patient who is involved with the justice system while they receive care in hospitals and outpatient health care settings; and
>
> advocate for the universal assessment of every individual who is involved with the justice system who presents for care, by medical and security staff in collaboration with correctional officers, to determine whether shackles are necessary or may be harmful, and, if restraint is deemed necessary, that the least restrictive alternative to shackling with metal cuffs is used when appropriate; and
>
> advocate nationally for the end of universal shackling, to protect human and patient rights, improve patient health outcomes, and reduce moral injury among physicians.

BACKGROUND

People who are justice system-involved have a higher prevalence of acute and chronic health conditions than the general U.S. population.[1] Federal law mandates the provision of health care for people who are incarcerated.[2,3] When an incarcerated patient requires medical care that exceeds the capacity of the correctional facility in which they are housed, they are transferred to a community hospital.[2] Health care professionals practicing outside of correctional facilities receive little dedicated training in the care of justice-system involved patients, may be unaware of guidelines for the treatment of justice-system involved patients, and practice in health care systems with varying policies toward these patients.[2,4–6] Hospitalized incarcerated patients are commonly shackled throughout their duration of treatment in community hospitals to prevent escape or harm to others.[7,8] While federal and state laws regulate shackling of pregnant people, no similar protections guide shackling of non-pregnant, incarcerated patients in the acute care setting.[7,9,10] As a result, health care professionals rarely unshackle incarcerated patients during routine hospital care.[9,9,10] Further it should be noted that shackling incarcerated patients in medical settings has been limited internationally. For example, in the Netherlands, shackles are never used on incarcerated patients in the medical setting and handcuffs are used only in exceptional circumstances.[11]

METHODS

English language articles were reviewed from searches of PubMed and Google Scholar using the search terms “shackling in health care settings”, “shackling AND harm to health care professional” and “shackling AND harm”. Additional articles were identified by manual review of the reference lists of pertinent publications. Web sites managed by government agencies such as the Department of Justice; applicable organizations were also reviewed for relevant information such as the National Commission on Correctional Health Care (NCCHC).

DEFINITIONS

The terms “restraint” and “shackling” are important to define because they are often used interchangeably despite having different definitions. These key terms may also have slightly different definitions depending on the source.

Restraint. (A) Any manual method, physical or mechanical device, material, or equipment that immobilizes or reduces the ability of a patient to move his or her arms, legs, body, or head freely; or (B) A drug or medication when it is used as a restriction to manage the patient's behavior or restrict the patient's freedom of movement and is not a standard treatment or dosage for the patient's condition. (C) A restraint does not include devices, such as orthopedically prescribed devices, surgical dressings or bandages, protective helmets, or other methods that involve the physical holding of a patient for the purpose of conducting routine physical examinations or tests, or to protect the patient from falling out of bed, or to permit the patient to participate in activities without the risk of physical harm (this does not include a physical escort).[12]

Shackling: the use of any physical restraint or mechanical device to control the movement of a prisoner’s body or limbs, including handcuffs, leg irons, and belly chains.[2] The use of all devices which encircle the ankle or wrist of an incarcerated individual and restrict movement.[13]

DISCUSSION

Hospital Restraint Policies

It is important to differentiate shackling policies for patients who are incarcerated from hospital restraint policies for patients who are agitated or combative. The latter is governed by Centers for Medicare & Medicaid Services (CMS) guidelines requiring the least restrictive form of restraint that protects the physical safety of the patient, staff, or others.[2,14] Health care professionals are required to document the reason for restraint, form of restraint, reevaluations of continued restraint need, and any consequences for patient health.[2,14] However, no such policy exists for shackling in the hospital setting.[2] Shackles are not medically necessary and are often used “as a means of coercion, discipline, convenience, or retaliation.”[15,16] It is up to the treating health care professional to determine whether appropriate care can be delivered with shackles in place.[2,15] Custody officials are then responsible for determining an alternative manner to safely secure, or not secure, a patient that allows for standards of medical care to be met.[2,15]

Applying Restraints to People Who Are Incarcerated

Federal regulations for the use of physical restraints on people who are incarcerated provide that staff are authorized to apply physical restraints necessary to “gain control” of an incarcerated individual “who appears to be dangerous” because the individual: assaults another individual; destroys government property; attempts suicide; inflicts injury upon self; or becomes violent or

displays signs of imminent violence.[17] This regulation does not restrict the use of restraints in situations requiring precautionary restraints, particularly in the movement or transfer of incarcerated people (e.g., the use of handcuffs in moving incarcerated individuals to and from a cell in detention, escorting an incarcerated person to a Special Housing Unit pending investigation).[18] The restraint equipment or devices (e.g., handcuffs) may not be used in any of the following ways: as a method of punishment, through placement around an incarcerated individual's neck or face, or in any manner which restricts blood circulation or obstructs the incarcerated individual's airways, in a manner that causes unnecessary physical pain or extreme discomfort, to secure an incarcerated individual to a fixed object, such as a cell door or cell grill, except under certaincircumstances.[19] Further, all incidents involving the use of force and the application of restraints must be carefully documented.[20]

Summary of Types of Medical Restraints

It is important for health care professionals to have a solid working knowledge of their own health care facility's "least restrictive to most restrictive" spectrum of available physical restraints and restraint alternatives.[14] When restraint use is warranted, the least restrictive potentially effective measure should be considered first.[14,21] Examples of physical restraints are outlined in Appendix I. It is important to note that de-escalation techniques and diversionary devices should be tried before the decision is made to use any type of restraint.[14,22] Diversionary devices such as activity aprons and fidget sensory aids, for example, are designed to provide stimulating activities and textures for patients with decreased cognitive function and/or requiring tactile stimulation.[22]

Human Rights and Shackling

It has been argued that routine shackling of patients who are incarcerated violates foundational international human rights principles, including those contained in the Universal Declaration of Human Rights, the International Convention on the Elimination of All Forms of Racial Discrimination, and the International Covenant on Civil and Political Rights.[23–25] These principles were designed to protect human dignity and protect people from discrimination and cruel, inhuman, and degrading treatment.[23–25] It has been argued that shackling patients who are incarcerated who are critically ill or at the end of life are an affront to their human dignity and increase pain and suffering in this vulnerable time.[23–26] Routine shackling violates the United Nations Standard Minimum Rules for the Treatment of Prisoners (The Nelson Mandela Rules)—the internationally accepted standard for the treatment of people who are incarcerated.[27] These standards note that restraints are to be imposed only when no lesser form of control would be effective to address the risks posed by unrestricted movement; the method of restraint shall be the least intrusive method that is necessary and reasonably available to control the person's movement, based on the level and nature of the risks posed; and restraint shall be imposed only for the time required, and they are to be removed as soon as possible after the risks posed by unrestricted movement are no longer present.[27] Further, in accordance with the Mandela Rules and the Charter of Fundamental Rights of the European Union, the head of the British prison service has stated that the "shackling of patients in hospital[s] should not occur," emphasizing that "security is important, but it should never blind us to the overriding need for compassion and humanity."[28] In the Netherlands, shackles are never used and handcuffs are used only in exceptional circumstances.[11]

Legal Challenges to Shackling

The use of shackles during hospital visits has been challenged in U.S. courts and routinely upheld.[29] In one case, a patient who was incarcerated with renal failure received injuries after his leg edema was so severe that "at one point the shackles themselves were barely visible."[29,30]

Though he was injured, the shackles were determined to have served a penological purpose outside of punishment, such as preventing escape, and the injuries were the result of the patient's guards not following protocol.[29,30] In the U.S. peripartum shackling of pregnant people who are incarcerated has been condemned. Though courts have had a mixed record on challenges, the practice has been banned in 23 states, though in most states significant exemptions exist.[31] Through the First Step Act of 2018, the federal government banned peripartum shackling for those in federal correctional facilities, but as most incarcerations are under state or local control, a considerable number of pregnant people who are justice system-involved can legally be shackled during their labor and deliveries.[32]

RATIONALE FOR SHACKLING PATIENTS WHO ARE INCARCERATED

Protecting Health Care Staff from Violence

The most frequently cited argument for shackling is that "not shackling people increases the risk of violence against health care staff," which is a legitimate concern.[15,33] Preliminary survey data suggest that violence against health care staff, such as nurses, escalated during the increased tension due to the COVID-19 pandemic.[15,34] However, there is currently no evidence suggesting that people who are incarcerated are contributors to these trends.[15,34] In fact, studies investigating the contributing factors to violence against health care staff reveal that hospital overcrowding, long waiting hours, staff shortages, and lack of staff training are key predictors of increased violence and that these factors point to a variety of strategies for addressing the issue.[15,35]

There is also a misconception that patients who are justice system-involved and have been convicted of a "violent" crime were convicted due to violent physical harm.[15] However, robbery (without assault) and drug-related offenses (such as stealing drugs and manufacturing methamphetamines) are considered violent crimes in many states.[15,36] Shackling to prevent violence in health care settings may result in unnecessary suffering of patients who may pose no risk of violence.[15] For instance, there have been reports of patients who are incarcerated being shackled while sedated and paralyzed.[37] There is also documentation of elderly patients who are incarcerated being shackled while dying, affecting dignity at the end of life.[38]

Protection Against Flight Risk

Data on the incidence of escape of patients who are incarcerated while hospitalized in community medical facilities is limited. A single study from 2011 using online media tracking identified 99 discrete incidents of patients who were incarcerated escaping medical facilities or medical transport over the course of a year.[7,39] This represents a minority of all individuals who are incarcerated and a small fraction of those seen within health care settings.[7,39] Articles in the press describe hospitalization and medical transport as times of vulnerability for law enforcement.[40] Press reports detail scenarios where shackles were removed prior to escape as well as instances in which shackles were in place during escape.[41] However, these reports do not demonstrate a relationship between indefinite shackling in health care settings and prevention of escape or harm to others.[39,41] Furthermore, the data show that escapes are few and far between in general but that if they are going to occur, it is most likely at the end of transportation back to the carceral facility after medical care has been received.[42] Systemic data identifying patient, incident, and facility-level contributing variables would allow better assessment of the use of shackles in the health care setting.[43]

Further, the risk of fleeing does not account for the fact that patients who are critically ill or under anesthesia are unable to flee. In several legal challenges against perinatal shackling instances, the

court concluded that prepartum, peripartum, and postpartum patients were not in a medical state to flee.[15] For example, in the 1993 class action suit *Women Prisoners of District of Columbia Department of Corrections v. District of Columbia*, the court concluded that "the physical limitations of a woman in the third trimester of pregnancy…make complete shackling redundant and unacceptable in light of the risk of injury to a woman and baby.… While a woman is in labor and shortly thereafter, however, the Court holds that shackling is inhumane."[44] This case outlines the inhumanity in shackling patients whose medical status bars them from posing a flight risk.[44] In 2004, the court in *Nelson v. Correctional Medical Services* stated that "an incarcerated individual in the final stages of labor cannot be shackled absent clear evidence that she is a security or flight risk."[45] Yet again, this case references how patients' medical state dictates their inability to physically pose flight risk.[45] These same principles can be extended to nonpregnant patients who are incarcerated. Patients who are critically ill or sedated are physically unable to pose a security risk; thus, shackling is deemed not only inhumane but also wholly unnecessary.[46] Despite this limited evidence, many health care organizations have policies that call for shackling of patients who are incarcerated by default or lack protection against shackling by correctional staff.[46]

Shackling Facilitates the Work of Health Care Professionals by Ensuring Cooperation

Shackling patients who are incarcerated during procedures presents an increased risk for harm relative to performing the same procedures without shackles.[7] Shackling is a physical and psychological barrier to health care professionals providing the highest-quality medical care.[7] For those admitted with terminal diagnoses, shackles limit palliative providers' ability to provide dignity-driven end of life care.[38] Further, there is evidence of patients who are incarcerated being shackled while undergoing physical examinations, outpatient office procedures, inpatient bedside procedures involving local or regional anesthesia and/or minimal to moderate sedation, and surgeries involving moderate to deep sedation or general anesthesia.[47]

Shackles manifest as a barrier for health care professionals in two ways. First, physical examinations and procedures are most effective and efficient with as few externally imposed movement restrictions as possible.[15] Shackles impede exam maneuvers, preventing full range-of-motion and other assessments that require the patient to move or turn over, and complicate positioning for procedures in clinics, hospital rooms, and operating rooms.[15,48] For example, a physician noted a time when they cared for a terminally ill 70-year-old female patient who was shackled to the bed.[15] The patient remained shackled during medical examinations and treatment despite being too weak to lift their leg against gravity.[15] The shackles made it more difficult for health care professionals to conduct comprehensive neurological exams and to roll the patient to prevent bed ulcers.[15] Second, shackling increases risk of medical complications.[7,15] Shackling sedated or anesthetized patients, for example, predisposes them to perioperative falls, tissue injury, and venous thromboembolism (VTE).[7,15] Patients who are sedated or anesthetized cannot maintain balance or request removal of shackles that compress their tissue.[7,15] As individuals recover from sedation or anesthesia, their immobility is already a risk factor for VTE, and being shackled exacerbates this risk.[7,15]

HARMS OF UNIVERSAL SHACKLING OF INCARCERATED PATIENTS

Shackles can cause proactive injury to patients who are incarcerated. Over-tightening of cuffs, potentially compounded by forced limb movement, has been shown to damage underlying structures leading to skin breakdown, compressive neuropathies, and fractures of the small bones of the hand.[7,49,50] When blanket shackling policies do not account for individual medical risk assessment, patients who are incarcerated with disabilities are disproportionately impacted.[7] For example, a shackled patient with hemiplegia may lose the ability to perform independent activities

if their functional deficits are not accounted for in limb placement.[7] An inability to comply with continuous cuffed restraint can precipitate delirium in those with impaired cognition.[7]

Shackling also increases risk of emotional harm as it erodes trust between patients who are justice system-involved and clinicians.[15,51] Evidence shows that shackles can reinforce existing negative biases toward patients who are justice system-involved, setting the stage for inappropriate use of force by health care staff and security personnel.[2,15,52,53] Patients who experience discrimination and perceive stigma due to their criminal legal status are more likely to have poor health outcomes.[15,54] The harms of discrimination are further intertwined with issues of race, as people of color—who are overrepresented in the population who is justice system-involved—are less likely to trust their health care professionals.[15,54] Further, Black patients routinely report greater mistrust than White patients in the outcomes of care and the motivations of physicians, in large part due to past and current discrimination and the medical community's history of experimentation.[7,15] Incarcerated patients may therefore view their clinician and/or hospital as complicit with shackling, and health care professionals may act on internalized biases when treating shackled patients who are incarcerated.[15]

BEST PRACTICES TO PROVIDE COMPASSIONATE CARE

Allowing hospitalized patients who are incarcerated to remain indefinitely shackled during medical treatment can lead to harmful outcomes.[7] Despite the desire for compassionate care from health care professionals, patients remain in shackles as a default practice.[7,9] Health care professionals are taught to employ a risk–benefit analysis to any interventions affecting patient health.[7,9] However, by deferring the management of shackles in the acute care setting, health care settings are passively accepting a structure that perpetuates inequities in care for people who are justice system-involved - a population already at risk for poor health outcomes.[7,9] Health care professionals should work collaboratively with carceral facilities and hospital security to identify the least restrictive means available to secure a patient and correctional representatives should be tasked with proactively demonstrating a correctional necessity that requires a patient to be shackled.[7,9] In this way, health care professionals and institutions can deliver legally grounded care that prevents unnecessary physical harm, reduces prejudice towards patients who are incarcerated, and relinquishes an overreliance on shackles in favor of security measures tailored to the needs of patients, providers, and custody officers.[7,9] Health care professionals should also regularly examine restraint sites for injuries and assess inpatients for conditions particularly impacted by restraint.[9]

Further, health care professionals should familiarize themselves with state and facility policies, including contractual relationships.[7,9] If health care professionals encounter barriers to unshackling patients who are incarcerated during treatment or apprehension addressing custody officers, one starting point is to contact the patient's health care professional at the referring correctional institution, who can offer context and patient advocacy.[7,9] Health care systems should standardize routes of communication between health care professionals and custody officers to facilitate collaborative relationships that ensure medical, and security needs are met.[7,55]

For health care systems, aligning policy on the shackling of patients who are incarcerated with policy guiding restraint of patients in general, creates parity and promotes the least restrictive form of restraint needed to secure a patient.[7] This change involves working from the assumption that all hospitalized patients should remain unshackled until a proven need for such restriction arises.[7] Such structural transformation mitigates the risks of active and passive harm to patients, lessens the prejudice shackles precipitate, and reflects shackling practices outside of health care settings.[7] Health care systems should also acknowledge the safety concerns of staff, real or perceived, as a barrier to care.[7] Examples of targeted interventions that address such concerns without reliance on

shackles include individualized security risk assessments on admission, strategic room allocation, protocols for supervised patient-clinician interactions, and use of soft restraints when necessary.[7,9]

Boston Medical Group: A Successful Case Study

Recently, medical students spearheaded revision of the policy and clinical practice for the shackling of patients incarcerated patients at Boston Medical Center (BMC), the largest safety net hospital in New England.[26] The modified policy allows for individualized assessments and allows incarcerated patients to be unshackled if they meet defined criteria.[26] Changes pioneered at BMC led the Mass General Brigham health system to follow suit. Most importantly, a BMC patient who was incarcerated, sedated, and intubated was unshackled by correctional officers for the purpose of preserving human dignity.[26] This protocol identifies incarcerated patients who may be safely unshackled and provides a framework for restraint removal while ensuring safety.[26] It can be integrated into existing policy systems, electronic health record (EHR) flowsheets, and health care workflows, while also providing individualized care for incarcerated patients.[26] The next steps include continuation of staff training about the modified policy and EHR documentation.[26]

This process solicited input from key interested parties including nursing and medical staff, public safety, and general counsel, and collaborated with the local correctional facility to guide implementation.[26] The policy outlined a schematic for communication and decision-making among correctional facilities, hospital security, and the patient's healthcare team (Figure 1).[26] The protocol parallels existing clinical assessments of any patient who is restrained in the hospital for medical or behavioral reasons and is incorporated into theEHR.[26] The EHR identifies incarcerated patients and prompts a member of the healthcare team to perform a "Recurring Shackle Assessment." This functions to determine if a shackled, patient who is justice system-involved meets any "Special Circumstances" for shackle removal.[26] These include but are not limited to the following: sedation, significant weakness due to age or clinical condition, dependence on life-support, end-of-life care, or paralysis for any reason.[26] If the patient meets any "Special Circumstance," the EHR protocol prompts the health care team to determine whether shackle removal is appropriate. If appropriate, care team members first notify hospital public safety.[26] The attending physician directly calls the medical team at the correctional facility, requests the accompanying correctional officers to contact their commanding officer, or utilizes a contact at each local correctional facility to communicate with the commanding officer at the facility. The supervisor can then direct the accompanying correctional officers to remove shackles.[26] If there is a disagreement between the care team and the correctional facility about shackle removal, the care team follows an appeal process, escalating the request to hospital public safety leadership.[26]

Although this reform was successful, obstacles were noted and are important to understand for future implementation. The most common obstacles in adopting this policy change include parsing patient and physician rights, determining who can request the modification or removal of shackles, determining who wields the practical authority to approve or deny such requests, and identifying and engaging all appropriate interested parties.[26] Success was attributed to identifying written policies wherever possible, collaborating with colleagues from across clinical specialties and with hospital administration, and working directly with correctional facility leadership.[26]

New York City

New York City recently provided clear guidelines for the Department of Corrections, the Health Authority, and the Health and Hospitals Corporation regarding shackling of patients who are incarcerated seeking health care outside of secure medical wards of community hospitals.[15,56] The guideline discourages routine shackling of patients who are incarcerated, details medical

circumstances in which patients should never be shackled, and outlines data reporting recommendations.[15,56] The guideline also recommends that patients be shackled only at the direction of the chief correctional officer once he or she has reviewed evidence of custodial and safety risks posed by the patient and concedes that patients who behave violently and/or attempt escape may be shackled regardless of their medical condition.[15,56] However, the guideline attempts to dissuade correctional staff from shackling patients out of convenience by suggesting that the decision to shackle a patient be routinely reevaluated by the chief correctional officer.[15,56] The guideline promotes patient advocacy among health care staff by recommending evaluating whether the shackles threaten the patient's life, in which case they can advocate for immediate shackle removal.[15,56] The guideline further recommends that health care staff routinely assess and communicate whether shackling is medically contraindicated and should be removed. The guideline also promotes increased data collection by recommending that health care organizations keep written records summarizing the reason for shackling, details of the shackling, and patient information.[15,56]

CURRENT AMA POLICY

AMA Code of Medical Ethics 1.2.7 "Use of Restraints" states that all individuals have a fundamental right to be free from unreasonable bodily restraint. It is noted that if health conditions may result in behavior that puts patients at risk of harming themselves, it may be ethically justifiable for physicians to order the use of chemical or physical restraint to protect the patient. The code also states that patients should never be restrained punitively, for convenience, or as an alternative to reasonable staffing and physicians who order chemical or physical restraints should: (a) Use best professional judgment to determine whether restraint is clinically indicated for the individual patient; (b) Obtain the patient's informed consent to the use of restraint, or the consent of the patient's surrogate when the patient lacks decision-making capacity; and (c) Regularly review the need for restraint and document the review and resulting decision in the patient's medical record. Finally, the code notes that in certain limited situations, when a patient poses a significant danger to self or others, it may be appropriate to restrain the patient involuntarily and that the least restrictive restraint reasonably should be implemented, and the restraint should be removed promptly when no longer needed.

AMA policy D-430.997 "Support for Health Care Services to Incarcerated Persons" supports NCCHC standards that improve the quality of health care services, including mental health services, delivered to the nation's correctional facilities. AMA policy D-430.993, "Study of Best Practices for Acute Care of Patients in the Custody of Law Enforcement or Corrections," supports the development of clearly defined and consistently implemented processes between health care professionals and law enforcement that:
can best protect patient confidentiality, privacy, and dignity while meeting the needs of patients, health professionals, and law enforcement and ensures security measures do not interfere with the capacity to provide medical, mental health, pregnancy, end of life care, palliative care, and substance use care, especially in emergency situations. AMA policy H-420.957, "Shackling of Pregnant Patients in Labor," prohibits the use of shackles on pregnant people unless flight or safety concerns exist. The AMA advocacy resource center has also developed model legislation prohibiting shackling of pregnant people who are incarcerated.

American Public Health Association (APHA) and NCCHC Policies

APHA's policy 20233 "A Call to Stop Shackling Incarcerated Patients Seeking Health Care" called on state and federal legislatures to pass laws requiring health care organizations and correction agencies to implement policies that ban shackling of patients receiving health care and requests that

the CMS and general assemblies enforce those regulations.[15] In the absence of shackling bans APHA outlines steps to end the practice of shackling during health care through: (1) legislative action, (2) national research efforts, (3) clinical guidance, and (4) clinical practice.[15]

The NCCHC remains the only national organization dedicated solely to improving correctional health care quality.[57] NCCHC's standards have provided uniquely valuable guidance to help correctional health professionals and administrators improve the health of their populations (and the communities to which they return), increase efficiency of health services delivery, strengthen organizational effectiveness, and reduce the risk of adverse legal judgments.[57] NCCHC's guidelines for "Use of Restraints for Nonmedical Purposes" notes that correctional health personnel should not participate in either the decision to restrain someone or in the placement of such restraints for nonmedical reasons. NCCHC standards explicitly prohibit health care staff from participating in this activity but recommend they monitor the health status of individuals placed in security restraints.[58] If they observe conditions or practices that threaten a patient's health, their concerns should be communicated to the prison or jail administrator as soon as possible.[58] It is acknowledged that this may be a situation in which the underlying ethical principle is one of "doing the least harm," and that NCCHC's position is an approach that is likely to result in less harm to the incarcerated individual.[58]

CONCLUSION

The U.S. has the highest incarceration rate in the world.[2,59] Compared to the general population, individuals with a history of incarceration are in worse mental and physical health.[2,60] Incarcerated individuals typically have high rates of psychiatric conditions, communicable diseases, substance use disorders, and chronic diseases.[2] Correctional facilities offer a range of health care services from primary care to hospital-level care, but few states have stand-alone hospitals for patients who are incarcerated.[2,60,61] When medical care required by a person who is incarcerated exceeds the capabilities of the correctional facility's health system (for specialty care, diagnostics, or acuity of illness), that individual is transferred to a contracted hospital or, in emergent cases, to the nearest health care institution.[2,15] Clinicians practicing outside of correctional settings face unique medical, legal, and ethical issues surrounding the care of patients who are incarcerated.[2,15] One of those challenges is the harmful and discriminatory routine shackling of patients who are incarcerated and seeking care.

Shackling policies for patients who are incarcerated are different from hospital restraint policies for patients who are agitated or combative. The latter is governed by CMS guidelines mandating the least restrictive form of restraint and for the shortest duration of time needed to ensure patient and staff safety.[2,14] In contrast, case reports describe patients who are incarcerated are shackled with metal cuffs indefinitely, even while intubated, paralyzed, disabled, or in labor.[26] Most health care professionals are aware of the negative consequences of restricting patient movement during hospitalization, including delirium and venous thromboembolism, and although most hospital policies allow health professionals to request removal of shackles for medical necessity, such requests are rarely made.[2,6] Incarcerated patients often remain shackled for the duration of their hospitalization, independent of any individual risk assessment.[2,6]

One potential starting place for shackling reform is for hospital policy on shackling of patients who are incarcerated to align with internal policy on the restraint of persons who are nonincarcerated.[15,26] Hospital policy should delineate for clinicians when and how to communicate to security what is medically necessary to provide the standard of care.[15,26] Special circumstances should be defined in which shackles are prohibited, and procedures should be developed for

compassionate removal.[15,26] Further, special considerations should be made for certain incarcerated populations such as older individuals, individuals who are disabled, individuals with serious mental illness, and individuals in the juvenile justice system. While this report does not directly address these specific populations, this is an area that warrants further study. It should be noted that AMA policy supports NCCHC standards and AMA's Code of Medical Ethics supports the use of the least restrictive restraint if it is appropriate to restrain a patient that the restraint should be removed promptly when no longer needed. However, this framework is currently not applied to patients who are incarcerated.[58,62]

RECOMMENDATIONS

The Council on Science and Public Health recommends that the following be adopted, and the remainder of the report be filed.

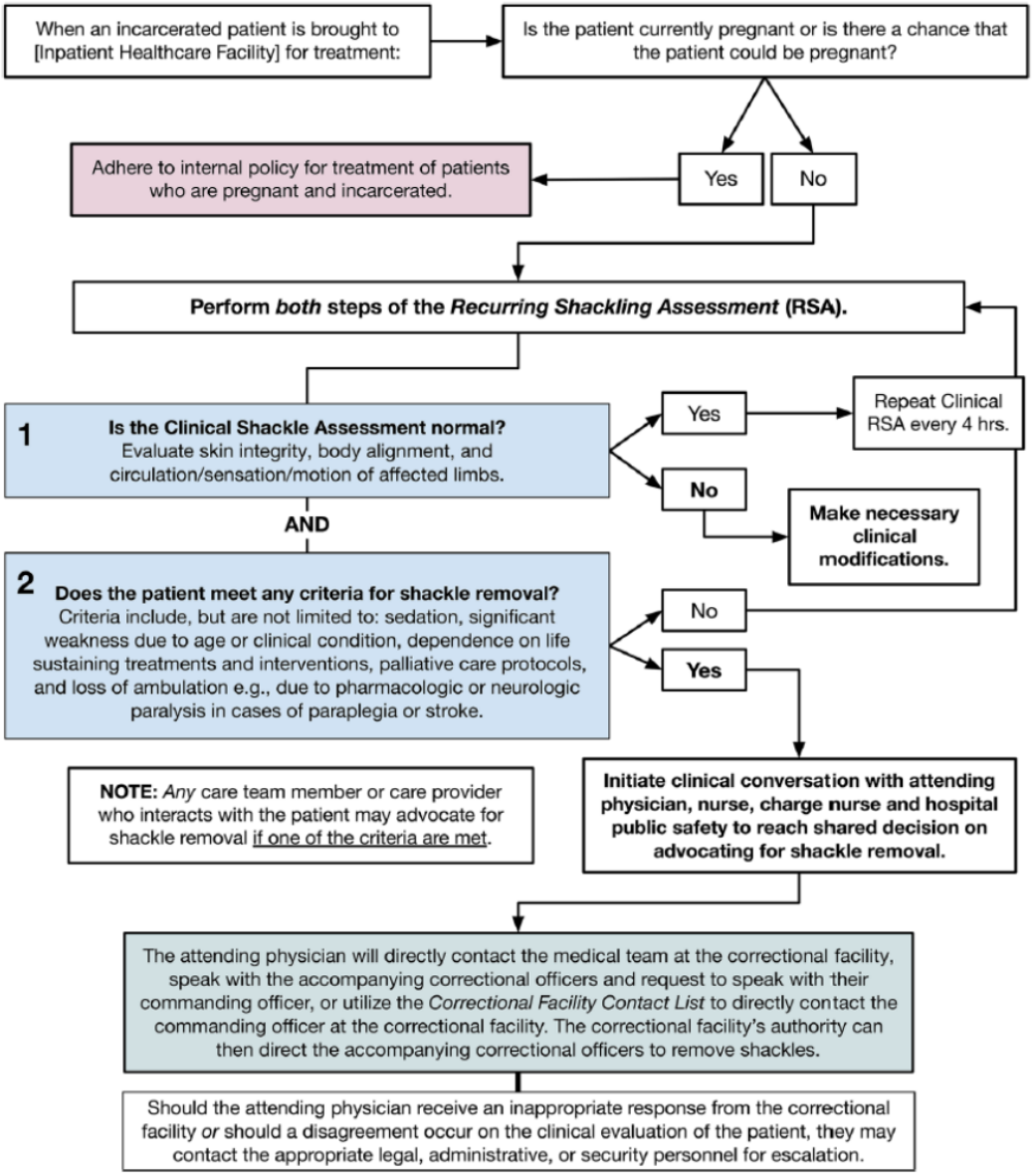
1. Our AMA opposes the universal shackling of patients in medical settings who are incarcerated as a means of punishment, control, and oppression and believes shackling should only be used when there is an immediate and serious threat of self-harm, harm to others, or risk of elopement, that cannot be reasonably mitigated by other least restrictive means necessary. (New HOD Policy)

2. Our AMA encourages health care facilities in collaboration with carceral facilities and hospital security, to develop and implement policies that eliminate or reduce universally shackling of patients who are incarcerated while receiving health care. Such policies should include:
   (a) individualized assessments that allow patients who are incarcerated to be unshackled when appropriate, particularly when incapacitating medical conditions are present such as weakness due to age or clinical condition, sedation, paralysis, dependence on life support, or while receiving end of life care;
   (b) clearly delineated procedures for shackle removal and/or replacement of shackles with the least restrictive means necessary; and
   (c) expeditious procedures for health care professionals to communicate to and collaborate with carceral facilities and hospital security when shackle removal is medically necessary to provide the standard of care. (New HOD Policy)

3. That our AMA reaffirm Policy H-420.957 "Shackling of Pregnant Women in Labor." (Reaffirm HOD Policy)

Fiscal Note – less than $1000

Figure 1: Generalizable protocol to supplement existing hospital policies for the care of patients who are incarcerated.[26]



APPENDIX I – Types of Restraints

Vest restraints	Designed to help prevent unassisted wheelchair, bed, and stretcher exits. These are considered one of the more physically restrictive types of patient restraints available for use.[22]
Limb restraints (limb holders)	Designed to limit the movement of wrists and/or ankles in patients assessed to be at risk of disrupting life-saving treatment, pulling lines/tubes, exacerbating skin conditions, compromising wound site integrity, or self-injury.[22] Sometimes these devices are referred to as being either soft restraints or hard restraints, depending on specific features such as cuff and strap materials and whether or not they can be locked.[22]
Belts	Designed for use with patients who need a reminder to call for assistance before exiting a hospital bed or wheelchair, for limiting unassisted exit and unwanted movement, or for patients who require a positioning device for added safety or to assist medical treatment.[22] Belts can be made from a variety of materials, can offer locking capabilities, and can be designed specifically to allow patients to self-release.[22] A belt's specific features help determine if it is considered a less restrictive or more restrictive device.[22] In some states and facilities, belts are not considered restraints.[22]
Hand mitts	Designed to help protect patients who are prone to disrupting medical treatment or to self-harm.[22] Mitts hinder picking and tube pulling and their construction and padding varies, as does the level of hand visibility afforded and the degree of finger movement permitted.[22] Mitts are generally considered to be less physically restrictive devices, and in some states and facilities they are not considered restraints.[22]
Multipurpose arm sleeves	Designed to limit or minimize patient arm movements without the use of rigid splints.[22] Multipurpose sleeves are in the least restrictive device category, and in some states and facilities they are not considered restraints.[22]
Enclosure beds	Designed to provide a safe, controlled environment for patients at risk of injury from an unassisted bed exit.[22] Although it's considered a restraint because it limits the patient's ability to get out of bed, an enclosure bed is less restrictive than other types of restraints.[63] Use of enclosure beds can help eliminate the need for more restrictive devices like limb holders or vest restraints.[22]

REFERENCES

1. Wang EA, Macmadu A, Rich JD. Examining the Impact of Criminal Justice Involvement on Health Through Federally Funded, National Population-Based Surveys in the United States. *Public Health Rep*. 2019;134(1_suppl):22S-33S. doi:10.1177/0033354918824324
2. Haber LA, Erickson HP, Ranji SR, Ortiz GM, Pratt LA. Acute Care for Patients Who Are Incarcerated: A Review. *JAMA Intern Med*. 2019;179(11):1561. doi:10.1001/jamainternmed.2019.3881
3. Rold WJ. Thirty Years After *Estelle v. Gamble:* A Legal Retrospective. *Journal of Correctional Health Care*. 2008;14(1):11-20. doi:10.1177/1078345807309616
4. Alemagno SA, Wilkinson M, Levy L. Medical Education Goes to Prison: Why?: *Academic Medicine*. 2004;79(2):123-127. doi:10.1097/00001888-200402000-00005
5. Tuite H, Browne K, O'Neill D. Prisoners in general hospitals: doctors' attitudes and practice. *BMJ*. 2006;332(7540):548.3-549. doi:10.1136/bmj.332.7540.548-b
6. Junewicz A. Shackled: Providing Health Care to Prisoners Outside of Prison. *The American Journal of Bioethics*. 2014;14(7):13-14. doi:10.1080/15265161.2014.918210
7. Haber LA, Pratt LA, Erickson HP, Williams BA. Shackling in the Hospital. *J Gen Intern Med*. 2022;37(5):1258-1260. doi:10.1007/s11606-021-07222-5
8. Rorvig L, Williams B. Providing Ethical and Humane Care to Hospitalized, Incarcerated Patients With COVID-19. *Am J Hosp Palliat Care*. 2021;38(6):731-733. doi:10.1177/1049909121994313
9. Brooks KC, Makam AN, Haber LA. Caring for Hospitalized Incarcerated Patients: Physician and Nurse Experience. *J GEN INTERN MED*. 2022;37(2):485-487. doi:10.1007/s11606-020-06510-w
10. Ferszt GG, Palmer M, McGrane C. Where Does Your State Stand on Shackling of Pregnant Incarcerated Women? *Nursing for Women's Health*. 2018;22(1):17-23. doi:10.1016/j.nwh.2017.12.005
11. Dillner L. Shackling prisoners in hospital. *BMJ*. 1996;312(7025):200-200. doi:10.1136/bmj.312.7025.200
12. *42 CFR 482.13(e)(1)*.
13. *40 RCNY§ 3-12(b)*.
14. Department of Health and Human Services, Centers for Medicare and Medicaid Services. Hospital conditions of participation: patients' rights. Accessed February 8, 2025. https://www.cms.gov/Regulations-and-Guidance/Legislation/CFCsAndCoPs/downloads/finalpatientrightsrule.pdf.
15. American Public Health Association. A Call to Stop Shackling Incarcerated Patients Seeking Health Care. Published online November 14, 2023.
16. Task Force on Correctional Care Standards. Standards for Health Services in Correctional Institutions. *Washington, DC: American Public Health Association*. Published online 2003.
17. *28 CFR 552.20(a-e)*.
18. *28 CFR 552.20*.
19. *28 CFR 552.22(h)(1-4)*.
20. *28 CFR 552.22(j)*.
21. *42 CFR 482.13(e)(3)*.
22. Rose C. Choosing the right restraint. American Nurse Clinical Journal. https://www.myamericannurse.com/choosing-restraints/
23. United Nations. *UN General Assembly Resolution 217A: Universal Declaration of Human Rights.*; 1948.
24. United Nations. *UN General Assembly Resolution 2106: International Convention on the Elimination of All Forms of Racial Discrimination.*; 1965.

25. United Nations. *UN General Assembly Resolution 2200A: International Covenant on Civil and Political Rights.*; 1966.
26. Bedi NS, Mathur N, Wang JD, et al. Human Rights in Hospitals: an End to Routine Shackling. *J GEN INTERN MED*. 2024;39(6):1048-1052. doi:10.1007/s11606-023-08584-8
27. United Nations. *United Nations Standard Minimum Rules for the Treatment of Prisoners (the Nelson Mandela Rules).*; 2016.
28. European Union. Charter Of Fundamental Rights Of The European Union. https://eur-lex.europa.eu/legalcontent/EN/TXT/PDF/?uri=CELEX:12012P/TXT&from=SL
29. Robinson M, Lavere K, Porsa E. End the Routine Shackling of Incarcerated Inpatients. *Journal of Hospital Medicine*. 2021;16(6):376-377. doi:10.12788/jhm.3581
30. Yearwood L. Pregnant and shackled: why inmates are still giving birth cuffed and bound. The Guardian. February 8, 2025. theguardian.com/us-news/2020/jan/24/shackled-pregnant-women - prisoners-birth
31. *FGP v Serco Plc and SSHD, EWHC 1804 (Admin) (2012).*
32. Congress.gov. *Formerly Incarcerated Reenter Society Transformed Safely Transitioning Every Person Act (FIRST STEP Act)*. https://www.congress.gov/bill/115th-congress/house-bill/5682/text?q=%7B%22search%22%3A%5B%22first+step+act%22%5D%7D#toc-H169162FE88434970931199E724EDDAFD.
33. Han S, Shanafelt TD, Sinsky CA, et al. Estimating the Attributable Cost of Physician Burnout in the United States. *Ann Intern Med*. 2019;170(11):784-790. doi:10.7326/M18-1422
34. Phillips JP. Workplace Violence against Health Care Workers in the United States. Longo DL, ed. *N Engl J Med*. 2016;374(17):1661-1669. doi:10.1056/NEJMra1501998
35. Lim MC, Jeffree MS, Saupin SS, Giloi N, Lukman KA. Workplace violence in healthcare settings: The risk factors, implications and collaborative preventive measures. *Annals of Medicine & Surgery*. 2022;78. doi:10.1016/j.amsu.2022.103727
36. Sawyer W. Mass incarceration: the whole pie. Prison Policy Institute.
37. Lescure T. No patient should have to die in shackles. Accessed February 28, 2025. https://www.washingtonpost.com/opinions/2021/10/05/no-patient-should-have-die-shackles/.
38. DiTomas M, Bick J, Williams B. Shackled at the End of Life: We Can Do Better. *The American Journal of Bioethics*. 2019;19(7):61-63. doi:10.1080/15265161.2019.1618957
39. Mikow-Porto VA, Smith TA. The IHSSF 2011 Prisoner Escape Study. *J Healthc Prot Manage*. 2011;27(2):38-58.
40. Kutner M. Recent Prisoner Escapes Have One Common Factor: Hospital Visits. 2015. https://www.newsweek.com/recent-prisoner-escapes-have-one-common-factor-hospital-visits-319692
41. Powell B. Federal Officials Join Search for Ohio Rape Suspect Who Escaped. 2017. https://www.nbcwashington.com/news/national-international/prisoner-charged-with-rape-overpowers-deputy-steals-his-gun/2019538/
42. Thomas SY, Lanterman JL. A National Analysis of Shackling Laws and Policies as They Relate to Pregnant Incarcerated Women. *Feminist Criminology*. 2019;14(2):263-284. doi:10.1177/1557085117737617
43. Peterson BE, Fera A, Mellow J. Escapes From Correctional Custody: A New Examination of an Old Phenomenon. *The Prison Journal*. 2016;96(4):511-533. doi:10.1177/0032885516650873
44. *Women Prisoners of DC Department v. District of Columbia (1993).*(U.S. District Court for the District of Columbia.).
45. *Nelson v. Correctional Medical Services (2004).*(U.S. District Court for the Eastern District of Arkansas.).
46. Bansal AD, Haber LA. On a Ventilator in Shackles. *J GEN INTERN MED*. 2021;36(12):3878-3879. doi:10.1007/s11606-021-07097-6

47. Surgery in Shackles: What Are Surgeons' Obligations to Incarcerated Patients in the Operating Room? *AMA Journal of Ethics*. 2017;19(9):939-946. doi:10.1001/journalofethics.2017.19.9.pfor1-1709
48. Armstrong, Md RE, Hendershot, Md KA, Newton, Md NP, Panakos, Md PD. Addressing Emergency Department Care for Patients Experiencing Incarceration: A Narrative Review. *WestJEM*. 2023;24(4). doi:10.5811/WESTJEM.59057
49. Haber LA, O'Brien M. Shackling Ulcer: an Upper Extremity Ulcer Secondary to Handcuffs. *J GEN INTERN MED*. 2021;36(7):2146-2146. doi:10.1007/s11606-021-06654-3
50. Haddad FS, Goddard NJ, Kanvinde RN, Burke F. Complaints of pain after use of handcuffs should not be dismissed. *BMJ*. 1999;318(7175):55-55. doi:10.1136/bmj.318.7175.55
51. Zust BL, Busiahn L, Janisch K. Nurses' Experiences Caring for Incarcerated Patients in a Perinatal Unit. *Issues in Mental Health Nursing*. 2013;34(1):25-29. doi:10.3109/01612840.2012.715234
52. Hofmeister S, Soprych A. Teaching resident physicians the power of implicit bias and how it impacts patient care utilizing patients who have experienced incarceration as a model. *Int J Psychiatry Med*. 2017;52(4-6):345-354. doi:10.1177/0091217417738935
53. Goshin LS, Sissoko DRG, Neumann G, Sufrin C, Byrnes L. Perinatal Nurses' Experiences With and Knowledge of the Care of Incarcerated Women During Pregnancy and the Postpartum Period. *Journal of Obstetric, Gynecologic & Neonatal Nursing*. 2019;48(1):27-36. doi:10.1016/j.jogn.2018.11.002
54. Howell BA, Earnshaw VA, Garcia M, Taylor A, Martin K, Fox AD. The Stigma of Criminal Legal Involvement and Health: a Conceptual Framework. *J Urban Health*. 2022;99(1):92-101. doi:10.1007/s11524-021-00599-y
55. Gahler J. Maryland'sModelGuidelines for the Security of Prisoners for EMS and Hospital Settings. Published online 2008. https://www.mhaonline.org/docs/ default-source/Resources/ebola/security-of-prisoners-for-ems-and-hospital- settings-final.pdf?sfvrsn=2
56. American Legal Publishing. *New York City: The Rules of the City.* https://codelibrary.amlegal.com/codes/newyorkcity/latest/NYCrules/0-0-0-80207.
57. National Commission on Correctional Health Care. About Us. Accessed February 8, 2025. https://www.ncchc.org/about-us/.
58. National Commission on Correctional Health Care. *Guidelines for the Management of an Adequate Delivery System*. CORRECTIONAL HEALTH CARE
59. US Department of Justice, Office of Justice Programs, Bureau of Justice Statistics. Correctional populations in the United States. 2016. https://www.bjs.gov/content/pub/pdf/cpus16.pdf.
60. The Pew Charitable Trusts. State prisons and the delivery of hospital care: how states set up and finance off-site care for incarcerated individuals. 2018. Accessed February 8, 2025. https://www.pewtrusts.org/en/research-and-analysis/reports/2018/07/19/state-prisons-and-the-delivery-of-hospital-care.
61. Eiting E, Korn CS, Wilkes E, Ault G, Henderson SO. Reduction in Jail Emergency Department Visits and Closure After Implementation of On-Site Urgent Care. *Journal of Correctional Health Care*. 2017;23(1):88-92. doi:10.1177/1078345816685563
62. Code of Medical Ethics. *1.2.7 Use of Restraints*.
63. Harris J. Enclosure bed: A protective and calming restraint. American Nurse Clinical Journal. https://www.myamericannurse.com/use-enclosure-beds/?_gl=1%2A19z3ah3%2A_gcl_au%2AMTYwNDY3MDczMy4xNzM4ODc0MDE4%2A_ga%2ANjYxNzA5MDUuMTczODg3NDAxOA..%2A_ga_ZSCNXVLEBE%2AMTczOTE0NjU5My4xLjEuMTczOTE0ODAzNS41OC4wLjA.

REPORT6 OF THE COUNCIL ON SCIENCE AND PUBLIC HEALTH (A-25)
Fragrance Regulation (Resolution 501-A-24)
(Reference Committee D)

EXECUTIVE SUMMARY

OBJECTIVE: Resolution 501-I-24, "Fragrance Regulations" was referred by the House of Delegates. This report examines the evidence on the prevalence and severity of fragrance sensitivity (e.g., multiple chemical sensitivity (MCS), chemical sensitivity (CS), chemical intolerance (CI), toxicant-induced loss of tolerance (TILT), idiopathic environmental intolerance (IEI), and environmental illness (IE)) to understand the etiology and impacts, as well as the potential methods to reduce exposure (e.g., state and federal legislation, industry regulation, accommodations under the Americans with Disabilities Act, or implementation of fragrance-free policies).

METHODS: English language reports were selected from searches of PubMed and Google Scholar databases using the search terms: "fragrance sensitivity," "fragrance-free policies" AND "fragrance regulations." Additional articles were identified by manual review of the reference lists of pertinent publications. There was also a review of state and federal fragrance regulations as well as case law on fragrance sensitivity, MCS, and disability. Web sites managed by federal agencies and applicable professional and advocacy organizations were also reviewed for relevant information.

RESULTS: Fragrance sensitivity is a controversial, unexplained, and complex disorder. There is extensive self-reported evidence suggesting that fragrance sensitivity is a serious problem for a significant portion of the population. Yet, the heterogeneity of symptoms and exposures coupled with the sheer volume of ingredients in fragranced products (and consumer products more broadly) makes understanding the causal mechanism extremely difficult. Consequently, most of the evidence, which varies wildly in quality, falls into three categories: (1) self-report of exposure to fragrance followed by a constellation of symptoms; (2) toxicological and epidemiological associations between chemicals found in fragranced products and potential risk of harm; and (3) analysis of potential mechanisms in individuals with a diagnosis of fragrance sensitivity. It is possible to connect the evidence to form a compelling narrative of how exposure to harmful chemicals from personal care and household cleaning products causes serious adverse health effects through several plausible mechanisms. However, the throughline between these categories of research is often attenuated, weak, or based on limited data.

CONCLUSION: The sheer volume of self-reported evidence suggests that fragrance sensitivity could result in adverse health effects; however, the evidence also illustrates the need for more research and better consensus regarding differences between MCS, CS, CI, TILT, IEI, and IE. At the same time, inaction on this topic means that many patients will continue to be misdiagnosed, offered health care solutions with limited or no effect, or be met with mistrust and doubt. Therefore, it is worth pursuing efforts to reduce exposure through other means including: (1) improving product labeling transparency, and (2) implementation of flexible, voluntary, fragrance-free policies.

REPORT OF THE COUNCIL ON SCIENCE AND PUBLIC HEALTH

CSAPH Report 6-A-25

Subject: Fragrance Regulation (Resolution 501-A-24)

Presented by: John T. Carlo, MD, MS, Chair

Referred to: Reference Committee D

INTRODUCTION

Resolution 501-I-24, "Fragrance Regulations" was referred by the House of Delegates. This resolution asked that our AMA: (1) recognize fragrance sensitivity as a disability; (2) encourage fragrance-free policies in hospitals, outpatient clinics, urgent cares, and other patient care areas inclusive of medical schools; (3) advocate for governmental regulatory bodies to recommend fragrance-free policies; (4) work with relevant parties to support the appropriate labeling of fragrance-containing personal care products, cosmetics, and drugs; and (5) support increased identification of hazardous chemicals in fragrance compounds, as well as research focused on fragrance sensitivity.

METHODS

English language reports were selected from searches of PubMed and Google Scholar databases using the search terms: "fragrance sensitivity," "fragrance-free policies" AND "fragrance regulations." Additional articles were identified by manual review of the reference lists of pertinent publications. There was also a review of state and federal regulations on fragrance regulations as well as case law on fragrance sensitivity, multiple chemical sensitivity, and disability. Web sites managed by federal agencies and applicable professional and advocacy organizations were also reviewed for relevant information.

BACKGROUND

Humans are exposed to thousands of chemicals in complex and dynamic mixtures everyday through fragrance materials that are pervasive in personal care and household cleaning consumer products.[1–6] Although fragrance materials must be generally regarded as safe for the intended use and dose, the ubiquity of exposure coupled with the limited transparency about the chemical constituents and reports of adverse health impacts after exposure raises the concerns about: 1) the harmful effects of fragrance chemicals on the skin including allergic contact dermatitis, phototoxicity, and photoallergy; (2) toxic effects (e.g., cancer, endocrine disruption, respiratory, immune, cardiovascular, neurological, reproductive, and developmental harm, etc.) that might arise through transdermal absorption, inhalation, or ingestion of fragrance chemicals; and (3) environmental consequences of fragrance chemicals on waste water and air quality.[4,7]

DISCUSSION

What is fragrance sensitivity?

Multiple names have been used to describe sensitivity to fragrances, chemicals, and the environment more broadly including: multiple chemical sensitivity (MCS), idiopathic environmental intolerance (IEI), environmental illness (IE), chemical intolerance (CI), chemical sensitivity (CS), toxicant-induced loss of tolerance (TILT), and fragrance sensitivity (FS).[8–16] The specifics of each condition vary, but they share two key elements: (1) environmental exposure at relatively low doses (e.g., below thresholds of harm for the average person) and (2) consequent recurrent symptoms that affect multiple and variable organ systems.

Conceptually, FS is the most narrowly defined, with a focus on fragranced chemicals.[16] MCS, CS, CI, and TILT are more expansive as they focus on chemicals which may or may not to be expressly fragranced. Finally, IEI and IE are the broadest definitions acknowledging any potential environmental exposure (e.g. fragrances, chemicals, electromagnetic forces, and radio signals). Additionally, while some researchers maintain that MCS, CS, and CI are really the same disorder, others suggest MCS is a more severe form of CI, and still others suggest that TILT is a two-stage disease mechanism (e.g., initiation and trigger), which can be used to explain and unite MCS, CS, CI, IEI, and IE.[14,17,18] There is still no consensus regarding naming; however, some researchers suggest that CI and TILT are being used with greater frequency now and that MCS, EI, and IEI are descriptive phases of the constellation of allergy-like symptoms, rather than distinct diseases.[14] Arguably, this naming inconsistency is indicative of the lack of consensus in the field, which ironically facilitates further uncertainty. For the purposes of this report, fragrance sensitivity is used as an umbrella term; however, when citing specific studies, deference is given to the language of the authors.

Diagnostic Criteria

One of the most important problems when diagnosing fragrance sensitivity is the variability of symptoms, the lack of symptomatic patterns in relation to frequency, sex or age of onset, and the breadth of distinct, but very similar conditions with similar and overlapping diagnostic criteria.[19] Despite over 50 years of research on the topic, including advances in understanding potential underlying mechanisms, there is also no single biomarker or test that can be used to definitively diagnose fragrance sensitivity.[15,20–23] The most frequently referenced diagnostic method for this disease is the QEESI (Quick Environmental Exposure and Sensitivity Inventory).[19,24–29] The instrument has four scales: Symptom Severity, Chemical Intolerances, Other Intolerances, and Life Impact. Each scale contains 10 items which are scored from 0 = “not a problem” to 10 = “severe or disabling problem.”[30]

Prevalence of Fragrance Sensitivity

Extensive self-reported data suggests exposure to fragrances and chemicals is associated with a variety of adverse health impacts including respiratory, eye, and skin irritation, mucosal symptoms, headaches and migraine, asthma exacerbation, and respiratory, cardiovascular, neurological, gastrointestinal, musculoskeletal, immune, and endocrine issues.[16,19,31–42] However, estimates of fragrance sensitivity prevalence vary. This is likely a product of: (1) the lack of consensus on what condition is being assessed (e.g., MCS, IEI, TILT, CI, CS, and FS); (2) variable study methods (e.g., reliance on self-report symptoms vs evidence of formal diagnosis); (3) environmental exposure variations based on socioeconomic, cultural, and societal differences; and (4) potential prevalence changes over time.

One international study comprised of nationally representative self-report surveys conducted between 2016 and 2017 in the U.S., Australia, the UK, and Sweden found that 34.7 percent, 33.0 percent, 28.7 percent, and 33.1 percent of the population, respectively, reported at least one adverse health effects from exposure to fragranced products.[32,37,39] The same survey found that across these four countries 19.9 percent of the population report chemical sensitivity, 7.4 percent report medically diagnosed MCS, 21.2 percent report chemical sensitivity and/or medically diagnosed MCS, and 32.2 percent report fragrance sensitivity.[37,39] These findings are emblematic of the overall variability of prevalence data due to uncertainty around disease definition (e.g. MCS, CS, CI, TILT, IEI, IE, and FS) and use of different methods (self-report of symptoms vs. diagnosis). For example, other self-report studies published between 1998 and 2015 in the U.S., Canada, Germany, Sweden, Finland, Australia, Korea and Japan found chemical intolerance prevalence estimates of 9–16 percent with lower rates of 0.5–3.9 percent reported for doctor-diagnosed MCS.[1,43–52] Additionally, it is possible some of the variability is a result of increases over time. Nationally representative U.S. population surveys conducted between 2002-2003, 2005-2006, and 2016-2017, by the same researchers who performed the study of international prevalence, found that self-reported chemical sensitivity and medically diagnosed MCS may have increased by more than 200 percent and 300 percent respectively, with chemical sensitivity prevalence increasing from (11.1-11.6 percent) to 26 percent and medically diagnosed MCS increasing from (2.5-3.9 percent) to 13 percent.[1,14,16,37,39,40]

There are also several demographic differences. Women are more likely to report fragrance sensitivity and chemical intolerance as are middle-aged individuals, and those who renovated their home in the past seven years.[13,19,27,42,53–57] There also appear to be high rates of self-reported CI and FS among individuals with asthma/asthma-like conditions and autism/autism spectrum disorder.[33,37,39,58] Finally, the evidence regarding socioeconomic status is mixed. A cross-sectional study of Danish adults showed increased risk of MCS among individuals with lower socioeconomic and subjective social status.[53] Other studies appear to suggest that on average individuals with MCS tend to be well-educated, of higher socioeconomic status, and middle aged.[42]

Sources of Fragrance Exposure

Fragrances are complex mixtures of organic chemicals – solvents, fixatives, essential oils, stabilizers, and preservatives – nearly all of which are either aromatic volatile organic compounds (VOCs) (e.g., ester, aldehydes, and alcohols) like limonene, alpha-pinene, beta-pinene, ethanol, acetone, and acetaldehyde that produce aromas, or semi-volatile organic compounds (SVOCs) like phthalates and parabens.[41,59,60] The complex and variable nature of fragrance means that the fragrance industry uses more than 3,000 chemical substances, both synthetic and naturally occurring, in personal care and other consumer products - a single perfume or fragrance may contain up to 300 different molecules.[4,31,41]

Most people are exposed to fragrance ingredients daily from personal care (e.g., perfumes, lotions, shampoos, bar soaps), air care (e.g., candles, environment fresheners), fabric care (e.g., detergents, fabric softeners), and home care products (kitchen, bathroom, and other household cleaners).[61,62] Scented products represent 89 percent of laundry, 79 percent of surface cleaning, and 99 percent of dish washing product sales in the U.S. and mouthwashes, toothpastes, soaps, and shampoos are the most frequently used scented products.[61,63,64] Fragrance exposures occur via direct contact, skin absorption, inhalation, and ingestion and once inside the body, the materials can impact any organ or system.[41,65]

Hazardous chemicals in consumer goods

There are more than 80,000 chemicals in thousands of regularly used consumer products and hazardous chemicals are commonly found in consumer products in the U.S.[36,66,67] One study used quantitative high throughput exposure assessment to evaluate the chemical content in common household products and found substantial risks associated with paints, paint strippers, pesticides, leave-on personal care products, and cleaning products.[67] Additionally, many of the ingredients commonly found in consumer goods are associated with asthma exacerbation, endocrine disruption, reproductive and developmental harm, cancer, immune system issues, nervous system damage, and headaches.[36,59]

Hazardous chemicals in fragranced consumer goods

Multiple studies have found evidence of endocrine disrupting chemicals (e.g., parabens and phthalates, bisphenol A), triclosan, and VOCs (e.g., ethanolamines, alkylphenols, fragrances, glycol ethers, cyclosiloxanes) in fragranced cleaners, synthetic detergents, fabric softeners, air fresheners, sunscreen, and deodorants for preservative properties.[34,68–80] Studies also suggest fragrance products have a higher concentration of these chemicals compared to non-fragranced products and that these chemicals are the most important contaminants in perfumes and colognes.[34,59] Furthermore, more frequent use of personal care products was associated with higher urinary concentrations of parabens.[68,72–74,77–80] Finally, exposures happen despite existing regulations and many detected chemicals were not listed on product labels.[34]

Social, cultural, and socioeconomic impacts on exposure

As noted earlier, social, cultural, and socioeconomic differences facilitate wildly disparate exposures and consequently risk from these exposures are not equally distributed.[36] Multiple studies have demonstrated that women have higher exposure to scented products than men, which may be driven by sociocultural forces that influence women to use more cosmetic, personal care, and cleaning products than men.[31,36,64,81,82] There is also some evidence of age differences, with individuals aged 40 years and older showing a significant lower exposure to scented products.[64] Additionally, individuals in The Netherlands and Germany had higher levels of exposure to scented products than individuals in Sweden.[64] Finally, there is evidence that products with more toxic ingredients are often marketed to marginalized communities, including racial minorities and low-income populations.[35,4036,83]

Workplace environments also impact exposure. Custodial professionals may use general-purpose cleaners, degreasers, detergents, and other household products more frequently than others.[36,41] Similarly, individuals working in the cosmetics industry including beauticians, nail and hair salon professionals, and aromatherapists are likely exposed to VOCs emitted from shampoos, styling products, lotions, nail products, cosmetics, and sanitizers.[36,41] The same is true for home and automobile maintenance and repair professionals who experience cumulative exposure to heavy-duty cleaners, degreasers, adhesives, lubricants, sealants, caulks, and paint strippers.[36] The highest intensity of VOC exposures in the workplace is expected during the use of floor strippers and general-purpose cleaners because they contain the highest concentrations of VOCs in the bulk.[84] Finally, there is some evidence of increased risk of fragrance allergy among individuals in professions with high workplace VOC exposure.[41,85,86]

A historical perspective on fragrance exposure

A brief look at history provides helpful context regarding the increased prevalence of exposures over time. MCS was first described in the 1950s, around the same time as the post-WWII expansion of the petrochemical industry including widespread production of organophosphate pesticides, solvents, dyes, and fragrances.[8,14] Sick building syndrome was first described in the 1970s, with MCS, IEI, and EI entering the popular press shortly thereafter to describe the myriad of symptoms reported internationally from exposures like: (1) employment in the U.S. Environmental Protection Agency (EPA) headquarters during renovation in 1987; (2) participation in the Gulf War in the 1990s; and (3) the World Trade Center tragedy.[14] By 1994, U.S. synthetic organics production reached over 460 billion pounds per year.[14] Moreover, as VOCs were becoming increasingly prevalent, people transitioned to spending more time indoors and building envelopes of homes and workplaces became better sealed to improve energy efficiency resulting in less fresh air circulation.[1,87,88] Consequently, indoor air quality is often worse than outdoor air quality with VOC concentrations approximately four times higher inside compared to outside.[88] Notably, mixed VOCs and SVOCs, followed by pesticides and combustion products were most prevalent across CI, MCS, and TILT initiation events.[1,14]

HEALTH, ENVIRONMENTAL, AND SOCIOECONOMIC IMPACTS

Self-report evidence suggests exposure to fragrances and chemicals are associated with a variety of adverse health impacts including skin irritation, mucosal symptoms, headaches and migraines, asthma exacerbation, and respiratory, cardiovascular, neurological, gastrointestinal, musculoskeletal, immune, cognitive and neurological issues (see Table 1).[16,16,19,31–40,42,89–96] Yet, understanding the potential health, environmental, and socioeconomic impacts of exposure to fragrances is extremely difficult because of the complexity of exposures, methodological limitations, and significant comorbidities and overlapping conditions. Currently, the strength of the evidence varies depending on the symptoms and organ system impacted.

Skin irritation and contact allergies

There is strong evidence that exposure to fragrances can cause skin irritation, contact dermatitis, contact urticaria, photosensitivity, phototoxicity, and photoallergy.[4,31,41,61,65,97–101] The prevalence of fragrance allergy appears to range between 1 and 9 percent depending on the population and the allergen test used.[41,97,98,102] In one meta-analysis, an estimated 4.5 percent of the general adult population was estimated to be allergic to fragrance materials (e.g., fragrance mix 1), and 1.9 percent has clinically relevant fragrance contact allergies.[41,103] Another systematic review found that the overall prevalence of sensitization to fragrance mix I (FM I) was 6.81 percent and FM II was 3.64 percent and among pediatric dermatitis patients, sensitization prevalence for FM I and FM II was 4.09 percent and 2.17 percent.[98]

The strong, consistent evidence of contact allergy associated with fragrances is not surprising considering more than 150 fragrance ingredients used in personal care and household cleaning products are known to cause contact allergies.[41,97,104] Nevertheless, neither the U.S. nor the European Union requires disclosure for all 150 known allergens. In the U.S., the Food and Drug Administration (FDA) has identified fragrance allergies, but has not yet published the list of allergens that must be included on labels, despite the original proposed June 2024 release date.[105–108] In contrast, the European Union recently updated the list of fragrance allergies required on labels from 26 products to 82.[102] There is also evidence that endocrine disrupting chemicals, many of which are found in fragranced products, may cause skin sensitization and allergic responses.[75,76]

Comorbid conditions, overlapping symptoms, and shared triggers

An important factor that complicates the ability to understand the health impacts of fragrance exposure is that there are numerous comorbid conditions (e.g., fibromyalgia, Sjogren's, autism, chronic fatigue, asthma, and migraine) with overlapping symptoms (e.g., fatigue, nausea, headache, etc.), and shared triggers.[1,1,8,13,31,42,59,109–115]
For instance, there are conditions like migraine that have osmophobia, sensitivity to odor, as a symptom, as well as exposure to fragrance as a trigger.[31,35,60,60,91,114,115] Specifically, there is evidence from retrospective comparison and cross-sectional studies of migraine patients that fragrances trigger migraine at high rates (70 percent and 90.2 percent), with perfume being the most common trigger (95.1 percent), followed by cleaning products (81.3 percent), cigarette smoke (71.5 percent), and motor vehicle exhaust (70.5 percent).[113–115]

Similarly, fragrance and fragranced consumer products have been linked to asthma, asthma exacerbation, and respiratory reactions in the respiratory tract that range from acute temporary upper airway irritation to obstructive lung disease.[16,31,34,39,54,61,65,97,116] As noted earlier, patients with asthma report that fragrances, in particular perfumes (56 percent), air fresheners (32 percent), and scented detergent (28 percent), can worsen their asthma symptoms.[31,117]

There is also some evidence that MCS patients often have comorbid autoimmune diseases (e.g., Hashimoto's thyroiditis, systemic lupus erythematosus (SLE), Sjogren's syndrome).[8,118] Similarly, autoimmunity may be linked to postural tachycardia syndrome (POTS) and myalgic encephalomyelitis/chronic fatigue syndrome (ME/CFS), which are associated with IEI and SBS.[119] One study found close correspondence between symptom patterns for mast cell activation syndrome (MCAS) and TILT such that as the likelihood of patients having CI increases, so did the likelihood of having MCAS.[120] This suggests that mast cell sensitization could be an underlying cause for both TILT and MCAS.[121,122]

Finally, there are extensive studies showing an association between mental illness and MCS, CI, CS, and FS.[9,13,15,42,123–131] Some research suggests that roughly half of MCS subjects meet the criteria for at least one mental health condition in their lifetime as well as significantly higher rates of depression and anxiety.[13,17] Additionally, one study found that 68 percent of the chemically intolerant women surveyed reported a past diagnosis of depression, anxiety, or panic disorder, which was significantly higher than those without chemical intolerance.[13,17,132] Likewise, a cross-sectional study of the association between MCS and mental illness among Canadian adults also found that individuals with MCS were more likely to have major depressive disorder, generalized anxiety disorder, major depressive disorder and generalized anxiety disorder, severe distress, and languishing/moderate mental wellbeing.[13]

Although the evidence on comorbidities, overlapping symptoms, and shared triggers does not provide much additional clarity on fragrance sensitivity, it does shed light on potential mechanism (e.g., inflammatory sensitization, immune dysfunction), illustrate some of the challenges in studying and understanding complex conditions like fragrance sensitivity, and highlight the value of efforts to reduce exposure to fragrances – as it may improve the health and well-being of individuals with shared triggers and comorbid conditions.

Epidemiological evidence of health impacts

Fragranced products often contain endocrine disruptors, carcinogens, and other toxic materials; however, the evidence connecting exposure to these materials in consumer and personal products to health impacts is limited and often weak or attenuated. There is limited evidence suggesting the ingredients in fragranced household products are associated with increased cancer risk as sixty percent of the chemical combinations in household products have hazard quotients exceeding 1, and 9 percent have lifetime cancer risks exceeding 10.[4,67] Similarly, there are epidemiological associations between MCS and tachycardia, arrhythmia, a mitral valve prolapses and electrocardiogram abnormalities.[8,133–135] Finally, there is some epidemiological evidence that MCS is associated with endocrinological disorders (i.e., hyposurrenalism, dysthyroidism and hyperprolactinemia).[8,136–139] Similarly, endocrine disrupting chemicals (EDCs), which are often found in fragranced products, may have synergistic endocrine disruption.[75,76] However, aside from the evidence that synthetic musks have been shown to have estrogenic effects, the evidence connecting EDCs in fragranced personal care and household cleaning products to endocrine disorders and disruption is weak.[34,140–142] However, in each of these examples the evidence is weak and attenuated.

Environmental Impacts

In addition to the multiple direct and immediate health risks associated with exposure to fragrances, there are also environmental impacts. One study found that fragrance substances are continuously discharged in large amounts into the environment, especially via wastewater.[143] Furthermore, fragrances and in particular musks are ubiquitous, persistent, bioaccumulative pollutants that can be highly toxic.[35,143] Yet, evaluating the overall impact is difficult because data on persistence, bioconcentration, and aquatic toxicity is only available for ~0.2 percent, one percent, and 11 percent respectively of chemicals registered in the European Union.[144–148] There is also concern that because many fragrance compounds are identical to those which are signal substances of environmental organisms at very low concentrations it is potentially impacting the ecosystem balance.[143,145,146] Additionally, fragrance VOCs and SVOCs contribute to air pollution and decrease air quality.[35,65]

Social and economic impacts

There is strong self-reported evidence that people with fragrance sensitivities report avoiding certain places because of potential exposure.[32,33,91,111,149]Specifically, individuals who experienced chemicals triggering adverse physical symptoms avoided social and occupational settings because of widespread use of chemicals.[149] Similarly, there is self-reported evidence suggesting that exposure to fragrances results in stigma, missed work, loss of income, and occasionally loss of employment.[111,149] One study found that those with fragrance sensitivity reported missing 7.4 workdays on average due to illness from fragranced product exposure in the workplace.[32] Moreover, one study found that of the individuals surveyed with a hypersensitivity to fragrance, 13.5 percent (1.8 percent of the entire sample) reported losing their jobs because of their hypersensitivity.[111]

PATHOPHYSIOLOGICAL THEORIES OF FRAGRANCE SENSITIVITY

Fragrance sensitivity is a complex condition and despite decades of research there is no consensus around a unified theory of fragrance sensitivity pathophysiology. However, there are multiple rationally grounded hypotheses about the underlying mechanisms of fragrance sensitivity (e.g., neural sensitization/hyperresponsivity/central sensitization, limbic system dysfunction, neurogenic inflammation, immune system dysregulation, and psychological theories) as well as cross-cutting themes and common ground for many of these theories (e.g., the importance of genetic and immune factors, altered metabolic capacity, and oxidative stress). [1,8,12,14,15,17,42,109,110,112,121,150,151]

Neurogenic Inflammation

Neurogenic inflammation is a type of inflammation that is triggered by the activation of sensory neurons. Under the neurogenic inflammation hypothesis, fragrances trigger the responses of unmyelinated c-fiber neurons in the respiratory mucosa, leading to central nervous system (CNS) inflammation, and eventually symptoms like headache or tachycardia.[42,152–158]

Limbic system dysregulation and neural sensitization

Limbic system dysregulation and neural sensitization are parallel processes that involve acquired hyper-responsiveness manifested in several body systems. Limbic system dysfunction hypothesis focuses on hyper-responsiveness in the limbic system. Specifically, recurrent low-level intermittent exposure to chemicals, could produce something similar to kindling, where an increased electrical response in the brain following repeated low-level electrical stimulations of limbic structures can permanently lower the seizure threshold.[42,150,159–164] Neural sensitization, sometimes referred to as hyperresponsivity or central sensitization, also involves increased responsiveness of neurons, but with a focus on non-limbic areas in the CNS. For instance, with neural sensitization increased EEG activity and changes in skin conductance occurred after repeated intermittent exposures to chemicals in chemically sensitive women compared to normal controls.[42,137,165,166] There is some evidence of both sensitization events and clear cellular-level impacts from fragrance and chemical exposure in the central and peripheral nervous and immune systems.[1,14,167] This is grounded in the notion that the olfactory nerve acts as a vector for neurotoxic agents to be transported into the central nervous system bypassing the blood brain barrier.[150,159] Neuroimaging studies support the idea that the development of MCS may be attributed to neural sensitization.[1,153,168–173] [150,173]

Immune dysregulation

Allergic response and immune system dysregulation is another proposed etiological mechanism to explain fragrance sensitivity.[8,112,119,121,150,174] Some researchers theorize that mast cell degranulation and mediator release, caused by indoor air contaminants (e.g., volatile organic chemicals outgassing from new construction and remodeling materials, pesticides, mold, disinfectants, and cleaning agents) at extremely high levels, could provide an explanation for the myriad illnesses and symptoms associated with MCS, TILT, and IEI as well as the comorbid and often overlapping conditions (e.g., fibromyalgia, chronic fatigue, depression, asthma, eczema, and neurodivergence).[120–122,175–177] One study demonstrated that individuals with MCS displayed a distinct systemic immune mediator profile suggestive of low-grade systemic inflammation, as plasma levels of interleukin-1β, -2, -4, and -6 were significantly increased in the MCS group compared with controls.[112]

Psychogenic theory

The psychogenic theory of MCS hypothesizes that MCS patients, who often have high levels of depression, anxiety, and mental distress, have a greater sensitization towards environmental stimuli, which they then focus their attention on to explain their psychological symptoms.[9,13,15,26,42,95,123–129,131,178–180] This is further complicated by the fact that some psychiatric disorders (e.g., panic disorder, and PTSD) share many of the same symptoms or features of MCS.

Other common factors to consider

Although not expressly tied to a given pathophysiological theory, there is also consistent evidence of the importance of genetic and immune factors, altered metabolic capacity, and oxidative stress. For instance, the clinical manifestations of MCS may be associated with a variety of genetic polymorphism many of which result in alterations in metabolic capacity.[19,181 8,18,23,109,150,182–186] There is also some evidence suggesting these polymorphisms could increase oxidative stress.[8,15,17,18,183,186–188] Therefore, it is possible that gene expression is epigenetically modulated by exposure, leading to potential hypersensitivity and MCS.[8,182–186]

LEGISLATIVE AND REGULATORY LANDSCAPE

Federal Legislation and Administrative Oversight

Historically there have been few regulations regarding fragrances and a patchwork of federal agencies that have authority over different products with fragrances. The FDA has the authority to regulate the safety of food, drugs, medical devices, and cosmetics. Additionally, The Fair Packaging and Labeling Act (FPLA or Act) directs the Federal Trade Commission (FTC) and the FDA to issue regulations requiring that all "consumer commodities" be labeled to disclose net contents, identity of commodity, and name and place of business of the product's manufacturer, packer, or distributor.[189] In the U.S., most cleaning products are regulated by the Consumer Product Safety Commission, which does not require full fragrance ingredients or even the presence of fragrances on either the product label or the material safety data sheet (MSDS).[65] Personal care products are regulated by the FDA, which requires ingredients on the product label, but not on the MSDS. Notably, the FDA does not require companies to disclose “trade secrets,” of which fragrance formulas are likely to be. Consequently, fragrance ingredients were simply listed as “fragrance,” rather than disclosed on an individual basis.[7,190,191] In short, the FDA required finished cosmetic products to be safe when used by customers in accordance with product labeling or customary usage and to not be misbranded or adulterated while the FPLA required cosmetics marketed on a retail basis to consumers in interstate commerce to be honestly and informatively labeled.[65,190] Together the FDCA and FPLA were the primary pieces of federal legislation governing fragrance chemicals in personal care products, cosmetics, and consumer goods until the Modernization of Cosmetics Regulation Act of 2022 (MoCRA) was passed.

The goal of MoCRA was to expand the FDA’s authority to regulate cosmetics. Specifically, the new powers provided to the FDA under MoCRA include: (1) expanded adverse event reporting and transparency; (2) recall authority; (3) requiring manufacturers and processors to register with the FDA; (4) good manufacturing processes (GMP); (5) expanded labeling requirements (e.g., contact for adverse event reporting and disclosure of fragrance allergens); (6) maintenance records supporting safety substantiation; (7) screening Talc-containing products for asbestos; and (8) assessment of per- and polyfluoroalkyl substances (PFAS) safety in personal care products (e.g., summary report in collaboration with National Center for Toxicological Research) issued within

three years.[190,192,193] Many of the new requirements became effective on December 29, 2023, but FDA delayed enforcement until July 1, 2024.[194,195]

Despite the improvements brought by MoCRA, there are still clear gaps and areas of improvement. First, although the new label requirements include the disclosure of fragrance allergens, which is a step in the right direction, as of the writing of this report, the FDA has not published a list of fragrance allergens. Additionally, fragrance ingredients that are not on the list of allergens may still be identified only as, "fragrance" to protect company trade secrets. Second, there are some exemptions under MoCRA. Specifically, certain small businesses (e.g., companies whose average gross annual sales of cosmetic products in the U.S. for the past three years is less than $1 million) are exempt from compliance with GMP, registration requirements, and adverse event record retention. However, the exemption does not apply to facilities that manufacture or process products that: (1) regularly come into contact with the mucus membrane of the eye; (2) are injected; (3) are intended for internal use; or (4) are intended to alter appearance for more than 24 hours.[194] MoCRA does preserve the authority of states to ban or regulate chemicals of concern in personal care products. Thus, the hard work of regulating specific ingredients now falls to the states.[193]

State Legislation

Currently, twenty states have passed laws limiting certain substances in cosmetics, including California, Colorado, Florida, Hawaii, Illinois, Iowa, Maryland, Minnesota, Montana, Mississippi, Nevada, New Jersey, New Mexico, New York, Ohio, Oregon, Vermont, Virginia, Washington and Wisconsin.[193] These states have stricter limits on some chemicals (e.g. 1,4-dioxane, cadmium, color additives, formaldehyde, mercury, parabens, PFAS, phthalates, methyl alcohol and methyl methacrylate) due to concerns about their potential health effects.[193]

California is a leader in consumer safeguards, specifically, regarding protection against harmful substances in personal care products, and therefore the best example of successful fragrance regulation at the state level. In 1986, the state passed Proposition 65, the Safe Cosmetics Act, which required manufacturers to reveal the presence of Proposition 65 chemicals. The Prop 65 list currently includes 624 carcinogens and 323 reproductive/developmental toxicants; however, it does not include other hazard endpoints, such as neurotoxicity, asthmagenicity, or endocrine disruption.[36,66] Then California passed the Professional Cosmetics Labeling Requirements Act, which mandated ingredient labels on professional salon products. Next, in 2020 the Toxic-Free Cosmetics Act banned 24 toxic chemicals sold in California and the Cosmetic Fragrance and Flavor Ingredient Right to Know Act was passed, requiring disclosure of fragrance mixture ingredients in personal care products. Finally, in 2022, California banned intentionally added PFAS chemicals from personal care products, effective on January 1, 2025.

Industry Self-Regulation

The final regulatory mechanism is industry self-regulation. The Research Institute for Fragrance Materials (RIFM) and the International Fragrance Association (IFRA) make up the international self-regulation system for the fragrance industry.[4] RIFM was formed as a member-supported nonprofit organization in 1966 and in 1967 RIFM established their Expert Panel for Fragrance Safety as an independent team of researchers and academics (e.g., dermatologists, pathologists, toxicologists, and environmental scientists) that review and approve all RIFM work. This includes the RIFM database which provides information (e.g., chemical features, safety assessment, genotoxicity, repeated dose and reproductive toxicity, skin sensitization, photoirritation and photoallergenicity, local respiratory toxicity, mutagenicity, carcinogenicity, metabolism and toxicokinetics, and environmental consequences) on 7,000 raw fragrance materials. However,

RIFM does not evaluate final fragrance formations and the database is only available to members.[4,65] IFRA was founded in 1973 and acts as the official representative body of the international fragrance industry. As such they represent the collective interests of the industry. The primary activity of IFRA is the publication of the list of usage standards for fragrance materials, based on the findings of RIFM. The most recent publication (the 51st Amendment) was implemented in January 2024 and updates are scheduled to occur every three years.[196] Ultimately, industry self-regulation is helpful, but labeling transparency and disclosure of all fragrance ingredients in consumer products may not be in their best interest.

Although the enactment of MoCRA and state legislation to either prohibit or provide notice of certain harmful ingredients in personal care and household cleaning consumer goods are actions that will likely help reduce exposure to potentially harmful chemicals and fragrances, other mechanisms may yield better results.

LEGAL LANDSCAPE AROUND FRAGRANCE SENSITIVITY AND DISABILITY

In the absence of more stringent state and federal legislation around fragrance regulation, the most likely tool to reduce exposure to fragrances for those who experience fragrance sensitivity is either: (1) exercising rights under the Americans with Disabilities Act (ADA) or (2) relying on organizations to pursue self-regulation and implementation of fragrance-free policies.[197]

ADA and third-party accommodations

Under the ADA, a disability means: (1) a physical or mental impairment that substantially limits one or more major life activities of such individual; (2) a record of such an impairment; or (3) being regarded as having such an impairment.[198]

The ADA uses the concept of reasonable accommodation to establish a form of positive rights. Specifically, the ADA affirmatively requires public and private entities to make reasonable modifications to physical environments, rules, and policies to make spaces accessible.[197] Generally, interpretation of what constitutes reasonable accommodation focuses on two parties, the individual seeking the accommodation to achieve equitable access and the employer or public/private actor who is being asked to engage in or refrain from certain behaviors. However, fragrance-free policies would require third-party accommodations, because other individuals using the shared space would also need to accommodate.[197] Third-party accommodation can be both passive behaviors (such as prohibiting peanuts in schools) as well as active behaviors (such as washing hands or wearing a mask).[197] In the case of fragrance-free policies, the accommodation would require multiple third parties to refrain from using certain fragranced products.

Often the criticism of third-party accommodations (and disability accommodations in general), is that they may be viewed as special rights that infringe on the rights of third parties. However, there are examples of successful third-party accommodation, starting with smoke-free policies that paved the way as both a disability accommodation as well as a general public health practice.[197,199] This provides hope for the potential success of other third-party accommodations.

Smoke-free policies as accommodations

Historically, courts have been sympathetic to claims of secondhand smoke-related disabilities and acknowledged employers should have granted reasonable accommodation such as prohibition of smoking on the job or inside the building.[197,200] Importantly, the standard courts have taken to evaluate the reasonableness of third-party accommodations, is whether the accommodation creates undue burden for others. For instance, smoke-free workplace policies and laws have been considered reasonable because they are inexpensive to implement and do not harm or burden businesses that have implemented them.[197,201]

Food allergy bans and mask requirements as accommodations

As with smoke-free policies, there has been evolution over the years with respect to accommodating food allergies and mask requirements – particularly in education, air travel, and the workplace. Section 504 is the primary statutory framework used to accommodate students with disabilities in schools and it has been used to accommodate students with food allergies and immune conditions.[197,202] Regarding food allergies, reasonable accommodations include allergen-free lunch tables, handwashing requirements, an allergen-free classroom, and self-carry epinephrine (EpiPen).[197,203] Although, there has been occasional resistance from parents of non-allergic kids, generally food bans as accommodations are well accepted and practiced with many schools banning nuts schoolwide.[197,199] In contrast, mask requirements in schools as a reasonable disability accommodation have had mixed results with circuit courts split.[197] One researcher theorizes that some courts are resistance to blanket mask requirement policies because they lack flexibility, applying mask requirements to everyone regardless of whether they come into contact with the student in need of accommodation. In contrast, a third-party accommodation argument and more importantly policy, which can be tailored to the specific needs of the individual being accommodated as well as the other parties, may be more successful in these circuits.[197]

Food allergies and self-regulation to avoid tort liability

The airline industry has shown similar successes regarding making planes safer for individuals with food allergies (specifically peanuts); however, it has taken the form of self-regulation. In the absence of federal or industry regulation banning peanuts, many airlines (but not all) decided to stop serving them to prevent potential tort liability.[197,204] Consequently, the current landscape theoretically gives consumers enough room to choose the safest airline for them. However, this sort of informal self-regulation, which is driven by the desire to avoid potential tort liability, has not been perfect – with reports of families being removed from planes when they raise questions regarding exposure or situations when the airline determines the severity of an allergy made it unsafe for them to fly.[197,205,206] In this way, the airline industry provides a cautionary example for informal self-regulation as opposed to formal regulation.

Third-party accommodations and fragrance sensitivity?

Smoke-free policies, mask requirements, and bans on food allergens provide a potential roadmap for fragrance sensitivity. Moreover, in many ways the current situation with fragrance sensitivity mirrors what was going on with food allergies 70 years ago. People with fragrance sensitivity experience symptoms when exposed to fragrances, but there is not a proven biological mechanism

or clear clinical biomarker. Likewise, prior to the discovery of immunoglobulin E (IgE) as an indicator allergy in the mid-1960s, food allergy was considered a controversial condition.[197,207] This is particularly interesting as successful ADA and Section 504 challenges for food allergy accommodations helped normalize narrowly applied third-party accommodations such that more widespread nut bans in schools are now more well accepted. At the same time, to avoid liability, the airline industry has relied on self-regulation to give consumers choice. It is not yet clear whether fragrance-free policies will have a similar divide.

ADA cases involving fragrance sensitivity

Initial efforts of individuals with MCS to exercise their rights under the ADA were largely unsuccessful. A study of 17 early ADA cases involving MCS (between 1995 and 2003) found that motions for summary judgment by the defendant were granted or affirmed in 14 cases.[197,208] Similarly, a review of cases involving MCS prior to the 2008 Americans with Disabilities Act Amendments Act (ADAAA), which broadened the definition of disability, demonstrate that courts regularly questioned whether the plaintiffs were truthful about the presence or severity of their condition.[197,209] Moreover, in 2022, with the ADAAA in place for some time, the Eastern District Court of Virginia still excluded from evidence a medical diagnosis of the condition because it "lacked reliability and the medical community has not accepted MCS as a diagnosis."[197,210,211] This suggests courts are reticent to acknowledge MCS as a condition meriting accommodation.

Moreover, even in cases where courts acknowledge fragrance sensitivity as a disability meriting accommodation, there remains the question of whether fragrance-free policies are considered a reasonable accommodation that does not unduly burden third parties. For instance, the Minnesota District Court decided that fragrance-free policies "impose an undue financial and administrative burden on employers, because they are very difficult to enforce."[197,212] Similarly, when evaluating the reasonableness of a fragrance-free policy in a public school, the court determined that, "a public school could never be free from any objectionable smell or any deodorant, perfume, cologne, hand lotion, or cleaning products."[197,211] At the same time there have been some successful ADA cases involving MCS.[213–216] In short, while there is a pathway under the ADA to ensure accommodations for individuals with fragrance sensitivity, evidence suggests the court system may not be the best tool to achieve equity.

Self-regulation and implementation of fragrance-free policies

Fragrance-free policies, which often apply to both individuals and spaces, aim to make spaces more accessible for individuals with MCS, as well as those with other conditions with symptoms that may be triggered by fragrance.[217] For instance, efforts are taken to promote the use of fragrance-free cleaning products, and people coming into those spaces asked to avoid or limit wearing perfume, using fragranced laundry detergent/dryer sheets, applying personal care products that contain fragrances, or refrain from using fragranced products when in fragrance-free spaces.[217]

As illustrated above, some blanket fragrance-free policies have been struck down by courts. Consequently, it is important to consider what sorts of fragrance-free policies might be the most successful.

Where are fragrance-free policies being implemented?

Fragrance-free polices are gaining traction in workplaces and schools. Since 2009, the Centers for Disease Control (CDC) has encouraged employees to be as fragrance-free as possible.[218] The rational for the policy was to establish guidance and procedures to protect and maintain safe indoor environmental quality for all CDC employees at all CDC work areas. Importantly, the policy does not expressly prohibit individuals from using fragranced products, but it does prohibit carrying or using such products inside the CDC.[218] Therefore, it is a good example of a flexible policy. There have also been efforts to implement and advocate for fragrance free spaces and product options elsewhere by the CDC, the American Lung Association, the Job Accommodation Network (JAN), and the U.S. EPA.[218–221] Additionally, University of Illinois Chicago (UIC) and University of California Los Angelas both advocate and provide resources for implementing fragrance-free policies on their campuses and Portland was the first city to ban fragrance.[141,217,222,223] Importantly, Portland's ban, like CDC's policy, is flexible. It applies only to City of Portland employees who are asked, "to refrain from the use of personal scented products in the workplace where the sole purpose is to produce a scent, such as perfume, after shave, and cologne and to avoid the use of strongly scented personal hygiene products such as laundry soap, dryer sheets hand lotion, powder, hair spray, and deodorant."[223]

It is not clear if increased implementation of fragrance-free spaces is based predominantly on the strength of the scientific evidence, the precautionary principle, or the legal landscape regarding MCS as a disability. However, currently fragrance-free policies appear to be the most effective method for reducing exposure to fragrances, particularly when the policies are flexible, creative, and voluntary rather than focusing on strict bans.[224]

CURRENT AMA POLICY

Our AMA does not currently have any policy related to fragrance regulations or fragrance-free policies. However, policy H-440.855, "National Cosmetics Registry and Regulation," does support the creation of a publicly available registry of all cosmetics and their ingredients. Additionally, although it is not a formal policy the AMA does discuss the complex medical and legal nature of disability. For instance, HOD policy supports the designation of alcohol use disorder as a disability and opposes the classification of obesity as a disability.

CONCLUSION

Fragrance sensitivity is a controversial, unexplained, and complex disorder. There is extensive self-report evidence suggesting that fragrance sensitivity is a serious problem for a significant portion of the population. Yet, the heterogeneity of symptoms and exposures coupled with the sheer volume of ingredients in fragranced products (and consumer products more broadly) makes understanding the relationship between fragrance exposure and health impacts extremely difficult. Most of the evidence, which varies wildly in quality, falls into three categories: (1) self-report of exposure to fragrance followed by a constellation of symptoms; (2) toxicological and epidemiological associations between chemicals found in fragranced products and potential risk of harm; and (3) analysis of potential mechanisms in individuals with a diagnosis of fragrance sensitivity. It is possible to connect the evidence to form a compelling narrative of how exposure to harmful chemicals from personal care and household cleaning products causes serious adverse health effects through several plausible mechanisms. However, the throughline between these categories of research is often attenuated, weak, or based on limited data.

This clearly illustrates the need for more research on fragrance sensitivity (e.g., diagnostic tools, mechanisms, health impacts, impacts of fragrance on other diseases, and fragrance-free interventions). Although more research is needed, inaction means that those with fragrance sensitivity will continue to be misdiagnosed, offered health care solutions with limited or no effect, or be met with mistrust and doubt. Furthermore, efforts to reduce exposure to fragrances and other chemicals will likely benefit individuals with fragrance sensitivity, as well as those with comorbidities and shared triggers that are also negatively impacted by exposure to fragrances. Therefore, it is worth pursuing efforts to reduce exposure.

It is unlikely that either federal regulation or industry self-regulation will bring significant changes or improvements regarding labeling transparency or ingredient bans, but some states have been making promising progress in these areas suggesting this may be an area worth more focus. Likewise, there is a viable mechanism for accommodation under the ADA, though decisions are mixed. Instead, the most effective approach has been self-regulation in the form of implementation of fragrance-free policies. Notably the most successful fragrance-free policies and third-party accommodations appear to be those that afford flexibility and creativity rather than blanket bans.

RECOMMENDATIONS

The Council on Science and Public Health recommends that the following be adopted, and the remainder of the report be filed.

Our American Medical Association:

(1) recognizes that some environmental exposures may have the potential to substantially limit major life activities of an individual with fragrance sensitivity and related disorders.

(2) encourages health care facilities, government agencies, and nonprofit organizations to adopt and promote fragrance-free policies that recommend individuals avoid or limit use of fragrances and support the use of fragrance-free products when feasible.

(3) encourages research on fragrance sensitivity to (a) improve diagnostic tools; (b) understand the impact of fragrances on other diseases; (c) evaluate the impact of fragrances on health; and (d) evaluate the impact of fragrance-free intervention.

(4) supports the identification of fragrance allergens and disclosure of fragrance ingredients as part of labeling of personal care products, cosmetics, and drugs. (New HOD Policy)

Fiscal Note: less than $1,000

Table 1. Variations is self-report symptom prevalence (%) across different populations and subgroups

	Steinemann*					Steinemann*	Steinemann*	Caress*	Fares-Medina*		Andresson**	Caress**	Hausteiner**	Borchein***	Klascha****		
	US	AU	UK	SE	AVG	US	US	US	ES-w	ES-m	nr	US	DE	nr	DE-FS	DE-Autists	DE-Asthmatics
Migraine headaches	15.7	10	8.4	16.1	12.6	8.4	15.7	7.2	19		66	88	58	33	25.1	22.4	12
Asthma attacks	8	7.6	6.8	5.5	7	6.8	8	4.7		29	59				16.9	20.4	13.8
Neurological problems (e.g., dizziness, seizures, head pain, fainting, loss of coordination)	7.2	4.5	3.7	5	5.1		7.2	3.2	10		22	7.2-46	22	19	27.4	30.6	11.1
Respiratory problems (e.g., difficulty breathing, coughing, shortness of breath)	18.6	16.7	11.6	20	16.7	11.6	18.6	9.5		47-60					55.3	30.6	24.4
Skin problems (e.g., rashes, hives, red skin, tingling skin, dermatitis)	10.6	9.5	9.8	6.5	9.1	9.8	10.6	5.7	15	1	30		19		32	34.7	16
Cognitive problems (e.g., difficulties thinking, concentrating, or remembering)	5.8	4.1	2.8	4.5	4.3	2.8	5.8		2-9		21-51	32	17-46	13-27	18.7	28.6	12.4
Mucosal symptoms (e.g., watery or red eyes, nasal congestion, sneezing)	16.2	14	9.2	13.5	13.2	9.2	16.2	7.6	42	2	22-65	59-77	11	12	35.6	28.6	14.2
Immune system problems (e.g., swollen lymph glands, fever, fatigue)	4	3.3	1.9	1.5	2.7	1.9	3.8					17.4			13.2	38.8	9.3
Gastrointestinal problems (e.g., nausea, bloating, cramping, diarrhea)	5.5	3.3	3	3.5	3.8	3	5.5		20	2	25-26		30	15	21.9	24.5	10.2
Cardiovascular problems (e.g., fast or irregular heartbeat, jitteriness, chest discomfort)	4.4	3	3.2	2.1	3.2	3.2	4.4		3		21-30	46-55	14-27	19-Dec	14.6	24.5	8
Musculoskeletal problems (e.g., muscle or joint pain, cramps, weakness)	3.8	2.6	2	1.5	2.5	2	1.7		17	2		30.4		19-21	9.6	24.5	6.7
Other	1.7	1.9	2.1	2.2	2		1.7					50.7			3.2		1.3

nr = not reported, AVG = average

**General popluation/nationally representative sample*

***Individuals with self reported chemical intolerance*

****Individuals with a diagnosis of MCS*

*****German subpopulations (FS = fragrance sensitive individuals, autists, and asthmatics)*

REFERENCES

1. Molot J, Sears M, Anisman H. Multiple chemical sensitivity: It's time to catch up to the science. *Neuroscience & Biobehavioral Reviews*. 2023;151:105227. doi:10.1016/j.neubiorev.2023.105227

2. Thornton JW, McCally M, Houlihan J. Biomonitoring of Industrial Pollutants: Health and Policy Implications of the Chemical Body Burden. *Public Health Rep*. 2002;117(4):315-323. doi:10.1093/phr/117.4.315

3. Hofman J, Staelens J, Cordell R, et al. Ultrafine particles in four European urban environments: Results from a new continuous long-term monitoring network. *Atmospheric Environment*. 2016;136:68-81. doi:10.1016/j.atmosenv.2016.04.010

4. Bickers DR, Calow P, Greim HA, et al. The safety assessment of fragrance materials. *Regulatory Toxicology and Pharmacology*. 2003;37(2):218-273. doi:10.1016/S0273-2300(03)00003-5

5. Li M, Gao S, Lu F, Tong H, Zhang H. Dynamic Estimation of Individual Exposure Levels to Air Pollution Using Trajectories Reconstructed from Mobile Phone Data. *IJERPH*. 2019;16(22):4522. doi:10.3390/ijerph16224522

6. Gherasim A, Lee AG, Bernstein JA. Impact of Climate Change on Indoor Air Quality. *Immunology and Allergy Clinics*. 2024;44(1):55-73. doi:10.1016/j.iac.2023.09.001

7. Commissioner O of the. Fragrances in Cosmetics. *FDA*. Published online August 22, 2024. Accessed February 12, 2025. https://www.fda.gov/cosmetics/cosmetic-ingredients/fragrances-cosmetics

8. Damiani G, Alessandrini M, Caccamo D, et al. Italian Expert Consensus on Clinical and Therapeutic Management of Multiple Chemical Sensitivity (MCS). *International Journal of Environmental Research and Public Health*. 2021;18(21):11294. doi:10.3390/ijerph182111294

9. Eek F, Karlson B, Österberg K, Östergren PO. Factors associated with prospective development of environmental annoyance. *Journal of Psychosomatic Research*. 2010;69(1):9-15. doi:10.1016/j.jpsychores.2009.12.001

10. Eis D, Helm D, Mühlinghaus T, et al. The German Multicentre Study on Multiple Chemical Sensitivity (MCS). *International Journal of Hygiene and Environmental Health*. 2008;211(5):658-681. doi:10.1016/j.ijheh.2008.03.002

11. Hausteiner C, Bornschein S, Zilker T, Henningsen P, Förstl H. Dysfunctional cognitions in idiopathic environmental intolerances (IEI)—An integrative psychiatric perspective. *Toxicology Letters*. 2007;171(1):1-9. doi:10.1016/j.toxlet.2007.04.010

12. Hempel S, Danz M, Robinson KA, et al. Multiple chemical sensitivity scoping review protocol: overview of research and MCS construct. Published online September 1, 2023. doi:10.1136/bmjopen-2023-072098

13. Johnson D, Colman I. The association between multiple chemical sensitivity and mental illness: Evidence from a nationally representative sample of Canadians. *Journal of Psychosomatic Research*. 2017;99:40-44. doi:10.1016/j.jpsychores.2017.06.002

14. Masri S, Miller CS, Palmer RF, Ashford N. Toxicant-induced loss of tolerance for chemicals, foods, and drugs: assessing patterns of exposure behind a global phenomenon. *Environ Sci Eur*. 2021;33(1):65. doi:10.1186/s12302-021-00504-z

15. Rossi S, Pitidis A. Multiple Chemical Sensitivity. *J Occup Environ Med*. 2018;60(2):138-146. doi:10.1097/JOM.0000000000001215

16. Caress SM, Steinemann AC. Prevalence of Fragrance Sensitivity in the American Population. *Journal of Environmental Health*. 2009;71(7):46-50.

17. Dantoft TM, Andersson L, Nordin S, Skovbjerg S. Chemical intolerance. *Curr Rheumatol Rev*. 2015;11(2):167-184. doi:10.2174/1573397111021507021111101

18. Lavric CE, Migueres N, Blay F de. Multiple chemical sensitivity: a review of its pathophysiology. *Explor Asthma Allergy*. 2024;2(4):350-362. doi:10.37349/eaa.2024.00050

19. Fares-Medina S, Díaz-Caro I, García-Montes R, Corral-Liria I, García-Gómez-Heras S. Multiple Chemical Sensitivity Syndrome: First Symptoms and Evolution of the Clinical Picture: Case-Control Study/Epidemiological Case-Control Study. *International Journal of Environmental Research and Public Health*. 2022;19(23):15891. doi:10.3390/ijerph192315891

20. Senger E. Scent-free policies generally unjustified. *CMAJ*. 2011;183(6):E315-E316. doi:10.1503/cmaj.109-3800

21. Belpomme D, Campagnac C, Irigaray P. Reliable disease biomarkers characterizing and identifying electrohypersensitivity and multiple chemical sensitivity as two etiopathogenic aspects of a unique pathological disorder. *Reviews on Environmental Health*. 2015;30(4):251-271. doi:10.1515/reveh-2015-0027

22. Vadalà M, Laurino C, Corazzari V, Palmieri B. A Proposal for Clinical Biomarkers in Multiple Chemical Sensitivity. *Clin Ter*. 2020;171(2):e149-e155. doi:10.7417/CT.2020.2205

23. De Luca C, Raskovic D, Pacifico V, Thai JCS, Korkina L. The Search for Reliable Biomarkers of Disease in Multiple Chemical Sensitivity and Other Environmental Intolerances. *International Journal of Environmental Research and Public Health*. 2011;8(7):2770-2797. doi:10.3390/ijerph8072770

24. Palmer RF, Walker T, Kattari D, et al. Validation of a Brief Screening Instrument for Chemical Intolerance in a Large U.S. National Sample. *International Journal of Environmental Research and Public Health*. 2021;18(16):8714. doi:10.3390/ijerph18168714

25. Jeong I, Kim I, Park HJ, Roh J, Park JW, Lee JH. Allergic Diseases and Multiple Chemical Sensitivity in Korean Adults. *Allergy Asthma Immunol Res*. 2014;6(5):409-414. doi:10.4168/aair.2014.6.5.409

26. Skovbjerg S, Berg ND, Elberling J, Christensen KB. Evaluation of the Quick Environmental Exposure and Sensitivity Inventory in a Danish Population. *Journal of Environmental and Public Health*. 2012;2012(1):304314. doi:10.1155/2012/304314

27. Azuma K, Uchiyama I, Katoh T, Ogata H, Arashidani K, Kunugita N. Prevalence and Characteristics of Chemical Intolerance: A Japanese Population-Based Study. *Archives of Environmental & Occupational Health*. 2015;70(6):341-353. doi:10.1080/19338244.2014.926855

28. García-Sierra R, Álvarez-Moleiro M. Evaluation of suffering in individuals with multiple chemical sensitivity. *Clínica y Salud*. 2014;25(2):95-103. doi:10.1016/j.clysa.2014.06.006

29. Hojo S, Sakabe K, Ishikawa S, Miyata M, Kumano H. Evaluation of subjective symptoms of Japanese patients with multiple chemical sensitivity using QEESI©. *Environ Health Prev Med*. 2009;14(5):267-275. doi:10.1007/s12199-009-0095-8

30. Miller CS, Prihoda TJ. The Environmental Exposure and Sensitivity Inventory (EESI): a standardized approach for measuring chemical intolerances for research and clinical applications. *Toxicol Ind Health*. 1999;15(3-4):370-385. doi:10.1177/074823379901500311

31. Ahmed F, Mirza F. Fragrances and their effects on public health: A narrative literature review.

32. Klaschka U. Between attraction and avoidance: from perfume application to fragrance-free policies. *Environ Sci Eur*. 2020;32(1):98. doi:10.1186/s12302-020-00377-8

33. Klaschka U. "This perfume makes me sick, but I like it." Representative survey on health effects associated with fragrances. *Environ Sci Eur*. 2020;32(1):30. doi:10.1186/s12302-020-00311-y

34. Dodson RE, Nishioka M, Standley LJ, Perovich LJ, Brody JG, Rudel RA. Endocrine Disruptors and Asthma-Associated Chemicals in Consumer Products. *Environmental Health Perspectives*. 2012;120(7):935-943. doi:10.1289/ehp.1104052

35. Chen J, Yi Z, Sun R, et al. Analysis of Fragrance Allergens in Personal Care Products, Toys, and Water Samples: A Review. *Journal of AOAC INTERNATIONAL*. 2022;105(2):396-412. doi:10.1093/jaoacint/qsab156

36. Knox KE, Dodson RE, Rudel RA, Polsky C, Schwarzman MR. Identifying Toxic Consumer Products: A Novel Data Set Reveals Air Emissions of Potent Carcinogens, Reproductive Toxicants, and Developmental Toxicants. *Environ Sci Technol*. 2023;57(19):7454-7465. doi:10.1021/acs.est.2c07247

37. Steinemann A. International prevalence of fragrance sensitivity. *Air Qual Atmos Health*. 2019;12(8):891-897. doi:10.1007/s11869-019-00699-4

38. Steinemann A. National Prevalence and Effects of Multiple Chemical Sensitivities. *Journal of Occupational and Environmental Medicine*. 2018;60(3):e152. doi:10.1097/JOM.0000000000001272

39. Steinemann A. International prevalence of chemical sensitivity, co-prevalences with asthma and autism, and effects from fragranced consumer products. *Air Qual Atmos Health*. 2019;12(5):519-527. doi:10.1007/s11869-019-00672-1

40. Caress SM, Steinemann AC. National Prevalence of Asthma and Chemical Hypersensitivity: An Examination of Potential Overlap. *Journal of Occupational and Environmental Medicine*. 2005;47(5):518. doi:10.1097/01.jom.0000161736.54099.44

41. de Groot AC. Fragrances: Contact Allergy and Other Adverse Effects. *Dermatitis*. 2020;31(1):13-35. doi:10.1097/DER.0000000000000463

42. Zucco GM, Doty RL. Multiple Chemical Sensitivity. *Brain Sciences*. 2022;12(1):46. doi:10.3390/brainsci12010046

43. Dantoft TM, Andersson L, Nordin S, Skovbjerg S. Chemical Intolerance. *http://www.eurekaselect.com*. Accessed February 12, 2025. https://www.eurekaselect.com/article/68492

44. Magill MK, Suruda A. Multiple Chemical Sensitivity Syndrome. *afp*. 1998;58(3):721-728.

45. Shinohara N, Mizukoshi A, Yanagisawa Y. Identification of responsible volatile chemicals that induce hypersensitive reactions to multiple chemical sensitivity patients. *J Expo Sci Environ Epidemiol*. 2004;14(1):84-91. doi:10.1038/sj.jea.7500303

46. Bornschein S, Förstl H, Zilker T. Idiopathic environmental intolerances (formerly multiple chemical sensitivity) psychiatric perspectives. *Journal of Internal Medicine*. 2001;250(4):309-321. doi:10.1111/j.1365-2796.2001.00870.x

47. McKeown-Eyssen GE, Baines CJ, Marshall LM, Jazmaji V, Sokoloff ER. Multiple Chemical Sensitivity: Discriminant Validity of Case Definitions. *Archives of Environmental Health: An International Journal*. 2001;56(5):406-412. doi:10.1080/00039890109604475

48. Winder C. Mechanisms of multiple chemical sensitivity. *Toxicology Letters*. 2002;128(1):85-97. doi:10.1016/S0378-4274(01)00536-7

49. Lacour M, Zunder T, Schmidtke K, Vaith P, Scheidt C. Multiple Chemical Sensitivity Syndrome (MCS) – suggestions for an extension of the US MCS-case definition. *International Journal of Hygiene and Environmental Health*. 2005;208(3):141-151. doi:10.1016/j.ijheh.2005.01.017

50. Gibson PR, Elms ANM, Ruding LA. Perceived treatment efficacy for conventional and alternative therapies reported by persons with multiple chemical sensitivity. *Environmental Health Perspectives*. 2003;111(12):1498-1504. doi:10.1289/ehp.5936

51. Cooper C. Multiple Chemical Sensitivity in the Clinical Setting: Although the cause and diagnosis of this condition remain controversial, the patient's concerns should be heeded. *AJN The American Journal of Nursing*. 2007;107(3):40.

52. Xu H, Wen LM, Rissel C. Associations of Parental Influences with Physical Activity and Screen Time among Young Children: A Systematic Review. *Journal of Obesity*. 2015;2015:1-23. doi:10.1155/2015/546925

53. Bjerregaard AA, Schovsbo SU, Gormsen LK, et al. Social economic factors and the risk of multiple chemical sensitivity in a Danish population-based cross-sectional study: Danish Study of Functional Disorders (DanFunD). Published online March 1, 2023. doi:10.1136/bmjopen-2022-064618

54. Berg ND, Linneberg A, Dirksen A, Elberling J. Prevalence of self-reported symptoms and consequences related to inhalation of airborne chemicals in a Danish general population. *Int Arch Occup Environ Health*. 2008;81(7):881-887. doi:10.1007/s00420-007-0282-0

55. Kreutzer R, Neutra RR, Lashuay N. Prevalence of People Reporting Sensitivities to Chemicals in a Population based Survey. *American Journal of Epidemiology*. 1999;150(1):1-12. doi:10.1093/oxfordjournals.aje.a009908

56. Park J, Gilmour H. Medically unexplained physical symptoms (MUPS) among adults in Canada: Comorbidity, health care use and employment. *Health Rep*. 2017;28(3):3-8.

57. Del Casale A, Ferracuti S, Mosca A, et al. Multiple Chemical Sensitivity Syndrome: A Principal Component Analysis of Symptoms. *International Journal of Environmental Research and Public Health*. 2020;17(18):6551. doi:10.3390/ijerph17186551

58. Steinemann A. Fragranced consumer products: effects on autistic adults in the United States, Australia, and United Kingdom. *Air Qual Atmos Health*. 2018;11(10):1137-1142. doi:10.1007/s11869-018-0625-x

59. Kazemi Z, Aboutaleb E, Shahsavani A, Kermani M, Kazemi Z. Evaluation of pollutants in perfumes, colognes and health effects on the consumer: a systematic review. *J Environ Health Sci Engineer*. 2022;20(1):589-598. doi:10.1007/s40201-021-00783-x

60. Steinemann A. Exposures and effects from fragranced consumer products in Sweden. *Air Qual Atmos Health*. 2018;11(5):485-491. doi:10.1007/s11869-018-0565-5

61. Macchione M, Yoshizaki K, Frias DP, et al. Fragrances as a trigger of immune responses in different environments. *Toxicology in Vitro*. 2024;96:105769. doi:10.1016/j.tiv.2023.105769

62. Biniecka M, Caroli S. Analytical methods for the quantification of volatile aromatic compounds. *TrAC Trends in Analytical Chemistry*. 2011;30(11):1756-1770. doi:10.1016/j.trac.2011.06.015

63. Herz RS, Larsson M, Trujillo R, et al. A three-factor benefits framework for understanding consumer preference for scented household products: psychological interactions and implications for future development. *Cogn Research*. 2022;7(1):28. doi:10.1186/s41235-022-00378-6

64. van Amerongen CCA, Ofenloch RF, Cazzaniga S, et al. Skin exposure to scented products used in daily life and fragrance contact allergy in the European general population - The EDEN Fragrance Study. *Contact Dermatitis*. 2021;84(6):385-394. doi:10.1111/cod.13807

65. Bridges B. Fragrance: emerging health and environmental concerns. *Flavour and Fragrance Journal*. 2002;17(5):361-371. doi:10.1002/ffj.1106

66. Boman A, Miguel M, Andersson I, Slunge D. The effect of information about hazardous chemicals in consumer products on behaviour – A systematic review. *Science of The Total Environment*. 2024;947:174774. doi:10.1016/j.scitotenv.2024.174774

67. Jolliet O, Huang L, Hou P, Fantke P. High Throughput Risk and Impact Screening of Chemicals in Consumer Products. *Risk Anal*. 2021;41(4):627-644. doi:10.1111/risa.13604

68. Dodson RE, Boronow KE, Susmann H, et al. Consumer behavior and exposure to parabens, bisphenols, triclosan, dichlorophenols, and benzophenone-3: Results from a crowdsourced biomonitoring study. *International Journal of Hygiene and Environmental Health*. 2020;230:113624. doi:10.1016/j.ijheh.2020.113624

69. Guo Y, Kannan K. A Survey of Phthalates and Parabens in Personal Care Products from the United States and Its Implications for Human Exposure. *Environ Sci Technol*. 2013;47(24):14442-14449. doi:10.1021/es4042034

70. Gabb HA, Blake C. An Informatics Approach to Evaluating Combined Chemical Exposures from Consumer Products: A Case Study of Asthma-Associated Chemicals and Potential Endocrine Disruptors. *Environmental Health Perspectives*. 2016;124(8):1155-1165. doi:10.1289/ehp.1510529

71. Lim S. The associations between personal care products use and urinary concentrations of phthalates, parabens, and triclosan in various age groups: The Korean National Environmental Health Survey Cycle 3 2015–2017. *Science of The Total Environment*. 2020;742:140640. doi:10.1016/j.scitotenv.2020.140640

72. Ashrap P, Watkins DJ, Calafat AM, et al. Elevated concentrations of urinary triclocarban, phenol and paraben among pregnant women in Northern Puerto Rico: Predictors and trends. *Environment International*. 2018;121:990-1002. doi:10.1016/j.envint.2018.08.020

73. Berger KP, Kogut KR, Bradman A, et al. Personal care product use as a predictor of urinary concentrations of certain phthalates, parabens, and phenols in the HERMOSA study. *J Expo Sci Environ Epidemiol*. 2019;29(1):21-32. doi:10.1038/s41370-017-0003-z

74. Meeker JD, Cantonwine DE, Rivera-González LO, et al. Distribution, Variability, and Predictors of Urinary Concentrations of Phenols and Parabens among Pregnant Women in Puerto Rico. *Environ Sci Technol*. 2013;47(7):3439-3447. doi:10.1021/es400510g

75. Lee I, Ji K. Identification of combinations of endocrine disrupting chemicals in household chemical products that require mixture toxicity testing. *Ecotoxicology and Environmental Safety*. 2022;240:113677. doi:10.1016/j.ecoenv.2022.113677

76. Hamid N, Junaid M, Pei DS. Combined toxicity of endocrine-disrupting chemicals: A review. *Ecotoxicology and Environmental Safety*. 2021;215:112136. doi:10.1016/j.ecoenv.2021.112136

77. Philippat C, Bennett D, Calafat AM, Picciotto IH. Exposure to select phthalates and phenols through use of personal care products among Californian adults and their children. *Environmental Research*. 2015;140:369-376. doi:10.1016/j.envres.2015.04.009

78. Nassan FL, Coull BA, Gaskins AJ, et al. Personal Care Product Use in Men and Urinary Concentrations of Select Phthalate Metabolites and Parabens: Results from the Environment And Reproductive Health (EARTH) Study. *Environmental Health Perspectives*. 2017;125(8):087012. doi:10.1289/EHP1374

79. Braun JM, Just AC, Williams PL, Smith KW, Calafat AM, Hauser R. Personal care product use and urinary phthalate metabolite and paraben concentrations during pregnancy among women from a fertility clinic. *J Expo Sci Environ Epidemiol*. 2014;24(5):459-466. doi:10.1038/jes.2013.69

80. Ferguson KK, Colacino JA, Lewis RC, Meeker JD. Personal care product use among adults in NHANES: associations between urinary phthalate metabolites and phenols and use of mouthwash and sunscreen. *J Expo Sci Environ Epidemiol*. 2017;27(3):326-332. doi:10.1038/jes.2016.27

81. Gribble MO, Bandeen-Roche K, Fox MA. Determinants of Exposure to Fragranced Product Chemical Mixtures in a Sample of Twins. *International Journal of Environmental Research and Public Health*. 2015;12(2):1466-1486. doi:10.3390/ijerph120201466

82. Wu X (May), Bennett DH, Ritz B, Cassady DL, Lee K, Hertz-Picciotto I. Usage pattern of personal care products in California households. *Food and Chemical Toxicology*. 2010;48(11):3109-3119. doi:10.1016/j.fct.2010.08.004

83. Singla V. Carcinogens in Products: Inadequate Protections Raise Cancer Risks. *Trends in Cancer*. 2020;6(8):619-622. doi:10.1016/j.trecan.2020.04.006

84. Bello A, Quinn MM, Perry MJ, Milton DK. Characterization of occupational exposures to cleaning products used for common cleaning tasks-a pilot study of hospital cleaners. *Environ Health*. 2009;8(1):11. doi:10.1186/1476-069X-8-11

85. Uter W, Schnuch A, Geier J, Pfahlberg A, Gefeller O. Association between occupation and contact allergy to the fragrance mix: a multifactorial analysis of national surveillance data. *Occupational and Environmental Medicine*. 2001;58(6):392-398. doi:10.1136/oem.58.6.392

86. Uter W, Fieβler C, Gefeller O, Geier J, Schnuch A. Contact sensitization to fragrance mix I and II, to Myroxylon pereirae resin and oil of tupentine: multifactorial analysis of risk factors based on data of the IVDK network. *Flavour and Fragrance Journal*. 2015;30(4):255-263. doi:10.1002/ffj.3242

87. Leech JA, Nelson WC, Burnett RT, Aaron S, Raizenne ME. It's about time: A comparison of Canadian and American time–activity patterns. *J Expo Sci Environ Epidemiol*. 2002;12(6):427-432. doi:10.1038/sj.jea.7500244

88. Leung DYC. Outdoor-indoor air pollution in urban environment: challenges and opportunity. *Front Environ Sci*. 2015;2. doi:10.3389/fenvs.2014.00069

89. Heydorn S, Johansen JD, Andersen KE, et al. Fragrance allergy in patients with hand eczema – a clinical study. *Contact Dermatitis*. 2003;48(6):317-323. doi:10.1034/j.1600-0536.2003.00133.x

90. Kumar P, Caradonna-Graham VM, Gupta S, Cai X, Rao PN, Thompson J. Inhalation challenge effects of perfume scent strips in patients with asthma. *Ann Allergy Asthma Immunol*. 1995;75(5):429-433.

91. Steinemann A. Fragranced consumer products: sources of emissions, exposures, and health effects in the UK. *Air Qual Atmos Health*. 2018;11(3):253-258. doi:10.1007/s11869-018-0550-z

92. Steinemann A. Fragranced consumer products: exposures and effects from emissions. *Air Qual Atmos Health*. 2016;9(8):861-866. doi:10.1007/s11869-016-0442-z

93. Andersson MJE, Andersson L, Bende M, Millqvist E, Nordin S. The Idiopathic Environmental Intolerance Symptom Inventory: Development, Evaluation, and Application. *Journal of Occupational and Environmental Medicine*. 2009;51(7):838. doi:10.1097/JOM.0b013e3181a7f021

94. Caress SM, Steinemann AC. A review of a two-phase population study of multiple chemical sensitivities. *Environmental Health Perspectives*. 2003;111(12):1490-1497. doi:10.1289/ehp.5940

95. Hausteiner C, Bornschein S, Hansen J, Zilker T, Förstl H. Self-reported chemical sensitivity in Germany: A population-based survey. *International Journal of Hygiene and Environmental Health*. 2005;208(4):271-278. doi:10.1016/j.ijheh.2005.03.006

96. Bornschein S, Hausteiner C, Zilker T, Förstl H. Psychiatric and somatic disorders and multiple chemical sensitivity (MCS) in 264 "environmental patients." *Psychol Med*. 2002;32(8):1387-1394. doi:10.1017/s0033291702006554

97. Mahajan VK. Perfumes and associated allergens: A brief review. *CosmoDerma*. 2022;2. doi:10.25259/CSDM_9_2022

98. Botvid S, Bennike NH, Simonsen AB, Johansen JD, Uter W. Contact sensitization to fragrance mix I and fragrance mix II among European dermatitis patients: A systematic review. *Contact Dermatitis*. 2024;91(3):177-185. doi:10.1111/cod.14618

99. Kumar M, Devi A, Sharma M, Kaur P, Mandal UK. Review on perfume and present status of its associated allergens. *Journal of Cosmetic Dermatology*. 2021;20(2):391-399. doi:10.1111/jocd.13507

100. Martins MS, Ferreira MS, Almeida IF, Sousa E. Occurrence of Allergens in Cosmetics for Sensitive Skin. *Cosmetics*. 2022;9(2):32. doi:10.3390/cosmetics9020032

101. Johansen JD. Fragrance Contact Allergy. *Am J Clin Dermatol*. 2003;4(11):789-798. doi:10.2165/00128071-200304110-00006

102. *Commission Regulation (EU) 2023/1545 of 26 July 2023 Amending Regulation (EC) No 1223/2009 of the European Parliament and of the Council as Regards Labelling of Fragrance Allergens in Cosmetic Products (Text with EEA Relevance)*. Vol 188.; 2023. Accessed February 12, 2025. http://data.europa.eu/eli/reg/2023/1545/oj/eng

103. Alinaghi F, Bennike NH, Egeberg A, Thyssen JP, Johansen JD. Prevalence of contact allergy in the general population: A systematic review and meta-analysis. *Contact Dermatitis*. 2019;80(2):77-85. doi:10.1111/cod.13119

104. SUKAKUL T, BRUZE M, SVEDMAN C. Fragrance Contact Allergy – A Review Focusing on Patch Testing. *Acta Derm Venereol*. 2024;104:40332. doi:10.2340/actadv.v104.40332

105. Commissioner O of the. Allergens in Cosmetics. *FDA*. Published online September 30, 2024. Accessed February 12, 2025. https://www.fda.gov/cosmetics/cosmetic-ingredients/allergens-cosmetics

106. 21 U.S. Code § 364e - Labeling. LII / Legal Information Institute. Accessed February 12, 2025. https://www.law.cornell.edu/uscode/text/21/364e

107. FDA is proposing to identify certain substances as fragrance allergens and to require the disclosure of fragrance allergens on the labels of cosmetic products - Spring 2024. Accessed February 12, 2025. https://www.reginfo.gov/public/do/eAgendaViewRule?pubId=202404&RIN=0910-AI90

108. FDA is proposing to identify certain substances as fragrance allergens and to require the disclosure of fragrance allergens on the labels of cosmetic products. - Fall 2024. Accessed February 12, 2025. https://www.reginfo.gov/public/do/eAgendaViewRule?pubId=202410&RIN=0910-AI90

109. De Luca C, Scordo MG, Cesareo E, et al. Biological definition of multiple chemical sensitivity from redox state and cytokine profiling and not from polymorphisms of xenobiotic-metabolizing enzymes. *Toxicology and Applied Pharmacology*. 2010;248(3):285-292. doi:10.1016/j.taap.2010.04.017

110. Molot J, Sears M, Marshall LM, Bray RI. Neurological susceptibility to environmental exposures: pathophysiological mechanisms in neurodegeneration and multiple chemical sensitivity. *Reviews on Environmental Health*. 2022;37(4):509-530. doi:10.1515/reveh-2021-0043

111. Caress SM, Steinemann AC. Prevalence of Multiple Chemical Sensitivities: A Population-Based Study in the Southeastern United States. *Am J Public Health*. 2004;94(5):746-747. doi:10.2105/AJPH.94.5.746

112. Dantoft TM, Elberling J, Brix S, Szecsi PB, Vesterhauge S, Skovbjerg S. An elevated pro-inflammatory cytokine profile in multiple chemical sensitivity. *Psychoneuroendocrinology*. 2014;40:140-150. doi:10.1016/j.psyneuen.2013.11.012

113. Fornazieri MA, Neto AR, de Rezende Pinna F, et al. Olfactory symptoms reported by migraineurs with and without auras. *Headache: The Journal of Head and Face Pain*. 2016;56(10):1608-1616. doi:10.1111/head.12973

114. Silva-Néto R, Peres M, Valença M. Odorant substances that trigger headaches in migraine patients. *Cephalalgia*. 2014;34(1):14-21. doi:10.1177/0333102413495969

115. Sjöstrand C, Savic I, Laudon-Meyer E, Hillert L, Lodin K, Waldenlind E. Migraine and Olfactory Stimuli. *Curr Pain Headache Rep*. 2010;14(3):244-251. doi:10.1007/s11916-010-0109-7

116. Steinemann A. Fragranced consumer products: effects on asthmatics. *Air Qual Atmos Health*. 2018;11(1):3-9. doi:10.1007/s11869-017-0536-2

117. Elberling J, Linneberg A, Dirksen A, et al. Mucosal symptoms elicited by fragrance products in a population-based sample in relation to atopy and bronchial hyper-reactivity. *Clinical & Experimental Allergy*. 2005;35(1):75-81. doi:10.1111/j.1365-2222.2005.02138.x

118. Migliore A, Bizzi E, Massafra U, Capuano A, Martin Martin LS. Multiple Chemical Sensitivity Syndrome in Sjögren's Syndrome Patients: Casual Association or Related Diseases? *Archives of Environmental & Occupational Health*. 2006;61(6):285-287. doi:10.3200/AEOH.61.6.285-287

119. Tuuminen T. The Roles of Autoimmunity and Biotoxicosis in Sick Building Syndrome as a "Starting Point" for Irreversible Dampness and Mold Hypersensitivity Syndrome. *Antibodies*. 2020;9(2):26. doi:10.3390/antib9020026

120. Palmer RF, Dempsey TT, Afrin LB. Chemical Intolerance and Mast Cell Activation: A Suspicious Synchronicity. *Journal of Xenobiotics*. 2023;13(4):704-718. doi:10.3390/jox13040045

121. Miller C, Palmer R, Dempsey T, Ashford N, Afrin L. Mast Cell Sensitization as a Plausible and Researchable Mechanism for Chemical Intoleranc. Published online 2021. doi:10.21203/rs.3.rs-547748/v1

122. Miller CS, Palmer RF, Dempsey TT, Ashford NA, Afrin LB. Mast cell activation may explain many cases of chemical intolerance. *Environ Sci Eur*. 2021;33(1):129. doi:10.1186/s12302-021-00570-3

123. Andersson L, Johansson A, Millqvist E, Nordin S, Bende M. Prevalence and risk factors for chemical sensitivity and sensory hyperreactivity in teenagers. *Int J Hyg Environ Health*. 2008;211(5-6):690-697. doi:10.1016/j.ijheh.2008.02.002

124. Skovbjerg S, Christensen KB, Ebstrup JF, Linneberg A, Zachariae R, Elberling J. Negative affect is associated with development and persistence of chemical intolerance: a prospective population-based study. *J Psychosom Res*. 2015;78(5):509-514. doi:10.1016/j.jpsychores.2015.02.005

125. Katerndahl DA, Bell IR, Palmer RF, Miller CS. Chemical intolerance in primary care settings: prevalence, comorbidity, and outcomes. *Ann Fam Med*. 2012;10(4):357-365. doi:10.1370/afm.1346

126. Cui X, Lu X, Hisada A, Fujiwara Y, Katoh T. The correlation between mental health and multiple chemical sensitivity: a survey study in Japanese workers. *Environ Health Prev Med*. 2015;20(2):123-129. doi:10.1007/s12199-014-0434-2

127. Osterberg K, Persson R, Karlson B, Carlsson Eek F, Orbaek P. Personality, mental distress, and subjective health complaints among persons with environmental annoyance. *Hum Exp Toxicol*. 2007;26(3):231-241. doi:10.1177/0960327107070575

128. Bailer J, Witthöft M, Rist F. Psychological Predictors of Short- and Medium Term Outcome in Individuals with Idiopathic Environmental Intolerance (IEI) and Individuals with Somatoform Disorders. *Journal of Toxicology and Environmental Health, Part A*. 2008;71(11-12):766-775. doi:10.1080/15287390801985562

129. Hausteiner C, Mergeay A, Bornschein S, Zilker T, Förstl H. New Aspects of Psychiatric Morbidity in Idiopathic Environmental Intolerances. *Journal of Occupational and Environmental Medicine*. 2006;48(1):76. doi:10.1097/01.jom.0000182207.68987.d7

130. Skovbjerg S, Rasmussen A, Zachariae R, Schmidt L, Lund R, Elberling J. The association between idiopathic environmental intolerance and psychological distress, and the influence of social support and recent major life events. *Environ Health Prev Med*. 2012;17(1):2-9. doi:10.1007/s12199-011-0210-5

131. Bornschein S, Hausteiner C, Drzezga A, et al. Neuropsychological and positron emission tomography correlates in idiopathic environmental intolerances. *Scand J Work Environ Health*. 2007;33(6):447-453. doi:10.5271/sjweh.1164

132. Bell IR, Peterson JM, Schwartz GE. Medical histories and psychological profiles of middle-aged women with and without self-reported illness from environmental chemicals. *J Clin Psychiatry*. 1995;56(4):151-160.

133. Ziem G, McTamney J. Profile of patients with chemical injury and sensitivity. *Environmental Health Perspectives*. 1997;105(suppl 2):417-436. doi:10.1289/ehp.97105s2417

134. Bell IR, Schwartz GE, Hardin EE, Baldwin CM, Kline JP. Differential Resting Quantitative Electroencephalographic Alpha Patterns in Women with Environmental Chemical Intolerance, Depressives, and Normals. *Biological Psychiatry*. 1998;43(5):376-388. doi:10.1016/S0006-3223(97)00245-X

135. Baldwin CM, Bell IR. Increased Cardiopulmonary Disease Risk in a Community-Based Sample With Chemical Odor Intolerance: Implications for Women's Health and Health-Care Utilization. *Archives of Environmental Health: An International Journal*. 1998;53(5):347-353. doi:10.1080/00039899809605720

136. Hojo S, Kumano H, Yoshino H, Kakuta K, Ishikawa S. Application of Quick Environment Exposure Sensitivity Inventory (QEESI©) for Japanese population: study of reliability and validity of the questionnaire. *Toxicol Ind Health*. 2003;19(2-6):41-49. doi:10.1191/0748233703th180oa

137. Bell IR, Bootzin RR, Davis TP, et al. Time-dependent sensitization of plasma beta-endorphin in community elderly with self-reported environmental chemical odor intolerance. *Biological Psychiatry*. 1996;40(2):134-143. doi:10.1016/0006-3223(95)00331-2

138. Baines CJ, McKeown-Eyssen GE, Riley N, et al. Case–control study of multiple chemical sensitivity, comparing haematology, biochemistry, vitamins and serum volatile organic

compound measures. *Occupational Medicine*. 2004;54(6):408-418. doi:10.1093/occmed/kqh083

139. Pigatto PD, Minoia C, Ronchi A, et al. Allergological and Toxicological Aspects in a Multiple Chemical Sensitivity Cohort. *Oxidative Medicine and Cellular Longevity*. 2013;2013(1):356235. doi:10.1155/2013/356235

140. Bitsch N, Dudas C, Körner W, et al. Estrogenic Activity of Musk Fragrances Detected by the E-Screen Assay Using Human MCF-7 Cells. *Arch Environ Contam Toxicol*. 2002;43(3):0257-0264. doi:10.1007/s00244-002-1192-5

141. Schreurs RHMM, Sonneveld E, Jansen JHJ, Seinen W, van der Burg B. Interaction of Polycyclic Musks and UV Filters with the Estrogen Receptor (ER), Androgen Receptor (AR), and Progesterone Receptor (PR) in Reporter Gene Bioassays. *Toxicological Sciences*. 2005;83(2):264-272. doi:10.1093/toxsci/kfi035

142. Van Der Burg B, Schreurs R, Van Der Linden S, Seinen W, Brouwer A, Sonneveld E. Endocrine effects of polycyclic musks: do we smell a rat? *International Journal of Andrology*. 2008;31(2):188-193. doi:10.1111/j.1365-2605.2007.00831.x

143. Klaschka U, Kolossa-Gehring M. Fragrances in the Environment: Pleasant odours for nature? (9 pp). *Env Sci Poll Res Int*. 2007;14(1):44-52. doi:10.1065/espr2007.01.380

144. Johnson AC, Jin X, Nakada N, Sumpter JP. Learning from the past and considering the future of chemicals in the environment. *Science*. 2020;367(6476):384-387. doi:10.1126/science.aay6637

145. Egeghy PP, Judson R, Gangwal S, et al. The exposure data landscape for manufactured chemicals. *Science of The Total Environment*. 2012;414:159-166. doi:10.1016/j.scitotenv.2011.10.046

146. Judson R, Richard A, Dix DJ, et al. The Toxicity Data Landscape for Environmental Chemicals. *Environmental Health Perspectives*. 2009;117(5):685-695. doi:10.1289/ehp.0800168

147. Strempel S, Scheringer M, Ng CA, Hungerbühler K. Screening for PBT Chemicals among the “Existing” and “New” Chemicals of the EU. *Environ Sci Technol*. 2012;46(11):5680-5687. doi:10.1021/es3002713

148. Posthuma L, van Gils J, Zijp MC, van de Meent D, de Zwart D. Species sensitivity distributions for use in environmental protection, assessment, and management of aquatic ecosystems for 12 386 chemicals. *Environmental Toxicology and Chemistry*. 2019;38(4):905-917. doi:10.1002/etc.4373

149. Driesen L, Patton R, John M. The impact of multiple chemical sensitivity on people’s social and occupational functioning; a systematic review of qualitative research studies. *Journal of Psychosomatic Research*. 2020;132:109964. doi:10.1016/j.jpsychores.2020.109964

150. Palmieri B, Corazzari V, Vadala′ M, Vallelunga A, Morales-Medina JC, Iannitti T. The role of sensory and olfactory pathways in multiple chemical sensitivity. *Reviews on Environmental Health*. 2021;36(3):319-326. doi:10.1515/reveh-2020-0058

151. Palmer RF, Almeida M, Perales RB, Rincon R. A genome-wide SNP investigation of chemical intolerance. *Environmental Advances*. 2023;12:100380. doi:10.1016/j.envadv.2023.100380

152. Bascom R. Multiple Chemical Sensitivity: A Respiratory Disorder? *Toxicol Ind Health*. 1992;8(4):221-228. doi:10.1177/074823379200800421

153. Orriols R, Costa R, Cuberas G, Jacas C, Castell J, Sunyer J. Brain dysfunction in multiple chemical sensitivity. *Journal of the Neurological Sciences*. 2009;287(1):72-78. doi:10.1016/j.jns.2009.09.003

154. Meggs WJ. Neurogenic inflammation and sensitivity to environmental chemicals. *Environmental Health Perspectives*. 1993;101(3):234-238. doi:10.1289/ehp.93101234

155. Meggs WJ. Neurogenic switching: a hypothesis for a mechanism for shifting the site of inflammation in allergy and chemical sensitivity. *Environmental Health Perspectives*. 1995;103(1):54-56. doi:10.1289/ehp.9510354

156. Meggs WJ. Mechanisms of allergy and chemical sensitivity. *Toxicology and Industrial Health*. Published online April 1, 1999. doi:10.1177/074823379901500307

157. Meggs WJ. The Role of Neurogenic Inflammation in Chemical Sensitivity. *Ecopsychology*. 2017;9(2):83-89. doi:10.1089/eco.2016.0045

158. Nordin S. Mechanisms underlying nontoxic indoor air health problems: A review. *International Journal of Hygiene and Environmental Health*. 2020;226:113489. doi:10.1016/j.ijheh.2020.113489

159. Czarnecki LA, Moberly AH, Rubinstein T, Turkel DJ, Pottackal J, McGann JP. *In vivo* visualization of olfactory pathophysiology induced by intranasal cadmium instillation in mice. *NeuroToxicology*. 2011;32(4):441-449. doi:10.1016/j.neuro.2011.03.007

160. Miller C, Ashford N, Doty R, et al. Empirical approaches for the investigation of toxicant-induced loss of tolerance. *Environmental Health Perspectives*. Published online March 1997. doi:10.1289/ehp.97105s2515

161. Genuis SJ. Sensitivity-related illness: The escalating pandemic of allergy, food intolerance and chemical sensitivity. *Science of The Total Environment*. 2010;408(24):6047-6061. doi:10.1016/j.scitotenv.2010.08.047

162. Miller CS. Toxicant-induced loss of tolerance. Accessed March 19, 2025. https://onlinelibrary.wiley.com/doi/10.1046/j.1360-0443.2001.9611159.x

163. Gilbert DL, Christian BT, Gelfand MJ, Shi B, Mantil J, Sallee FR. Altered mesolimbocortical and thalamic dopamine in Tourette syndrome. *Neurology*. 2006;67(9):1695-1697. doi:10.1212/01.wnl.0000242733.18534.2c

164. Antelman SM. Time-Dependent Sensitization in Animals: A Possible Model of Multiple Chemical Sensitivity in Humans. *Toxicol Ind Health*. 1994;10(4-5):335-342. doi:10.1177/074823379401000508

165. Joffres MR, Sampalli T, Fox RA. Physiologic and Symptomatic Responses to Low-Level Substances in Individuals with and without Chemical Sensitivities: A Randomized Controlled Blinded Pilot Booth Study. *Environmental Health Perspectives*. Published online September 2005. doi:10.1289/ehp.7198

166. Fernandez M, Bell IR, Schwartz GER. EEG sensitization during chemical exposure in women with and without chemical sensitivity of unknown etiology. *Toxicol Ind Health*. 1999;15(3-4):305-312. doi:10.1177/074823379901500304

167. Jaworski S. Multiple chemical sensitivity/idiopathic environmental intolerance: A disability-rights, patient-led perspective. *The Journal of Allergy and Clinical Immunology: In Practice*. 2024;12(1):265-266. doi:10.1016/j.jaip.2023.11.023

168. Hillert L, Musabasic V, Berglund H, Ciumas C, Savic I. Odor processing in multiple chemical sensitivity. *Human Brain Mapping*. 2007;28(3):172-182. doi:10.1002/hbm.20266

169. Azuma K, Uchiyama I, Takano H, et al. Changes in Cerebral Blood Flow during Olfactory Stimulation in Patients with Multiple Chemical Sensitivity: A Multi-Channel Near-Infrared Spectroscopic Study. *PLOS ONE*. 2013;8(11):e80567. doi:10.1371/journal.pone.0080567

170. Azuma K, Uchiyama I, Tanigawa M, et al. Association of Odor Thresholds and Responses in Cerebral Blood Flow of the Prefrontal Area during Olfactory Stimulation in Patients with Multiple Chemical Sensitivity. *PLOS ONE*. 2016;11(12):e0168006. doi:10.1371/journal.pone.0168006

171. Azuma K, Uchiyama I, Tanigawa M, et al. Assessment of cerebral blood flow in patients with multiple chemical sensitivity using near-infrared spectroscopy—recovery after olfactory stimulation: a case–control study. *Environ Health Prev Med*. 2015;20(3):185-194. doi:10.1007/s12199-015-0448-4

172. Andersson L, Claeson AS, Nyberg L, Stenberg B, Nordin S. Brain responses to olfactory and trigeminal exposure in idiopathic environmental illness (IEI) attributed to smells — An fMRI study. *Journal of Psychosomatic Research*. 2014;77(5):401-408. doi:10.1016/j.jpsychores.2014.09.014

173. Andersson L, Claeson AS, Nyberg L, Nordin S. Short-term olfactory sensitization involves brain networks relevant for pain, and indicates chemical intolerance. *International Journal of Hygiene and Environmental Health*. 2017;220(2, Part B):503-509. doi:10.1016/j.ijheh.2017.02.002

174. Theoharides TC, Tsilioni I, Ren H. Recent advances in our understanding of mast cell activation – or should it be mast cell mediator disorders? *Expert Review of Clinical Immunology*. 2019;15(6):639-656. doi:10.1080/1744666X.2019.1596800

175. Theoharides TC. Autism Spectrum Disorders and Mastocytosis. *Int J Immunopathol Pharmacol*. 2009;22(4):859-865. doi:10.1177/039463200902200401

176. Heilbrun LP, Palmer RF, Jaen CR, Svoboda MD, Perkins J, Miller CS. Maternal Chemical and Drug Intolerances: Potential Risk Factors for Autism and Attention Deficit Hyperactivity Disorder (ADHD). *J Am Board Fam Med*. 2015;28(4):461-470. doi:10.3122/jabfm.2015.04.140192

177. Afrin LB, Pöhlau D, Raithel M, et al. Mast cell activation disease: An underappreciated cause of neurologic and psychiatric symptoms and diseases. *Brain, Behavior, and Immunity*. 2015;50:314-321. doi:10.1016/j.bbi.2015.07.002

178. Staudenmayer H, Binkley KE, Leznoff A, Phillips S. Idiopathic Environmental Intolerance. *Toxicol Rev*. 2003;22(4):235-246. doi:10.2165/00139709-200322040-00005

179. Binkley KE. Multiple Chemical Sensitivity/Idiopathic Environmental Intolerance: A Practical Approach to Diagnosis and Management. *The Journal of Allergy and Clinical Immunology: In Practice*. 2023;11(12):3645-3649. doi:10.1016/j.jaip.2023.08.039

180. Speck MJ, Witthöft M. Symptoms of Idiopathic Environmental Intolerance associated with chemicals (IEI-C) are positively associated with perceptual anomalies. *Journal of Psychosomatic Research*. 2022;157:110808. doi:10.1016/j.jpsychores.2022.110808

181. Tran MTD, Arendt-Nielsen L, Kupers R, Elberling J. Multiple chemical sensitivity: On the scent of central sensitization. *International Journal of Hygiene and Environmental Health*. 2013;216(2):202-210. doi:10.1016/j.ijheh.2012.02.010

182. Caccamo D, Cesareo E, Mariani S, et al. Xenobiotic Sensor- and Metabolism-Related Gene Variants in Environmental Sensitivity-Related Illnesses: A Survey on the Italian Population. *Oxidative Medicine and Cellular Longevity*. 2013;2013(1):831969. doi:10.1155/2013/831969

183. McKeown-Eyssen G, Baines C, Cole DE, et al. Case-control study of genotypes in multiple chemical sensitivity: CYP2D6, NAT1, NAT2, PON1, PON2 and MTHFR. *International Journal of Epidemiology*. 2004;33(5):971-978. doi:10.1093/ije/dyh251

184. Berg ND, Berg Rasmussen H, Linneberg A, et al. Genetic susceptibility factors for multiple chemical sensitivity revisited. *International Journal of Hygiene and Environmental Health*. 2010;213(2):131-139. doi:10.1016/j.ijheh.2010.02.001

185. Fujimori S, Hiura M, Yi CX, Xi L, Katoh T. Factors in genetic susceptibility in a chemical sensitive population using QEESI. *Environ Health Prev Med*. 2012;17(5):357-363. doi:10.1007/s12199-011-0260-8

186. Cui X, Lu X, Hiura M, Oda M, Miyazaki W, Katoh T. Evaluation of genetic polymorphisms in patients with multiple chemical sensitivity. *PLoS One*. 2013;8(8):e73708. doi:10.1371/journal.pone.0073708

187. De Luca C, Gugliandolo A, Calabrò C, et al. Role of polymorphisms of inducible nitric oxide synthase and endothelial nitric oxide synthase in idiopathic environmental intolerances. *Mediators Inflamm*. 2015;2015:245308. doi:10.1155/2015/245308

188. Pall ML. Elevated nitric oxide/peroxynitrite theory of multiple chemical sensitivity: central role of N-methyl-D-aspartate receptors in the sensitivity mechanism. *Environmental Health Perspectives*. 2003;111(12):1461-1464. doi:10.1289/ehp.5935

189. Fair Packaging and Labeling Act: Regulations Under Section 4 of the Fair Packaging and Labeling Act. Federal Trade Commission. December 12, 2013. Accessed February 12, 2025. https://www.ftc.gov/legal-library/browse/rules/fair-packaging-labeling-act-regulations-under-section-4-fair-packaging-labeling-act

190. Brown H. MoCRA Is Here—Now What? Unpacking Litigation and Regulatory Risk for Cosmetics Brands Following MoCRA's Enactment. Food and Drug Law Institute (FDLI). February 22, 2023. Accessed February 12, 2025. https://www.fdli.org/2023/02/mocra-is-here-now-what-unpacking-litigation-and-regulatory-risk-for-cosmetics-brands-following-mocras-enactment/

191. Commissioner O of the. Cosmetics Labeling Guide. *FDA*. Published online August 22, 2024. Accessed February 12, 2025. https://www.fda.gov/cosmetics/cosmetics-labeling-regulations/cosmetics-labeling-guide

192. Commissioner O of the. Modernization of Cosmetics Regulation Act of 2022 (MoCRA). FDA. January 17, 2025. Accessed February 12, 2025. https://www.fda.gov/cosmetics/cosmetics-laws-regulations/modernization-cosmetics-regulation-act-2022-mocra

193. Reforming federal cosmetics law: What is the Modernization of Cosmetics Regulation Act? | Environmental Working Group. December 22, 2023. Accessed February 12, 2025. https://www.ewg.org/news-insights/news/2023/12/reforming-federal-cosmetics-law-what-modernization-cosmetics-regulation

194. Time's Up! Cosmetic Facilities Must Comply With FDA's New Registration Requirements by July 1. Accessed February 12, 2025. https://www.wiley.law/alert-Times-Up-Cosmetic-Facilities-Must-Comply-With-FDAs-New-Registration-Requirements-by-July-1

195. Commissioner O of the. Registration & Listing of Cosmetic Product Facilities and Products. FDA. January 10, 2025. Accessed February 12, 2025. https://www.fda.gov/cosmetics/registration-listing-cosmetic-product-facilities-and-products

196. International Fragrance Association. *The Complete IFRA Standards*. https://ifrafragrance.org/docs/default-source/51st-amendment/ifra-standards---51st-amendment.pdf?sfvrsn=9bc6a23b_0

197. Dorfman D. Third-Party Accommodations. Published online February 29, 2024. Accessed February 12, 2025. https://papers.ssrn.com/abstract=4742287

198. Americans with Disabilities Act of 1990, As Amended. ADA.gov. Accessed February 12, 2025. https://www.ada.gov/law-and-regs/ada/

199. Maldonado NS. Peanut Butter in Schools: A Tough Nut to Crack! *Childhood Education*. Published online October 1, 2009. Accessed February 12, 2025. https://www.tandfonline.com/doi/abs/10.1080/00094056.2009.10523109

200. Zellers L, Thomas MA, Ashe M. Legal Risks to Employers Who Allow Smoking in the Workplace. *Am J Public Health*. 2007;97(8):1376-1382. doi:10.2105/AJPH.2006.094102

201. *Hendler v. Intelecom USA, Inc.* F. Supp. 963, 200 (Dist. Court 1997).

202. Colker R. The Death of Section 504. *U Mich JL Reform*. 2001;35:219.

203. Rocheleau GC, Rocheleau BN. The Mark of a Food Allergy Label: School Accommodation Policy and Bullying. *Journal of School Violence*. 2020;19(2):167-176. doi:10.1080/15388220.2019.1566072

204. Goldberg JCP, Zipursky BC. Triangular Torts and Fiduciary Duties. Published online April 26, 2016. doi:10.2139/ssrn.2770722

205. » Reader StoriesNo Nut Traveler. Accessed February 12, 2025. https://nonuttraveler.com/reader-stories

206. Rabin RC. Travelers With Nut Allergies Clash With Airlines. *The New York Times*. https://www.nytimes.com/2017/01/26/well/family/travelers-with-nut-allergies-clash-with-airlines.html. January 26, 2017. Accessed February 12, 2025.

207. Smith M. *Another Person's Poison: A History of Food Allergy*. Columbia University Press; 2015. doi:10.7312/smit16484

208. Afram R. New Diagnoses and the ADA: A Case Study of Fibromyalgia and Multiple Chemical Sensitivity. *Yale J Health Pol'y L & Ethics*. 2004;4:85.

209. The Americans with Disabilities Act Amendments Act of 2008. US EEOC. Accessed February 12, 2025. https://www.eeoc.gov/statutes/americans-disabilities-act-amendments-act-2008

210. *Sb by and Through Mb v. Lee*. F. Supp. 3d 566, 835 (Dist. Court 2021).

211. *Anderson v. the School Board of Gloucester County*.(Dist. Court 2022).

212. Heaser v. Allianceone Receivables Management, Inc., 07-CV-2924 (JMR/FLN) | Casetext Search + Citator. Accessed February 13, 2025. https://casetext.com/case/heaser-v-allianceone-receivables-management

213. *McBride v. City of Detroit*.(Dist. Court 2007).

214. *McBride v. City of Detroit*.(Dist. Court 2008).

215. Core v. Champaign County Board of County Commissioners, No. 3:2011cv00166 - Document 51 (S.D. Ohio 2012). Justia Law. February 21, 2025. Accessed February 13, 2025. https://law.justia.com/cases/federal/district-courts/ohio/ohsdce/3:2011cv00166/146509/51/

216. Ali v. Regan, No. 22-5124 (D.C. Cir. 2024). Justia Law. February 21, 2025. Accessed February 13, 2025. https://law.justia.com/cases/federal/appellate-courts/cadc/22-5124/22-5124-2024-08-09.html

217. Accessible Spaces: A Fragrance-Free Toolkit. Center for the Study of Women. Accessed February 13, 2025. https://csw.ucla.edu/toolkit

218. CDC has issued the "Indoor Environmental Quality Policy.https://www.chemicalsensitivityfoundation.org/pdf/CDC-2009-Indoor-Environmental-Quality-internal-policy542.pdf.

219. US EPA O. Safer Choice Criteria for Fragrances. January 17, 2014. Accessed February 13, 2025. https://www.epa.gov/saferchoice/safer-choice-criteria-fragrances

220. Association AL. Improve Indoor Air Quality. Accessed February 13, 2025. https://www.lung.org/help-support/corporate-wellness/create-a-lung-healthy-work

221. Employees with Fragrance Sensitivity.https://hr.okstate.edu/site-files/equal-opportunity/8-fragrance.pdf.

222. Accessible Spaces: A Fragrance Free Toolkit | Disability Cultural Center | University of Illinois Chicago. Accessed February 13, 2025. https://dcc.uic.edu/news-stories/fragrance-free/

223. HRAR-4.03 - Dress, Appearance and Fragrance in the Work Place | Portland.gov. Accessed February 13, 2025. https://www.portland.gov/policies/human-resources-administrative-rules/employee-behavior-expectations/hrar-403-dress

224. Steinemann A. Ten questions concerning fragrance-free policies and indoor environments. *Building and Environment*. 2019;159:106054. doi:10.1016/j.buildenv.2019.03.052

REPORT 7 OF THE COUNCIL ON SCIENCE AND PUBLIC HEALTH (A-25)
Addressing the Health Issues Unique to Minority Communities in Rural Areas
(Reference Committee D)

EXECUTIVE SUMMARY

BACKGROUND. Resolution 433-A-24 asked that our American Medical Association study health issues unique to minority communities in rural areas, such as access to care difficulties. Rural minority populations are not a homogeneous group of individuals and ethnic and racial diversity within rural America has increased significantly within the past twenty years. Despite limitations in available data and health studies, it has been well established that racial and ethnic minority populations in rural areas often experience disparities in health status, health insurance coverage, rates of chronic disease, life expectancy, and rates of unintentional injury compared to their White rural counterparts. This report provides a summary of the available evidence on health disparities within minority rural populations, with a focus on Black/African American, Hispanic/Latinx, American Indian/Alaskan Native (AI/AN), as well as the LGBTQ+ community. Additionally, the report explores the historical and current contributors to ongoing health disparities, such as the social determinants of health and structural racism.

METHODS. English language articles were selected from searches of PubMed and Google Scholar using the search terms “rural” AND “minority”; “rural” and “health disparities”, and “rural” and “health inequities.” Additional articles were identified by manual review of the reference lists of pertinent publications and as new areas of exploration were revealed through identified articles. Web sites managed by government agencies and applicable organizations were also reviewed for relevant information.

DISCUSSION. Many studies demonstrate that rural minority populations have poor health outcomes across multiple measures compared to their White rural counterparts. For example, as of 2017, close to 30 percent of AI/ANs, non-Hispanic blacks, and Hispanics self-reported poor or fair health compared to only about 18 percent of non-Hispanic Whites. While many rural racial minority populations suffer worse health outcomes and have poorer health care access compared to their White rural counterparts, each group experiences a unique set of challenges which are influenced by intersecting social determinants of health. Rural minorities are functionally impacted by two overlapping disparity processes - disparities associated with their rural geography and disparities associated with being a member of a particular minority group. Among the various social determinants of health, a lack of education, economic stagnation, and lack of investment within rural communities are notable as they have led to disproportionate rates of poverty in rural areas, leading to lower tax bases that limit the ability for educational and health systems to thrive. As a result, upstream social and economic determinants are negatively impacted, including housing, food security, access to places to be physically active, and health care access. Many of these social determinants are deeply rooted in centuries of discrimination, racism, violence, as well as disinvestment and injustice.

CONCLUSION. Rural minority populations suffer a disproportionate burden of adverse health outcomes compared to rural White populations or urban minority populations. Rural minority residents experience dual disparities and poor health outcomes are a result of intersecting structural and social determinants of health. Longstanding disparities in health care access within rural areas are compounded by additional and unique barriers experienced by rural minority populations.

REPORT OF THE COUNCIL ON SCIENCE AND PUBLIC HEALTH

CSAPH Report 7-A-25

Subject: Addressing the Health Issues Unique to Minority Communities in Rural Areas

Presented by: John T. Carlo, MD, MS, Chair

Referred to: Reference Committee D

INTRODUCTION

Resolution 433 was adopted at the 2024 Annual Meeting resulting in policy H-350.937, "Improving Healthcare of Minority Communities in Rural Areas." Item five of this policy asks that "our American Medical Association (AMA) will research and study health issues unique to minority communities in rural areas, such as access to care difficulties."

BACKGROUND

As of 2020, around 46 million Americans, or 14 percent of the U.S. population, lived in rural areas.[1] Rural Americans face numerous health disparities compared with their urban counterparts. Rural Americans are more likely to die from heart disease, cancer, unintentional injury, chronic lower respiratory disease, and stroke than their urban counterparts.[2] Unintentional injury deaths are approximately 50 percent higher in rural areas than in urban areas, partly due to greater risk of death from motor vehicle crashes and opioid overdoses.[3,4] In general, residents of rural areas in the U.S. tend to be older and sicker than their urban counterparts.[2,5]

While rural America is still overwhelmingly White (constituting about 76 percent of the rural population), it has become more ethnically and racially diverse over the last twenty years.[1] Despite limitations in available data and health studies, it has been well established that racial and ethnic minority populations in rural areas often experience disparities in health status, rates of chronic disease, life expectancy, and rates of unintentional injury compared to their White rural counterparts.[6–8] As an example, in a recent study, rural counties with a majority non-Hispanic Black or American Indian/Alaska Native (AI/AN) residents were found to have a higher premature death rate compared to rural counties with a majority of non-Hispanic White residents.[9] In places where race and ethnicity overlay with rural geography, residents often experience dual disparities and face some of the worst outcomes in the nation. Poor health outcomes for rural minority populations are a result of intersecting social determinants of health factors, which are further elucidated in this report.

In 2022, the AMA's Council on Science and Public Health (CSAPH) authored a report on improving rural public health infrastructure, which found that rural local health departments are often limited by budgets, staffing, and capacity constraints in providing public health services, limiting their ability to respond to national public health and health care policy initiatives and emergencies. With less funding and fewer staff, rural local health departments are often not able to meet the needs of a sicker population over a larger geographical area, contributing to the lack of essential public health services offered in rural areas. Building from the previous CSAPH report, this report provides a summary of the available evidence on health disparities within minority rural populations, with a focus on Black/African American, Hispanic/Latinx, AI/AN, as well as gender

and sexual minority populations. Additionally, the report explores the historical and current contributors to ongoing health disparities, such as the social determinants of health and structural racism.

METHODS

English language articles were selected from searches of PubMed and Google Scholar using the search terms "rural" AND "minority"; "rural" and "health disparities", and "rural" and "health inequities." Additional articles were identified by manual review of the reference lists of pertinent publications and as new areas of exploration were revealed through identified articles. Web sites managed by government agencies and applicable organizations were also reviewed for relevant information.

DISCUSSION

Rural minority populations are not a homogeneous group of individuals and ethnic and racial diversity within rural America has increased significantly within the past twenty years.[1] For the purposes of this report, rural minority populations are grouped into four general categories: African American/Black, Hispanic/Latinx, AI/AN, and the LGBTQ+ community. To note, the non-Hispanic multiracial population has also increased in rural areas as of the 2020 Census, now representing 3.9 percent of the rural population.[1] However, due to the recency of this population increase and little information in the literature on the health issues of this population, this report focuses primarily on the four above noted categories.

Data from the Behavioral Risk Factor Surveillance System (BRFSS), an annual state-based, random-digit–dialed telephone survey of the noninstitutionalized U.S. population aged 18 years or older, demonstrates that rural minority populations have poor health outcomes across multiple measures compared to their White rural counterparts.[6] For example, as of 2017, close to 30 percent of AI/ANs, non-Hispanic blacks, and Hispanics self-reported poor or fair health compared to only about 18 percent of non-Hispanic Whites.[6] While many rural racial minority populations suffer worse health outcomes and have poorer health care access compared to their White rural counterparts, each group experiences a unique set of challenges.[6] The following sections summarize health challenges unique to each of the four minority groups.

Non-Hispanic African American/Black. As of the 2020 Census, rural African Americans account for about 7.7 percent of nonmetropolitan inhabitants, with a concentrated population in the rural south.[1] This geographic concentration is an artifact of our countries' history of chattel slavery, as many black families stayed in the south following emancipation and the Civil War despite the large migration to other regions of the country in the early 20th century. The history of slavery in the U.S. is an important social determinant influencing the health disparities experienced by rural African Americans today (discussed further below). Rural African Americans have significantly lower rates of health care coverage (73.2 percent) compared to White populations (83.9 percent) and almost one in four (24.5 percent) have not seen a doctor in the past 12 months due to cost.[6] Based on BRFSS data, rural African Americans are significantly more likely to have two or more chronic health conditions (40.3 percent prevalence), are more likely to be severely obese (12.1 percent have a BMI greater than or equal to 40 kg/m2), and are more likely to get no leisure-time physical activity (38.2 percent prevalence) compared to non-Hispanic White populations (36.0 percent prevalence of two or more chronic conditions, 5.0 percent prevalence of severe obesity, and 27.7 percent prevalence of no leisure time physical activity).[6] As a result, rural African American communities are particularly impacted by cardiovascular disease, hypertension, stroke, and diabetes.[7] Rural African Americans are 20 percent more likely to be diagnosed with diabetes

compared to urban residents and also tend to have poorer diabetes disease control, leading to increased rates of complications that arise from diabetes.[7]

Poor control of hypertension among rural African American communities is also high, which may be linked to the high rates of stroke found in this population. The high rate of stroke is so stark that southern states where many rural African Americans reside have been nicknamed "The Stroke Belt."[7] Lastly, due to barriers faced in accessing preventive services in rural areas, cancer disparities are more acutely felt among rural African Americans.[7,10] For example, African American women in rural areas have the highest breast cancer mortality rate compared to other racial and ethnic populations in the U.S.[7] The high prevalence of poorly managed chronic disease, lack of access to preventive services and care, ultimately lead to higher mortality rates among rural African Americans. Based on one study, the age-adjusted mortality rates estimated across a five year period (2013-2017) were highest among rural African Americans compared to all other minority groups, in both rural and urban settings (981.3 deaths per 100,000).[8]

Hispanic/Latinx. As of the 2020 census, Hispanics represent the largest share of the rural minority population, with a population of about 4.1 million or 9.0 percent.[1] Since 1980, Hispanics have been the fastest growing population in rural America, often relocating for employment opportunities in the agriculture, construction, and manufacturing sectors.[7] A result of the intersection of largely being immigrants (26.7 percent of rural Hispanics were born outside of the U.S.) and working in lower skilled jobs, rural Hispanics have the lowest prevalence of health care coverage among rural minority populations (61.1 percent) and nearly a quarter have not seen a doctor in the past 12 months due to cost (23.1 percent).[6] In terms of health conditions, rural Hispanics are impacted by a high prevalence of diabetes compared to rural White populations and urban Hispanic populations, as well as a higher burden of hypertension, heart disease, and stroke.[7] Rural Hispanics with diagnosed diabetes and/or hypertension are significantly less likely to be managing their conditions.[7] Significant barriers to accessing care unique to the rural Hispanic community are lack of bilingual staff or qualified medical interpreters within health care settings.[7] Despite higher prevalence and burden of some health conditions, rural Hispanics have a lower age-adjusted mortality rate compared to their African American, AI/AN, and White rural counterparts (580.7 per 100,000) but it is significantly higher than urban Hispanic populations (522.7 per 100,000).[8]

American Indian/Alaskan Native. AI/AN populations are largely rural in composition, with approximately 54 percent living in rural areas of small towns, and 68 percent living on or near their tribal homelands.[11] AI/AN communities have a significantly higher prevalence of depressive disorder (23.2 percent), obesity (38.5 percent), and are more likely to be current smokers (36.7 percent) compared to non-Hispanic Whites (20.3 percent prevalence of depressive disorders, 32.0 percent obese, and 24.7 percent are current smokers).[6] Rural AI/AN communities also have the highest rate of death by unintentional injury compared to all other racial/ethnic groups, both urban and rural (101.9 deaths per 100,000).[8] Notable health conditions of concern in AI/AN community include high rates of diabetes and hypertension, substance use, suicide, as well as respiratory health conditions such as tuberculosis, asthma, pneumonia, and more recently, COVID-19.[7,12] As a result of the numerous health disparities experienced by the AI/AN community, they have a lower life expectancy compared to all other racial groups in the U.S. population (65.2 years in 2021 compared to 76.4 for White populations).[12] While life expectancy declines from the COVID-19 pandemic were experienced among the entire population, AI/AN groups experienced the largest decline which is reflective of the disproportionate burden of excess deaths from COVID-19 experienced in this community.[12]

LGBTQ+ community. While exact numbers of the LGBTQ+ population in rural areas are difficult to assess compared to racial and ethnic minorities as there is no standardized method for collecting

this information, (such as the Census) and ongoing stigma targeted at the LGBTQ+ community makes self-reporting unreliable, it is estimated that there are approximately three to four million LGBTQ+ individuals living in rural areas.[7,13] Data is limited in terms of unique health conditions experienced in this community. However, it has been documented that self-reported health among rural LGBTQ+ populations is more likely to be poor or fair and they are more likely to report having three or more chronic conditions compared to urban LGBTQ+ populations.[14] Sexual minority populations are at an elevated risk for substance use and substance use disorders compared to heterosexual populations, which has been associated with chronic stress and use of substances as a coping mechanism.[15] Rural LGBTQ+ populations may experience more stress due to continued stigmatization and prejudice, with reduced access to supportive communities, leading to higher levels of anxiety and depression.[13,14] It has also been estimated that rural sexual minorities have lower access to substance use disorder treatment, but few studies have evaluated this issue.[15]

Causes of Rural Minority Health Disparities: Intersecting Social Determinants of Health

Rural minorities are functionally impacted by two overlapping disparity processes - disparities associated with their rural geography and disparities associated with being a member of a particular minority group, which can be exponential, not just additive.[7] In other words, existing rural health disparities are a product of a complex intersection and interplay of many social and structural determinants of health. Among the various social determinants of health, a lack of education, economic stagnation, and lack of investment within rural communities are notable as they have led to disproportionate rates of poverty in rural areas, leading to lower tax bases that limit the ability for educational and health systems to thrive.[7] As a result, upstream social and economic determinants are negatively impacted, including housing, food security, access to places to be physically active, and health care access.[16,17]

While many consider housing shortages and affordability an urban issue, many rural areas are also facing similar challenges caused by an overall lack of housing development over many decades as well as the growth in seasonal and recreational use of available housing.[18,19] These issues were exacerbated by the COVID-19 pandemic, when urban dwellers and remote workers moved to rural areas.[20] Housing shortages and affordability not only impact low-income minority populations but also makes recruitment and retention of rural health care professionals even more challenging.[18,19] Multi-modal transportation infrastructure, such as public transportation, sidewalks, and biking-walking trails, is also lacking in rural areas compared to most urban and suburban municipalities.[21,22] Combined with long distances between destinations, this reduces the availability of daily opportunities for physical activity and creates a reliance on personal automobiles to access daily needs and services.

To understand how the current social determinants of health were created, it is useful to look from a structural and historical perspective. The relationship between rural minority groups and current poor health outcomes is rooted in centuries of discrimination, racism, violence, as well as disinvestment and injustice.[23] Structural racism in the U.S. is defined as "the totality of ways in which societies foster racial discrimination through mutually reinforcing systems…These patterns and practices in turn reinforce discriminatory beliefs, values and distribution of resources."[24] Structural racism plays a critical role in the existing health disparities experienced by minority rural populations as it has influenced housing and lending discrimination, cultural stigma, forced migration, occupational inequalities, and xenophobic immigration policies.[25] For Black Americans in the rural South and AI/AN populations, the historical legacy of land dispossession is a critical structural determinant in understanding the current context of high poverty levels and poor health.

In the rural South, particularly the Mississippi Delta area (an area defined as the northwest section of the U.S. that lies between the Mississippi and Yazoo rivers), 98 percent of black agricultural landowners have lost ownership of their land, equating to a loss of 12 million acres over the last century.[26] Following the civil war and during the Reconstruction era, Black ownership of land increased and even outnumbered White landowners in some southern counties. At the beginning of the 20th century, it was estimated that African Americans owned as much as 14 million acres of farmland.[27] That changed starting during the Great Depression and through the 1960s when federal agencies and policy directives, implemented in a structurally discriminatory manner, transformed the nature of farm ownership and increased racial disparities in farm owner acreage. As an example, Black farmland in Mississippi totaled 2.2 million acres in 1910. Fifty years later, according to the Census of Agriculture, black farmers lost almost 800,000 acres of land over a fourteen-year period. This was largely a result of discriminatory loan servicing and loan denial practices by the USDA and other federal and financial institutions (as found by major audits and investigations).[26] Coupled with the onset of Jim Crow laws in the late nineteenth and early twentieth century, rural African American communities have struggled economically, with the long-term effects on health clear today.

Among indigenous communities in the U.S., the overall level of land dispossession is even more staggering. The colonization and imperial expansion by Western European countries of North America led to the displacement and forced migration of indigenous communities across the U.S., the erosion of their languages and culture, and dismantling of their social structures.[28,29] It is estimated that there has been an aggregate reduction in historical indigenous lands of about 98.9 percent.[29] The eviction of indigenous people from their ancestral lands has had long-term intergenerational impacts on indigenous families and community. For both the African American and AI/AN communities, the dispossession of their lands has led to an overwhelming loss of actual and potential net wealth that could have been passed on between generations. For African Americans, it has been estimated that as of 2013 the median net wealth of their households is $11,200, while it is thirteen times greater for White households.[30] For ancestral AI/AN lands, one study estimated that the total worth of the transfer of land resources was equivalent to approximately half a billion dollars.[30] Overall, loss of land has been found to have stemmed from "discrimination in federal and state programs, swindles by lawyers and speculators, unlawful denials of private loans, and even outright acts of violence or intimidation."[26] Considering the extreme level of poverty experienced by these rural minority communities today, the importance of this historical loss of wealth cannot be overstated. Additionally, current lands where indigenous populations have been relocated to are more exposed to climate change risks and hazards, including more extreme heat and less precipitation.[29]

Occupational Hazards

In the Hispanic/LatinX rural population, occupational health hazards represent an important and unique social determinant of health which intersects with low pay for the work they do, few regulatory protections, limited services, as well as discrimination and harassment.[16] Hispanic migrants make up an overwhelming majority of hired crop workers in the U.S. One estimate is that they account for around 83 percent of hired U.S. farm workers. Rural Hispanics are also overly represented in the workforce of large scale agricultural processing facilities (e.g., poultry processing).[31] Working in the agricultural sector, rural Hispanics face numerous environmental and physical threats, including chemical hazards from pesticides and air pollutants, physical hazards such as those from occupational injuries and the effects of extreme heat, as well as biological hazards from inadequate access to drinking water and basic sanitation.[32,33]

Pesticides are not only a source of injury and acute illness among farm workers, but long-term exposure is also linked to several chronic health effects. Acute, short-term health impacts of pesticide exposure depend on the type of chemicals used but can include eye and skin irritation, nausea, dizziness, and diarrhea.[34] Chronic health effects from pesticide exposure can include cancer, birth defects and reproductive harm, neurological and developmental impacts, and disruptions to the endocrine system.[34] Farm workers are also exposed to numerous air pollutants, including black carbon, particulate matter, carbon monoxide, nitrogen dioxide, sulfur dioxide, and diesel-related emissions from farm activities, such as tractor driving, maintenance and repair of machinery and equipment, and agricultural crop residue burning.[32] An emerging threat to farm worker health is exposure to smoke, dust, and poor air quality from wildfires, which are expected to increase in frequency and intensity in the coming years because of climate change.[35]

Machine related injuries are another top occupational risk for farm workers as well as musculoskeletal injuries from physical exertion and repetitive motions.[16,32,36] Bacterial and viral threats from working in agriculture are also unique to farm workers and there are several recent examples of this. During the COVID-19 pandemic, farm workers were considered essential and had to keep working, thus increasing their risk of COVID exposure.[32] Most recently with the spread of highly pathogenic avian influenza A (H5N1) in dairy cows, the small number of cases that have occurred in farm workers has affected primarily Latino migrants.[37] Despite working on farms and harvesting food, the combination of low wages and living in highly rural areas with a low density of available supermarkets means that food insecurity is especially high among migrant workers in the rural/agricultural sector.[5] Additionally, there is a lack of quality housing for migrant workers and available low-cost housing is limited. Reports have consistently found high rates of overcrowded and substandard housing among migrant workers.[32]

Environmental Conditions

Increased risk of exposure to hazardous environmental exposures and conditions are not limited to the rural Hispanic community. Rural Black and AI/IN populations also experience similar but unique environmental justice issues. For example, intensive livestock operations, such as large hog farms, are disproportionately located near rural, low-income African American communities, which results in wide range of adverse health impacts including eye irritations, respiratory ailments, cardiovascular issues, mental health issues, and noxious odors.[38] Additionally, low-income, African American communities are disproportionately exposed to toxic air pollution from the fossil fuel industry, with more than 1 million African Americans living within a half-mile of oil and natural gas wells, processing, transmission and storage facilities.[39] Abandoned hard rock mining operations in the Western U.S. are disproportionately located on American Indian lands, creating an increased likelihood that American Indians living near these mines are exposed to high levels of toxic metals, which are associated with increased risk of kidney disease, hypertension, and other chronic diseases.[40]

Concerns over water quality and waste management in rural African American and AI/AN communities are also prevalent, as many of these communities are not connected to larger municipal water and sewage treatment systems but rather rely on wells and septic systems.[41] One report estimates that 48 percent of households on American Indian reservations lack clean water or adequate sanitation.[42] Another study found that American Indians, Black, and Hispanic households are much more likely to live in a household without indoor plumbing and running water and "plumbing poverty" is geographically clustered in Alaska, the U.S. Southwest, the Upper Midwest, the Northeast (especially northern Maine and New Hampshire), and the Allegheny and Appalachian regions of Pennsylvania and West Virginia.[43] Moreover, for those with access, particularly well water, they are still at risk of contamination. The Hopi Tribe estimates 75 percent

of its community members are drinking contaminated water.[44] Similarly, multiple studies documented home well contamination with the Navajo nation exposed to uranium and arsenic in their well water and 39 percent of Tribal families' wells on the Crow Reservation showing unsafe levels of metals and/or nitrate.[45]

Fear of Deportation

Lastly, for migrant and immigrant Hispanic communities, the fear of and experience of deportation is an ongoing concern with both mental and physical health consequences, to the individuals themselves, their families, and their communities. If arrested and targeted for deportation, a person is held within an immigration detention center. In recent years, U.S. immigration detention centers have seen increasing reports of civil and human rights abuses as well as preventable in-custody deaths.[46] One study of detained immigrants in California found that greater exposure to confinement conditions within detention facilities increased the likelihood of one or more negative health conditions, but researchers also found a cumulative negative effect on their overall health.[47] Not only are the conditions of detention centers inhumane, but immigrants may fear what sort of conditions and punishment they will face upon return to their home country.[48]

Deportation efforts also separate individuals from their families and social support networks, often breaking up families that may have mixed immigration status. Large scale deportation efforts can be economically devastating for families, potentially plunging millions of families into poverty, increasing housing instability and food insecurity.[49] Mass deportation efforts also negatively impact communities. After deportation raids, communities are often more fearful and less trusting of public institutions, are less likely to participate in social and cultural activities, are less likely to seek health care, and are more reluctant to report crime to the police.[48]

Health Care Access

There are longstanding disparities in health care access within rural areas, which suffer from a shortage of health care professionals, the need to travel long distances to health care facilities and a lack of public transportation options for those who do not own cars, lower rates of health insurance coverage, as well as an increase in rural hospital closures.[5,50–55] Intersecting with these longstanding challenges, racial and ethnic segregation also impact access to health care in rural areas. While rural areas have lower proportions of racial and ethnic minorities compared to urban areas, estimates of residential segregation patterns are similar.[56] Segregation can perpetuate existing disparities by restricting various health promoting opportunities, such as education, employment, concentrating poverty, as well as access to health care resources. More than half of rural counties are estimated to be either whole or partially within a health primary shortage area, and those in this designation are more likely to be in counties that are majority Hispanic and/or African American.[56] In a study assessing residential segregation and health care access, both African American and Hispanic segregation were negatively associated with having a usual source of care but higher levels of segregation were also positively associated with health care needs being reported as met.[56] This second finding, as the study authors note, "underscores the need to identify assets and sources of resilience on which racial/ ethnic minority communities rely," in order to meet health care needs.[56]

Southern states, which have the highest populations of rural Black populations, were less likely to accept Medicaid expansion following the Affordable Care Act (ACA), therefore limiting the ability for lower-income minority rural patients to have access to health insurance coverage.[10] Medicaid plays an important role in rural areas for those who are low-income and unemployed (or underemployed). Medicaid coverage rates tend to be higher in rural areas versus urban areas and

the expansion of Medicaid under the ACA has been instrumental in expanding insurance coverage in rural America. It has also been demonstrated that Medicaid expansion decisions have been racialized as there are large differences in support for Medicaid expansion across different races. For example, state adoption decisions have been positively related to White opinion and do not respond to non-White support levels. Additionally, evidence indicates that when the size of the Black population increases and White support levels are low, states were significantly less likely to expand Medicaid.[57]

Outside of hospital settings, community health centers play an important role in providing primary care in rural areas that have a shortage of health care professionals. There are two federal programs which help to meet this gap – the Rural Health Clinics program and the Federally Qualified Health Centers program.[58] In terms of distance to health care facilities, one study found that rural zip code tabulation areas with a high proportion of Black or Hispanic residents tended to have better geographic access, defined as shorter distances, to both Rural Health Centers and Federally Qualified Health Centers compared to White populations, but those distances were still longer than urban minority populations.[55] However, in this study AI/AN populations had the poorest geographic access to Rural Health Centers and Federally Qualified Health Centers, with the longest distances, and areas with higher minority populations have been found to be more likely to have experienced a decline in Rural Health Centers compared to low-minority communities.[55,58]

The growing use of telemedicine has been hailed as a potential solution to help improve health care access and utilization, but evidence of a rural/urban and ethnic/racial digital divide has made equitable access to telemedicine challenging.[59] One study looking at the utilization of telemedicine amid the COVID-19 pandemic found that both adults living in rural areas and minority race/ethnicity groups were less likely to use telemedicine.[60] This may be due to the fact that ethnic minorities, particularly rural African Americans, report less access to a computer or laptop with high-speed internet, smartphone with a data plan, or any digital access compared to non-Hispanic Whites based on 2019 American Community Survey data.[61,62] According to one estimate, there are approximately 3 million people living in rural areas without adequate broadband access or healthcare, and these populations are geographically concentrated in the rural South, Appalachia, and the remote West.[63] In addition to the challenges of internet access in rural areas, telemedicine has limits in terms of the types of medical issues that can be addressed, such as physical exams or medical testing. Thus, if accessing health care in-person is too far or expensive for rural minority communities, then telemedicine can only do so much to meet the existing health care needs.

Other barriers to accessing health care include stigma and cultural practices inherent to the current health care system.[59] Among LGBTQ+ populations in rural areas, stigma around seeking mental health care was a concern.[59] In particular, transgender and gender-diverse individuals living in rural areas face numerous barriers to accessing health care, including systemic transphobia and lack of health care professionals with sufficient training in gender-affirming care.[64] Another instance where stigma around gender and sexual identity intersects with health care access is the current epidemic of HIV in the South which has shifted towards rural areas.[65,66] Rurality has been associated with lower availability of HIV testing, prevention education, and Pre-Exposure Prophylaxis, which leads to later HIV diagnosis, later adoption of antiretroviral therapy, and increased HIV-related mortality.[66,67] To give an example, in one national study, HIV testing rates were 66 percent for nonurban participants versus 88 percent for urban participants.[66] Additionally, on top of all the other challenges in health care access, there is also a lack of access to clinicians with HIV expertise.[66] Based on the most recent data from the Centers for Disease Control and Prevention (CDC), nearly half of all new HIV infections were in the Southern region of the U.S., and the most affected subpopulations were Hispanic/LatinX men and African American men who had male-to-male sexual contact.[65] Thus, individuals who have multiple minority identities coupled

with HIV diagnoses may experience even more significant stigma and discrimination in their interactions with the health care system, which may negatively impact their willingness to seek treatment or manage their health conditions.

Reproductive Health Care Access

The impacts of the reversal of *Roe v. Wade*, in terms of limiting access to reproductive health care, may be especially acute for minority women in rural areas. Pregnant and postpartum women in rural areas already experience worse health outcomes, with one study finding that rural women had a 9 percent greater probability of severe maternal morbidity and mortality compared to urban residents.[53] State abortion bans exacerbate existing workforce shortages based on location and specialty, with OB/GYN, trauma and emergency medicine, and primary care in rural areas being most adversely impacted.[68] Consequently, an increasing number of rural women travel long distances to see health care professionals and have more nonindicated induction and C-sections.[69] Moreover, areas with more abortion restrictions also have fewer social safety net and maternal and child health resources.[70,71] Minority women are thus seriously impacted by intersecting barriers to care including long travel distances and maternity care deserts, waiting periods, parental consent, and financial burden.[69,72,73]

Strategies to Improve Rural Minority Health

The challenges facing rural minority populations are immense, multigenerational and multifactorial, and as such require targeted investment and resources across multiple sectors. Reversing the health care professional shortages and trends in hospital closures in high minority rural areas would be an initial step but bolstering public health and preventive services would need to occur simultaneously. However, due to the historical and entrenched poverty in many rural minority communities, changes in available economic and housing opportunities, investment in education, improved environmental regulation and clean-up, as well as stronger occupational regulations would also be needed to reverse the historical and ongoing trauma of disinvestment and injustice.

There have been federal agency initiatives aimed at improving rural minority health disparities. In 2023, the National Institute on Minority Health and Health Disparities in the National Institutes of Health started an initiative to address gaps in scientific knowledge and support research that addresses multilevel and multiple domains influences related to health disparities experienced by people who live in rural communities.[74] In 2022, the Centers for Medicare & Medicaid Services published their Framework for Advancing Health Care in Rural, Tribal and Geographically Isolated Communities, which has six priority areas that aim to support, strengthen, and improve data collection efforts, health care professionals, health care coverage, as well as medical and communication technology in these communities.[75] Additionally, in 2023 the CDC established the Office of Rural Health and in 2024 published its Rural Public Health Strategic Plan, FY 2024-2029. The Strategic Plan has four key priorities: (1) advance results-based engagement with partners and communities to address rural public health challenges, (2) strengthen rural public health infrastructure and workforce, (3) advance rural public health science, and (4) improve rural public health preparedness and response capacity.[76] With all that being said, changes to federal priorities with the election of a new administration in 2024 may impact the existence or scope of these initiatives moving forward.

CURRENT AMA POLICY

There are over 20 existing AMA policies pertinent to rural health and health care. The most relevant, AMA Policy H-350.937, "Improving Healthcare of Minority Communities in Rural Areas," was adopted in parallel with this request for study. In addition to a study, the policy (1) encourages health promotion, access to care, and disease prevention through educational efforts and publications specifically tailored to minority communities in rural areas; (2) encourages enhanced understanding by federal, state and local governments of the unique health and health-related needs, including mental health, of minority communities in rural areas to improve their quality of life; (3) encourages the collection of vital statistics and other relevant demographic data of minority communities in rural areas; (4) states AMA will advise organizations of the importance of minority health in rural areas; (5) states AMA will channel existing policy for telehealth to support minority communities in rural areas, and lastly (6) encourages AMA's Center for Health Equity to support minority health in rural areas through programming, equity initiatives, and other representation efforts. AMA also recently adopted policy in 2024 (D-135.963) supporting access to water and adequate sanitation, water treatment, and environmental support and health services in AI/AN communities.[77]

CONCLUSION

Despite more limited data compared to urban minority populations, it is clear rural minority populations experience a disproportionate burden of adverse health outcomes compared to rural White populations or urban minority populations. Rural minority residents experience dual disparities and poor health outcomes as a result of intersecting structural and social determinants of health. There are also longstanding disparities in health care access within rural areas in general, which are compounded by additional barriers experienced by rural minority populations, including racial and ethnic segregation, limited transportation options, lower rates of health insurance coverage, poor internet and broadband coverage which limits the ability for expanded telemedicine, as well as stigma and discrimination.

RECOMMENDATIONS

The Council on Science and Public Health recommends that the following be adopted, and the remainder of the report be filed.

1. That Policy H-350.937, "Improving Healthcare of Minority Communities in Rural Areas" be amended by addition and deletion to read as follows:

    1. Our American Medical Association encourages health promotion, access to care, and disease prevention through educational efforts and publications specifically tailored to minority communities in rural areas.
    2. Our AMA encourages enhanced understanding by federal, state and local governments of the unique health and health-related needs, including mental health, of minority communities in rural areas in an effort to improve their quality of life.
    3. Our AMA encourages the collection of vital statistics and other relevant demographic data of minority communities in rural areas.
    4. Our AMA will advise organizations of the importance of minority health in rural areas.
    ~~5. Our AMA will research and study health issues unique to minority communities in rural areas, such as access to care difficulties.~~

~~6.~~ 5. Our AMA will channel existing policy for telehealth to support improved broadband internet access in minority communities in rural areas to increase the availability of telemedicine where clinically appropriate.

~~7.~~ 6. Our AMA ~~encourages our Center for Health Equity to~~ supports minority health in rural areas through programming, equity initiatives, and other representation efforts.

7. Our AMA encourages the development of strategies and mechanisms for communities to share resources and best practices to serve their rural minority populations. (Modify Current HOD Policy)

2. That Policy H-135.905, "Furthering Environmental Justice and Equity H-135.905" be amended by addition and deletion to read as follows:

1. Our American Medical Association supports prioritizing greenspace access and tree canopy coverage for communities that received a "D" rating from the Home Owners' Loan Corporation, otherwise known as being "redlined," or those that have been impacted by other discriminatory development, loan servicing, and building practices with full participation by the community residents in these decisions.
2. Our AMA supports measures to protect frontline communities from the health harms of proximity to historical and current harmful industrial and mining operations, including fossil fuel extraction, refining and combustion, and large-scale agriculture, such as using the best available technology to reduce local pollution exposure ~~from oil refineries~~, or health safety buffers from ~~oil extraction~~ industrial operations.

Fiscal Note: less than $1,000

REFERENCES

1. Carsey School of Public Policy. Growing Racial Diversity in Rural America: Results from the 2020 Census. Accessed November 20, 2024. https://carsey.unh.edu/publication/growing-racial-diversity-rural-america-results-2020-census
2. CDC. Rural Public Health. Rural Health. September 9, 2024. Accessed November 5, 2024. https://www.cdc.gov/rural-health/php/index.html
3. Garnett MF, Rose Spencer M, Hedegaard H. *Urban-Rural Differences in Unintentional Injury Death Rates Among Children Aged 0–17 Years: United States, 2018–2019*. National Center for Health Statistics, CDC; 2021. doi:10.15620/cdc:110040
4. Peek-Asa C, Zwerling C, Stallones L. Acute Traumatic Injuries in Rural Populations. *Am J Public Health*. 2004;94(10):1689-1693.
5. National Institutes of Health. Health in Rural America. NIH News in Health. March 2022. Accessed January 27, 2025. https://newsinhealth.nih.gov/2022/03/health-rural-america
6. James CV, Moonesinghe R, Wilson-Frederick SM, Hall JE, Penman-Aguilar A, Bouye K. Racial/Ethnic Health Disparities Among Rural Adults — United States, 2012–2015. *MMWR Surveill Summ*. 2017;66. doi:10.15585/mmwr.ss6623a1
7. Warren JC, Smalley KB, Rimando M, Barefoot KN, Hatton A, LeLeux-LaBarge K. Chapter 14. Rural Minority Health: Race, Ethnicity, and Sexual Orientation. In: Warren JC, Smalley KB, eds. *Rural Public Health: Best Practices and Preventive Models*. Springer Publishing Company, Incorporated; 2014:203-279.
8. Probst JC, Zahnd WE, Hung P, Eberth JM, Crouch EL, Merrell MA. Rural-Urban Mortality Disparities: Variations Across Causes of Death and Race/Ethnicity, 2013–2017. *Am J Public Health*. 2020;110(9):1325-1327. doi:10.2105/AJPH.2020.305703
9. Henning-Smith CE, Hernandez AM, Hardeman RR, Ramirez MR, Kozhimannil KB. Rural Counties With Majority Black Or Indigenous Populations Suffer The Highest Rates Of Premature Death In The US. *Health Aff (Millwood)*. 2019;38(12):2019-2026. doi:10.1377/hlthaff.2019.00847
10. Zahnd WE, Murphy C, Knoll M, et al. The Intersection of Rural Residence and Minority Race/Ethnicity in Cancer Disparities in the United States. *Int J Environ Res Public Health*. 2021;18(4):1384. doi:10.3390/ijerph18041384
11. Dewees S, Marks B. *Twice Invisible: Understanding Rural Native America*. First Nations Development Institute; 2017. https://www.usetinc.org/wp-content/uploads/bvenuti/WWS/2017/May%202017/May%208/Twice%20Invisible%20-%20Research%20Note.pdf
12. Hill L, Artiga S. What is Driving Widening Racial Disparities in Life Expectancy? KFF. May 23, 2023. Accessed January 23, 2025. https://www.kff.org/racial-equity-and-health-policy/issue-brief/what-is-driving-widening-racial-disparities-in-life-expectancy/
13. O'Connor B, Phelon K, Price B, et al. *LGBTQIA+ Health in Rural America*. National Rural Health Association; 2022. Accessed March 11, 2025. https://www.ruralhealth.us/getmedia/6589dfad-a5f9-494e-b0e8-749f8b60ff68/2022-NRHA-LGBTQ-Policy-Paper-Final-(1).pdf
14. Henning-Smith C, Gonzales G, Ott A, et al. Rural LGBTQ+ Americans Face Health Disparities, But Communities Revealed Strengths. doi:10.1377/forefront.20221021.273708
15. Dyar C, Morgan E. Rural and urban differences in disparities in substance use and substance use disorders affecting sexual minority populations. *J Rural Health*. 2024;40(3):542-556. doi:10.1111/jrh.12816
16. Arcury TA, Quandt SA. The Health and Safety of Farmworkers in the Eastern United States: A Need to Focus on Social Justice. In: Quandt SA, Arcury TA, eds. *Latino Farmworkers in the Eastern United States: Health, Safety and Justice*. Springer; 2009:1-14. doi:10.1007/978-0-387-88347-2_1

17. Brown NI, Abdelmessih P, Rogers LQ, Pekmezi D. Physical Activity Barriers, Facilitators, and Preferences in Rural Adults with Obesity. *Curr Cardiovasc Risk Rep*. 2024;19(1):1. doi:10.1007/s12170-024-00754-5
18. The Rural Monitor. Housing Shortages Are Making Recruitment and Retention Even More Challenging for Some Rural Healthcare Providers. Rural Health Information Hub. December 13, 2023. Accessed March 10, 2025. https://www.ruralhealthinfo.org/rural-monitor/healthcare-workforce-housing
19. United States Joint Economic Committee. Addressing Rural Health Worker Shortages Will Improve Population Health And Create Job Opportunities - Addressing Rural Health Worker Shortages Will Improve Population Health And Create Job Opportunities - United States Joint Economic Committee. January 30, 2024. Accessed March 11, 2025. https://www.jec.senate.gov/public/index.cfm/democrats/2024/1/addressing-rural-health-worker-shortages-will-improve-population-health-and-create-job-opportunities
20. Ionescu D. The Quiet Housing Crisis in Rural America. Planetizen. March 20, 23AD. Accessed March 10, 2025. https://www.planetizen.com/news/2023/03/122189-quiet-housing-crisis-rural-america
21. Cadmus-Bertram LA, Gorzelitz JS, Dorn DC, Malecki KMC. Understanding the physical activity needs and interests of inactive and active rural women: a cross-sectional study of barriers, opportunities, and intervention preferences. *J Behav Med*. 2020;43(4):638-647. doi:10.1007/s10865-019-00070-z
22. Del Rio M, Hargrove WL, Tomaka J, Korc M. Transportation Matters: A Health Impact Assessment in Rural New Mexico. *Int J Environ Res Public Health*. 2017;14(6):629. doi:10.3390/ijerph14060629
23. Scott B. Creating a healthier future for Native communities. American Medical Association. December 18, 2024. Accessed January 23, 2025. https://www.ama-assn.org/about/leadership/creating-healthier-future-native-communities
24. American Medical Association. What is structural racism? American Medical Association. November 9, 2021. Accessed January 29, 2025. https://www.ama-assn.org/delivering-care/health-equity/what-structural-racism
25. Kapadia F, Borrell LN. Structural Racism and Health Inequities: Moving From Evidence to Action. *Am J Public Health*. 2023;113(S1):S6-S9. doi:10.2105/AJPH.2022.307174
26. Newkirk II VR. The Great Land Robbery - The Mississippi Delta's History of Black Land Theft. *The Atlantic*. Published online September 2019. Accessed November 21, 2024. https://www.theatlantic.com/magazine/archive/2019/09/this-land-was-our-land/594742/
27. Armstrong NE. Sweat Equity: A contemporary analysis of land dispossession of black farmers in the southern United States. *Wash Univ J Law Policy*. 2024;73:408-422.
28. Brown HJ, McPherson G, Peterson R, Newman V, Cranmer B. Our land, our language: connecting dispossession and health equity in an indigenous context. *Can J Nurs Res Rev Can Rech En Sci Infirm*. 2012;44(2):44-63.
29. Farrell J, Burow PB, McConnell K, Bayham J, Whyte K, Koss G. Effects of land dispossession and forced migration on Indigenous peoples in North America. *Science*. 2021;374(6567):eabe4943. doi:10.1126/science.abe4943
30. Akee R. Stolen Lands and Stolen Opportunities. *Native Am Indig Stud*. 2021;8(1):123-128.
31. Mirabelli MC, Chatterjee AB, Arcury TA, et al. Poultry Processing Work and Respiratory Health of Latino Men and Women in North Carolina. Accessed November 21, 2024. https://stacks.cdc.gov/view/cdc/33852
32. Castillo F, Mora AM, Kayser GL, et al. Environmental Health Threats to Latino Migrant Farmworkers. *Annu Rev Public Health*. 2021;42(Volume 42, 2021):257-276. doi:10.1146/annurev-publhealth-012420-105014
33. Deadly Heat. *Fault Lines*. Published online October 23, 2024. Accessed January 27, 2025. https://www.aljazeera.com/program/fault-lines/2024/10/23/deadly-heat

34. Californians for Pesticide Reform. Pesticides & Human Health. Accessed January 28, 2025. https://www.pesticidereform.org/pesticides-human-health/
35. Becerra NR. Impacts of the Climate Crisis on Farmworkers. Each Breath Blog - American Lung Association. October 13, 2023. Accessed January 28, 2025. https://www.lung.org/blog/climate-change-impacts-farmworkers
36. Cartwright MS, Walker FO, Blocker JN, et al. The Prevalence of Carpal Tunnel Syndrome in Latino Poultry-Processing Workers and Other Latino Manual Workers. *J Occup Environ Med*. 2012;54(2):198. doi:10.1097/JOM.0b013e31823fdf53
37. Migrant Clinicians Network. Avian Flu FAQ for Clinicians Serving Migrant and Immigrant Workers. December 12, 2024. Accessed December 16, 2024. https://www.migrantclinician.org/blog/2024/dec/avian-flu-faq-clinicians-serving-migrant-and-immigrant-workers.html
38. Charles SM, Cuevas AK. Chapter 13. Environmental and Occupational Health in Rural Areas. In: Warren JC, Smalley KB, eds. *Rural Public Health: Best Practices and Preventive Models*. Springer Publishing Company, Incorporated; 2014:203-279.
39. Lavelle M, McKenna P. 'This Is an Emergency': 1 Million African Americans Live Near Oil, Gas Facilities. Inside Climate News. November 14, 2017. Accessed March 10, 2025. https://insideclimatenews.org/news/14112017/african-americans-exposed-oil-gas-wells-refineries-health-risks-naacp-study/
40. Lewis J, Hoover J, MacKenzie D. Mining and Environmental Health Disparities in Native American Communities. *Curr Environ Health Rep*. 2017;4(2):130-141. doi:10.1007/s40572-017-0140-5
41. Bernhard MC, Evans MB, Kent ST, et al. Identifying environmental health priorities in underserved populations: a study of rural versus urban communities. *Public Health*. 2013;127(11):994-1004. doi:10.1016/j.puhe.2013.08.005
42. Democratic staff of the House Committee on Natural Resources. *Water Delayed Is Water Denied: How Congress Has Blocked Access to Water for Native Families*. U.S. House of Representatives, Natural Resources Committee; 2016. https://democrats-naturalresources.house.gov/imo/media/doc/House%20Water%20Report_FINAL.pdf
43. Deitz S, Meehan K. Plumbing Poverty: Mapping Hot Spots of Racial and Geographic Inequality in U.S. Household Water Insecurity. *Ann Am Assoc Geogr*. 2019;109(4):1092-1109. doi:10.1080/24694452.2018.1530587
44. Wildeman MK. Arsenic in Hopis' water twice the EPA limit, and it may be making them sick. *The Arizona Republic*. https://www.azcentral.com/story/news/local/arizona-water/2016/08/24/natural-arsenic-poisons-hopi-reservation-water/88317458/. August 24, 2016. Accessed January 30, 2025.
45. Martin C, Simonds VW, Young SL, Doyle J, Lefthand M, Eggers MJ. Our Relationship to Water and Experience of Water Insecurity among Apsáalooke (Crow Indian) People, Montana. *Int J Environ Res Public Health*. 2021;18(2):582.
46. Saadi A, De Trinidad Young ME, Patler C, Estrada JL, Venters H. Understanding US Immigration Detention: Reaffirming Rights and Addressing Social-Structural Determinants of Health. *Health Hum Rights*. 2020;22(1):187-197.
47. Saadi A, Patler C, De Trinidad Young ME. Cumulative Risk of Immigration Prison Conditions on Health Outcomes Among Detained Immigrants in California. *J Racial Ethn Health Disparities*. 2022;9(6):2518-2532. doi:10.1007/s40615-021-01187-1
48. A Policy Statement by the Society for Community Research and Action: Division 27 of the American Psychological Association. Statement on the Effects of Deportation and Forced Separation on Immigrants, their Families, and Communities. *Am J Community Psychol*. 2018;62(1-2):3-12. doi:10.1002/ajcp.12256
49. Warren R, Kerwin D. Mass Deportations Would Impoverish US Families and Create Immense Social Costs. *J Migr Hum Secur*. 2017;5(1):1-8.

50. McCarthy S, Moore D, Smedley WA, et al. Impact of Rural Hospital Closures on Health-Care Access. *J Surg Res*. 2021;258:170-178. doi:10.1016/j.jss.2020.08.055
51. Wishner J, Solleveld P, Rudowitz R, Paradise J, Antonisse L. *A Look at Rural Hospital Closures and Implications for Access to Care: Three Case Studies | KFF*. KFF; 2016. Accessed December 18, 2024. https://www.kff.org/medicaid/issue-brief/a-look-at-rural-hospital-closures-and-implications-for-access-to-care/
52. Foutz J, Artiga S, Published RG. The Role of Medicaid in Rural America. KFF. April 25, 2017. Accessed December 10, 2024. https://www.kff.org/medicaid/issue-brief/the-role-of-medicaid-in-rural-america/
53. Medicaid and CHIP Payment and Access Commission. *Medicaid and Rural Health*.; 2021. https://www.macpac.gov/wp-content/uploads/2021/04/Medicaid-and-Rural-Health.pdf
54. Merrell MA, Zahnd WE, Benavidez GA, et al. *Availability of Primary Care Safety Net Providers in Minoritized Racial/Ethnic Group Areas*. Rural & Minority Health Resource Center; 2023. https://www.sc.edu/study/colleges_schools/public_health/research/research_centers/sc_rural_health_research_center/documents/primarycaresafetynetbrief2023.pdf
55. Rural Health Information Hub. Healthcare Access in Rural Communities Overview. February 21, 2025. Accessed March 10, 2025. https://www.ruralhealthinfo.org/topics/healthcare-access
56. Caldwell JT, Ford CL, Wallace SP, Wang MC, Takahashi LM. Racial and ethnic residential segregation and access to health care in rural areas. *Health Place*. 2017;43:104-112. doi:10.1016/j.healthplace.2016.11.015
57. Grogan CM, Park SE. The Racial Divide in State Medicaid Expansions. *J Health Polit Policy Law*. 2017;42(3):539-572. doi:10.1215/03616878-3802977
58. Ko M, Cummings JR, Ponce NA. Changes in the Supply of US Rural Health Centers, 2000-2011: Implications for Rural Minority Communities. *J Rural Health*. 2016;32(3):245-253. doi:10.1111/jrh.12147
59. Douthit N, Kiv S, Dwolatzky T, Biswas S. Exposing some important barriers to health care access in the rural USA. *Public Health*. 2015;129(6):611-620. doi:10.1016/j.puhe.2015.04.001
60. Park JH, Lee MJ, Tsai MH, Shih HJ, Chang J. Rural, Regional, Racial Disparities in Telemedicine Use During the COVID-19 Pandemic Among US Adults: 2021 National Health Interview Survey (NHIS). *Patient Prefer Adherence*. 2023;17:3477-3487. doi:10.2147/PPA.S439437
61. Probst J, Ajmal F. *Social Determinants of Health Among the Rural African American Population - Rural Health Research Gateway*. Rural Health Research Gateway; 2019. Accessed December 10, 2024. https://www.ruralhealthresearch.org/publications/1268
62. Curtis ME, Clingan SE, Guo H, Zhu Y, Mooney LJ, Hser YI. Disparities in digital access among American rural and urban households and implications for telemedicine-based services. *J Rural Health Off J Am Rural Health Assoc Natl Rural Health Care Assoc*. 2022;38(3):512-518. doi:10.1111/jrh.12614
63. Hacker SJT Holly K. Millions in US Live in Places Where Doctors Don't Practice and Telehealth Doesn't Reach. KFF Health News. March 10, 2025. Accessed March 10, 2025. https://kffhealthnews.org/news/article/dead-zone-sickest-counties-slow-internet-broadband-desert-health-care-provider-shortage/
64. MacDougall H, Henning-Smith C, Gonzales G, Ott A. Access to Health Care for Transgender and Gender-Diverse Adults in Urban and Rural Areas in the United States. *Med Care Res Rev*. 2024;81(1):68-77. doi:10.1177/10775587231191649
65. CDC. Fast Facts: HIV in the United States. HIV. July 1, 2024. Accessed January 29, 2025. https://www.cdc.gov/hiv/data-research/facts-stats/index.html
66. Schafer KR, Albrecht H, Dillingham R, et al. The Continuum of HIV Care in Rural Communities in the United States and Canada: What Is Known and Future Research Directions. *J Acquir Immune Defic Syndr*. 2017;75(1):35-44. doi:10.1097/QAI.0000000000001329

67. Kauffman G. “A Safe Place”: Rural HIV Patients and Providers Fight Stigma, Isolation Through Connection. The Rural Monitor. June 28, 2023. Accessed March 10, 2025. https://www.ruralhealthinfo.org/rural-monitor/rural-hiv
68. Health Resources Services Administration, Health Center Program. *Exploring Health Center Capacity in Rural Maternity Care Deserts*. Health Resources Services Administration https://bphc.hrsa.gov/sites/default/files/bphc/data-reporting/brief-1.pdf
69. Guttmacher Institute. Latest Data Confirm People Are Traveling Farther Distances to Access Abortion Care Post-Dobbs. June 13, 2024. Accessed January 29, 2025. https://www.guttmacher.org/news-release/2024/latest-data-confirm-people-are-traveling-farther-distances-access-abortion-care
70. Treisman R. States with the toughest abortion laws have the weakest maternal supports, data shows. *NPR*. https://www.npr.org/2022/08/18/1111344810/abortion-ban-states-social-safety-net-health-outcomes. August 18, 2022. Accessed January 29, 2025.
71. Vilda D, Wallace ME, Daniel C, Evans MG, Stoecker C, Theall KP. State Abortion Policies and Maternal Death in the United States, 2015–2018. *Am J Public Health*. 2021;111(9):1696-1704. doi:10.2105/AJPH.2021.306396
72. March of Dimes. *Nowhere to Go: Maternity Care Deserts Across the US*.; 2024. Accessed January 29, 2025. https://www.marchofdimes.org/maternity-care-deserts-report
73. Addante AN, Paul R, Dorsey M, McNicholas C, Madden T. Differences in Financial and Social Burdens Experienced by Patients Traveling for Abortion Care. *Womens Health Issues*. 2021;31(5):426-431. doi:10.1016/j.whi.2021.06.002
74. NIH, National Institute on Minority Health and Health Disparities. Rural Health Disparities and Health Care. NIMHD. Accessed November 5, 2024. https://www.nimhd.nih.gov/funding/approved-concepts/2023/rural-health-disparities-and-health-care.html
75. Centers for Medicare & Medicaid Services. *CMS Framework for Advancing Health Care in Rural, Tribal, and Geographically Isolated Communities*.; 2022. https://www.cms.gov/files/document/cms-geographic-framework.pdf
76. CDC. Rural Public Health Strategic Plan. Rural Health. September 12, 2024. Accessed November 5, 2024. https://www.cdc.gov/rural-health/php/about/strategic-plan.html
77. American Medical Association. D-135.963 Indian Water Rights. Accessed March 10, 2025. https://policysearch.ama-assn.org/policyfinder/detail/indian%20water%20rights?uri=%2FAMADoc%2Fdirectives.xml-D-135.963.xml

AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES

Resolution: 401
(A-25)

Introduced by: American Academy of Ophthalmology

Subject: Reducing Pickleball-Related Ocular Injuries

Referred to: Reference Committee D

Whereas, the estimated number of annual pickleball-related injuries presenting to U.S. emergency departments increased by 91% from 2020 to 2022 (8,894 to 16,997 injuries), and pickleball-related hospital admissions increased by 257% in the same period (992 to 3,541 hospital admissions); and

Whereas, older adults (65-80 years) accounted for 61.1% of pickleball-related injuries with a mean injury ago of 64 years in the period 2013 to 2022; and

Whereas, there are a growing number of reports of pickleball-related ocular injuries including corneal abrasions, iritis, traumatic lens subluxation, vitreous hemorrhage, symptomatic retinal tear, retinal detachment, and angle recession and commotio retinae; and

Whereas, a pickleball traveling at speeds of 25 mph or more can fit within the orbital socket, posing a significant risk of blunt-force ocular trauma; and

Whereas, the ASTM F3164-24 standard specification for eye protectors for racket sports (i.e, racquetball, squash, tennis, and pickleball) is designed to prevent serious eye injuries; and

Whereas, protective eyewear is not currently mandated to play pickleball at any level; and

Whereas, existing AMA policy (H-10.970) supports protective eyewear for high-risk sports, but does not address the emerging risks of pickleball injuries or advocate for broader injury prevention strategies; therefore be it

RESOLVED, that our American Medical Association advocate for international, national, and local pickleball organizations, leagues, and recreational facilities to adopt eye injury prevention strategies—such as mandating protective eyewear—particularly for older adults and individuals with pre-existing ocular conditions. (Directive to Take Action); and be it further

RESOLVED, that our AMA support targeted educational initiatives on pickleball-related eye injury prevention, with specific outreach to older adults, high-risk individuals, and healthcare professionals, to promote safe play and increase awareness of ocular injury risks (Directive to Take Action); and be it further

RESOLVED, that our AMA encourage continued research and injury surveillance efforts to evaluate the long-term impact of pickleball-related eye injuries on healthcare costs, rehabilitation outcomes, and the effectiveness of preventive strategies (Directive to Take Action); and be it further

RESOLVED, that our AMA recognize the growing popularity of pickleball among aging populations and encourage physicians to incorporate counseling on sports-related eye injury prevention as part of routine patient care. (New HOD Policy)

Fiscal Note: Minimal – less than $1,000

Received: 4/21/25

REFERENCES

1. Cheng, Ryan & Moran, Jay & Kim, Billy & Yuan, Marshall & O'Leary, Connor & Wang, Calvin & Dines, Joshua & Katt, Brian & Jimenez, Andrew. (2024). A Substantial Increase in Injuries and Hospitalizations Associated with Playing Pickleball from 2020 to 2022: A National Database Study. Arthroscopy, Sports Medicine, and Rehabilitation. 101067. 10.1016/j.asmr.2024.101067. https://www.researchgate.net/publication/386995489_A_Substantial_Increase_in_Injuries_and_Hospitalizations_Associated_with_Playing_Pickleball_from_2020_to_2022_A_National_Database_Study
2. Yu J, Yendluri A, Linden GS, Namiri NK, Corvi JJ, Song J, Parsons BO, Parisien RL. Increasing Incidence of Pickleball Injuries Presenting to US Emergency Departments: A 10-year Epidemiologic Analysis of Mechanisms and Trends. Orthop J Sports Med. 2025 Jan 23;13(1):23259671241305364. doi: 10.1177/23259671241305364. PMID: 39866953; PMCID: PMC11758564. https://pmc.ncbi.nlm.nih.gov/articles/PMC11758564/pdf/10.1177_23259671241305364.pdf
3. Boopathiraj N, Wagner IV, Krambeer CJ, Lentz PC, Miller DD, Mashayekhi A, Dorairaj SK. In a pickle: Cases of pickleball related ocular injuries. Am J Ophthalmol Case Rep. 2024 May 22;35:102082. doi: 10.1016/j.ajoc.2024.102082. PMID: 38841153; PMCID: PMC11152897. https://pubmed.ncbi.nlm.nih.gov/38841153/
4. Huang H, Greven MA. Traumatic Lens Subluxation from Pickleball Injury: A Case Series.. Retin Cases Brief Rep. 2024 Jan 1;18(1):15-17. doi: 10.1097/ICB.0000000000001312. PMID: 35963000. https://pubmed.ncbi.nlm.nih.gov/35963000/
5. Atkinson CF, Patron ME, Joondeph BC.Retinal Tears Due to Pickleball Injury. Retin Cases Brief Rep. 2022 May 1;16(3):312-313. doi: 10.1097/ICB.0000000000000965. Epub 2020 Jan 16. PMID: 31971926. https://pubmed.ncbi.nlm.nih.gov/31971926/
6. Dang, Vin & Alkawally, Mariam. (2021). Pickleball Associated Abrasion and Iritis: A Case Study. CRO (Clinical & Refractive Optometry) Journal. 32. 10.57204/001c.36828. https://www.researchgate.net/publication/364894227
7. Welch, Ashley interviewing Amy Coburn, MD, Annette Hoskin, PhD, BSc(Optom), MBA, Lisa D. Kelly, MD, MEd, Zeba A. Syed, MD, Marisa Tieger, MD, and Fasika A. Woreta, MD, MPH "More Than a Pickle: Fastest-Growing U.S. Sport May Pose Ocular Injury Risks" https://www.aao.org/eyenet/article/more-than-a-pickle-ocular-injury-risks
8. ASTM F3164-24, Standard Specification for Eye Protectors for Racket Sports (that is, Racquetball, Squash, Tennis, Pickleball) https://store.astm.org/f3164-24.html
9. Waisberg E, Ong J, Lee AG. Pickleball eye injuries: ocular protection recommendations and guidelines. Eye (Lond). 2024 Apr;38(6):1039-1040. doi: 10.1038/s41433-023-02870-9. Epub 2023 Dec 14. PMID: 38097802; PMCID: PMC11009287. https://pmc.ncbi.nlm.nih.gov/articles/PMC11009287/

RELEVANT AMA POLICY

H-10.970 Use of Protective Eyewear by Athletes
Our American Medical Association supports the use of protective eyewear for sports participants who have had intraocular surgery or eye trauma, or are functionally one-eyed individuals, and for all other sports participants engaged in high-risk eye injury sports, as advocated by the American Academy of Pediatrics and the American Academy of Ophthalmology. [Res. 404, I-98; Reaffirmed: CSAPH Rep. 2, A-08; Reaffirmed: CSAPH REP. 01, A-18]

H-10.998 Impact-Resistant Lens
Our AMA recommends that physicians providing eye care which involves spectacles of any kind, including sunglasses, should continue to prescribe impact-resistant lenses whenever this is medically feasible. [BOT Rep. Y, A-72, Reaffirmed: CLRPD Rep. C, A-89; Reaffirmed: Sunset Report, A-00; Reaffirmed: CSAPH Rep. 1, A-10; Reaffirmed: CSAPH Rep. 01, A-20B]

H-470.967 Safety in Youth Baseball and Softball
The AMA urges youth baseball and softball organizations to adopt policies for the use of protective equipment and encourages sponsors of organized youth sports activities to adopt written emergency and first responder plans. [Res.408, I-95; Reaffirmed: CSA Rep. 8, A-05; Reaffirmed: CSAPH Rep. 3, A-15; Modified: CSAPH Rep. 1, A-15]

H-470.960 Soccer Injuries
Our AMA recognizes the problem of injuries in soccer and encourages additional studies into the

incidence of soccer-related injuries and methods to reduce those injuries. [Res. 408, I-95; Reaffirmed: CSA Rep. 8 A-05; Reaffirmed: CSAPH Rep. 3, A-15; Modified: CSAPH Rep. 1, A-15]

H-470.955 Support of Protective Headgear (Helmets) in the Sport of Girls'/Women's Lacrosse
Our American Medical Association supports requiring approved protective headgear for all athletes participating in the sport of girls'/women's lacrosse. [Res. 423, A-15]

H-470.985 Goalie Face Masks in Hockey
Our American Medical Association endorses the mandatory use of an adequate cage-type face mask for goalies in all amateur, high school and college hockey programs in the nation. [Res. 4, I-81; Reaffirmed: CLRPD Rep. F, I-91; Reaffirmed: Sunset Report, I-01; Reaffirmed: CSAPH Rep. 1, A-11; Reaffirmed: CSAPH Rep. 1, A-21]

H-470.986 Helmets for Hockey Referees
Our American Medical Association endorses the use of hockey helmets for all referees in amateur, high school and college hockey programs in the US. [Res. 123, A-81; Reaffirmed: CLRPD Rep. F, I-91; Reaffirmed: Sunset Report, I-01; Reaffirmed: CSAPH Rep. 1, A-11; Reaffirmed: CSAPH Rep. 1, A-21]

H-470.954 Reduction of Sports-Related Injury and Concussion
1. Our American Medical Association:
    a. will work with appropriate agencies and organizations to promote awareness of programs to reduce concussion and other sports-related injuries across the lifespan.
    b. will promote awareness that even mild cases of traumatic brain injury may have serious and prolonged consequences.
2. Our AMA supports the adoption of evidence-based, age-specific guidelines on the evaluation and management of concussion in all athletes for use by physicians, other health professionals, and athletic organizations.
3. Our AMA will work with appropriate state and specialty medical societies to enhance opportunities for continuing education regarding professional guidelines and other clinical resources to enhance the ability of physicians to prevent, diagnose, and manage concussions and other sports-related injuries.
4. Our AMA urges appropriate agencies and organizations to support research to:
    a. assess the short- and long-term cognitive, emotional, behavioral, neurobiological, and neuropathological consequences of concussions and repetitive head impacts over the life span; identify determinants of concussion and other sports-related injuries in pediatric and adult athletes, including how injury thresholds are modified by the number of and time interval between head impacts and concussions;
    b. develop and evaluate effective risk reduction measures to prevent or reduce sports-related injuries and concussions and their sequelae across the lifespan; and
    c. develop objective biomarkers to improve the identification, management, and prognosis of athletes suffering from concussion to reduce the dependence on self-reporting and inform evidence-based, age-specific guidelines for these patients.
5. Our AMA supports research into the detection, causes, and prevention of injuries along the continuum from subconcussive head impacts to conditions such as chronic traumatic encephalopathy (CTE).
6. Our AMA encourages evidence-based studies regarding post-injury management protocols and return-to-play criteria that can help guide physicians who are caring for injured athletes. [CSAPH Rep. 3, A-15; Appended: Res.905, I-16; Appended: Res. 904, I-23]

AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES

Resolution: 402
(A-25)

Introduced by: American Association of Public Health Physicians, Medical Student Section

Subject: Protecting In-Person Prison Visitations to Reduce Recidivism

Referred to: Reference Committee D

Whereas, reducing recidivism enhances public safety, lowers taxpayer costs, and supports reintegration, with close family relationships shown to reduce recidivism, enhance job prospects post-prison, and ease harms and improve mental health outcomes for family members who are separated from their loved ones[1-8]; and

Whereas, an estimated 684,500 U.S. state and federal prisoners are parents of at least one minor child, and reducing recidivism among incarcerated mothers benefits their children, as maternal incarceration is linked to higher rates and earlier onset of arrests among children[9,10]; and

Whereas, in-person prison visits include either non-contact “through-the-glass” visits or contact visits[11-14]; and

Whereas, frequent in-person visits between children and their incarcerated parents are positively associated with stronger parent-child relationships, promoting healthier psychological outcomes later in life[8]; and

Whereas, in-person visitation has been shown to reduce recidivism by up to 26%, felony reconviction by 13%, prison misconduct by up to 25%, and technical violations by 25%[3-6]; and

Whereas, in-person visitations have shown to improve mental health outcomes for visitors, increase the likelihood of long-term family reunions, and foster prosocial connections among incarcerated individuals, although challenges such as security risks and contraband introduction remain[1-6,15-18]; and

Whereas, barriers limiting the frequency of in-person visitations, such as prison location, transportation accessibility, caregiver willingness to take children to visit their parents, restricted visiting hours, and varying policies across correctional facilities, result in fewer than 50% of inmates receiving visitations[19-21]; and

Whereas, private telecommunications companies promote video visitation systems as a cheap and easy alternative to in-person visitations, as well as a profitable means of generating revenues[22]; and

Whereas, at least 600 jails and prisons in America have instituted video visitation programs and 74% of these correctional facilities have either reduced or eliminated in-person visits[23,24]; and

Whereas, video visits may alleviate certain barriers but fail to replicate the psychological benefits of in-person visitation, are not preferred by the majority of incarcerated individuals or

their visitors, and have significant drawbacks, including poor reliability, low quality, and higher costs[5,6,17,18,25-27]; and

Whereas, in March 2024, two lawsuits were filed against Michigan counties alleging that the video-only policy violated the civil rights of families, arguing that abolition of a child's "right to hug" their parent through contact visits "akin to torture"[26]; and

Whereas, the Bureau of Justice Assistance, the National Institute of Corrections, and the U.S Department of Health and Human Services partnered in 2016 to support a $1 million effort to develop family-strengthening policies that could be implemented in correctional facilities to reduce the traumatic impact of parental incarceration on children, including family-friendly visiting policies and procedures[7]; and

Whereas, the average number of in-person monthly visits increased when both in-person visitation and video calling were available, and numerous states have approved or are pending legislation that protects in-person visits for incarcerated people[6,28,29]; therefore be it

RESOLVED, that our American Medical Association support local, state, and federal efforts that protect and improve accessibility to in-person visitations at correctional facilities to reduce recidivism while encouraging and supporting all custodial efforts to reduce (or eliminate) the introduction of illegal substances and contraband during such in-person visitations. (New HOD Policy)

Fiscal Note: Minimal – less than $1,000

Received: 4/6/25

REFERENCES

1. Gelb A, Velazquez T. The Changing State of Recidivism: Fewer People Going Back to Prison. Pew Charitable Trusts. 2018. Accessed August 25, 2024. https://www.pewtrusts.org/en/research-and-analysis/articles/2018/08/01/the-changing-state-of-recidivism-fewer-people-going-back-to-prison.
2. Legislative Analyst's Office. The 2024- 25 Budget: California Department of Corrections and Rehabilitation. Accessed September 8, 2024. https://lao.ca.gov/Publications/Report/4852
3. Mears DP, Cochran JC, Siennick SE, Bales WD. Prison Visitation and Recidivism. Criminal Justice Policy Review. 2012;23(4):471-496. Accessed August 23, 2024. https://journals.sagepub.com/doi/abs/10.1177/0887403411429724.
4. Reidy, T., & Sorensen, J. (2020). Visitation and Misconduct Among Maximum-Security Inmates. The Prison Journal, 100(4), 447-467. https://doi.org/10.1177/0032885520939289.
5. Mitchell, MM, Spooner, K, Jia, D, Zhang, Y. The effect of prison visitation on reentry success: A meta-analysis, Journal of Criminal Justice. 2016; 47:74-83. Accessed September 8, 2024. https://doi.org/10.1016/j.jcrimjus.2016.07.006.
6. Prison Policy Initiative. Research roundup: The positive impacts of family contact for incarcerated people and their families. Accessed August 23, 2024. https://www.prisonpolicy.org/blog/2021/12/21/family_contact/.
7. Office of Public Affairs | Deputy Attorney General Sally Q. Yates Announces Family-Friendly Prison Policies to Strengthen Inmate-Familial Bonds | United States Department of Justice. Accessed August 23, 2024. https://www.justice.gov/opa/pr/deputy-attorney-general-sally-q-yates-announces-family-friendly-prison-policies-strengthen
8. Kremer KP, Christensen KM, Stump KN, Stelter RL, Kupersmidt JB, Rhodes JE. The role of visits and parent–child relationship quality in promoting positive outcomes for children of incarcerated parents. *Child & Family Social Work*. 2022;27(2):206-216. doi:10.1111/CFS.12872
9. Maruschak LM, Statistician B, Bronson J, Alper M. Parents in Prison and Their Minor Children. Published online 2021. Accessed on September 8, 2024. https://bjs.ojp.gov/content/pub/pdf/pptmcspi16st.pdf
10. Kopak, A. M., & Smith-Ruiz, D. Criminal Justice Involvement, Drug Use, and Depression Among African American Children of Incarcerated Parents. Race and Justice, 6(2), 89-116. Accessed August 23, 2024. https://doi-org.ezproxy.lib.utah.edu/10.1177/2153368715586633
11. BOP: How to visit a federal inmate. www.bop.gov. https://www.bop.gov/inmates/visiting.jsp
12. Sims S. The end of American prison visits: jails end face-to-face contact – and families suffer. the Guardian. Published December 9, 2017. https://www.theguardian.com/us-news/2017/dec/09/skype-for-jailed-video-calls-prisons-replace-in-person-visits
13. Types of Visits - Visitation Information. Visitation Information. Published July 9, 2024. https://www.cdcr.ca.gov/visitors/types-of-visits/

14. Norfolk County Sheriff's Office | Visiting. Norfolksheriff.com. Published 2025. Accessed February 25, 2025. https://www.norfolksheriff.com/visitor-information/visiting
15. Duwe, G., & Clark, V. (2013). Blessed Be the Social Tie That Binds: The Effects of Prison Visitation on Offender Recidivism. Criminal Justice Policy Review, 24(3), 271-296.
16. McNeeley, S., & Duwe, G. (2019). Keep Your Friends Close and Your Enemies Closer: Prison Visitation, Spatial Distance, and Concentrated Disadvantage of Visitor Neighborhoods, and Offender Recidivism. Justice Quarterly, 37(4), 571–589.
17. Understanding the pros and cons of video visitation systems in corrections. Corrections1. https://www.corrections1.com/products/facility-products/inmate-visitation/articles/understanding-the-pros-and-cons-of-video-visitation-systems-in-corrections-ppCagR6HnVXV5hWV/
18. Kaste M. Jails are embracing video-only visits, but some experts say screens aren't enough. NPR. Published December 20, 2023. https://www.npr.org/2023/12/20/1219692753/jails-are-embracing-video-only-visits-but-some-experts-say-screens-arent-enough
19. Dallaire DH, Wilson LC, Ciccone A. Caring for Children of Incarcerated Parents. Pediatrics in Review. 2022;43(11):631-641. Accessed August 20, 2024. https://publications.aap.org/pediatricsinreview/article-abstract/43/11/631/189751/Caring-for-Children-of-Incarcerated-Parents?redirectedFrom=fulltext.
20. Prison Policy Initiative. Separation by Bars and Miles: Visitation in state prisons. Published October 2015. Accessed September 15, 2024. https://www.prisonpolicy.org/reports/prisonvisits.html
21. Bales WD, Mears DP. Inmate Social Ties and the Transition to Society: Does Visitation Reduce Recidivism? Office of Justice Programs. Accessed August 20, 2024.https://www.ojp.gov/ncjrs/virtual-library/abstracts/inmate-social-ties-and-transition-society-does-visitation-reduce.
22. Patrice A. Fulcher, The Double-Edged Sword of Prison Video Visitation: Claiming to Keep Families Together While Furthering the Aims of the Prison Industrial Complex, 9 Fla. A&M U. L. Rev. (2013). Available at: http://commons.law.famu.edu/famulawreview/vol9/iss1/5
23. Denied the "right to hug": In many U.S. jails, video calls are the only way detainees can see loved ones. Accessed August 23, 2024. https://www.nbcnews.com/investigations/many-us-jails-video-calls-are-only-way-detainees-can-see-loved-ones-rcna158048
24. Equal Justice Initiative. Jails and Prisons Are Ending In-Person Visits. EJI. Published December 21, 2017. Accessed September 15, 2024. https://eji.org/news/jails-and-prisons-ending-in-person-visits/
25. Video Visiting in Corrections: Benefits, Limitations, and Implementation Considerations | National Institute of Corrections. Accessed August 23, 2024. https://nicic.gov/resources/nic-library/all-library-items/video-visiting-corrections-benefits-limitations-and
26. Tartaro, C., & Levy, M. P. (2017). Visitation Modality Preferences for Adults Visiting Jails. The Prison Journal, 97(5), 562-584.
27. Murdoch, D. J., & King, L. L. (2019). 'Not feeling like a caged animal:' prisoner perceptions of a remote video visitation system. Journal of Crime and Justice, 43(2), 212–227.
28. Prison Policy Initiative. Prison Visitation Policies: A Fifty-State Survey. Prison Policy Initiative. Accessed August 20, 2024. https://www.prisonpolicy.org/visitation/.
29. California Assembly Bill 2709: Prison Visitation. Session Year 2023-2024. Digital Democracy. Accessed September 8, 2024. https://digitaldemocracy.calmatters.org/bills/ca_202320240ab2709.

RELEVANT AMA POLICY

Improving Care to Lower the Rate of Recidivism H-430.978
Our AMA will advocate and encourage federal, state, and local legislators and officials to increase access to community mental health facilities, community drug rehabilitation facilities, appropriate clinical care, and social support services (e.g., housing, transportation, employment, etc.) to meet the needs of indigent, homeless, and released previously incarcerated persons.

Our AMA will advocate and encourage federal, state, and local legislators and officials to advocate prompt reinstatement in governmental medical programs and insurance for those being released from incarceration facilities. [Res. 244, A-23; Reaffirmed: CSAPH Rep. 07, A-24]

Reducing the Burden of Incarceration on Public Health D-430.992
Our AMA will support efforts to reduce the negative health impacts of incarceration, such as: (1) Implementation and incentivization of adequate funding and resources towards indigent defense systems. (2) Implementation of practices that promote access to stable employment and laws that ensure employment non-discrimination for workers with previous non-felony criminal records. (3) Housing support for formerly incarcerated people, including programs that facilitate access to immediate housing after release from carceral settings.

Our AMA will partner with public health organizations and other interested stakeholders to urge Congress, the Department of Justice, the Department of Health and Human Services, and state officials and agencies to minimize the negative health effects of incarceration by supporting programs that facilitate employment at a living wage, and safe, affordable housing opportunities for formerly incarcerated individuals, as well as research into alternatives to incarceration. [Res. 902, I-22]

Standards of Care for Inmates of Correctional Facilities H-430.997
Our AMA believes that correctional and detention facilities should provide medical, psychiatric, and substance use disorder care that meets prevailing community standards, including appropriate referrals for ongoing care upon release from the correctional facility in order to prevent recidivism. [Res. 60, A-84; Reaffirmed by CLRPD Rep. 3 - I-94; Amended: Res. 416, I-99; Reaffirmed: CEJA Rep. 8, A-09; Reaffirmation I-09; Modified in lieu of Res. 502, A-12; Reaffirmation: I-12; Modified: CSAPH Rep. 1, A-22]

AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES

Resolution: 403
(A-25)

Introduced by: American Association of Public Health Physicians

Subject: Promoting Evidence-Based Responses to Measles and Misuse of Vitamin A

Referred to: Reference Committee D

Whereas, there is a measles outbreak of unprecedented scale in the United States[1] in 2025, with nearly 600 confirmed cases in Texas and outbreaks in other states the vast majority of cases occurring in unvaccinated individuals[2] and three reported deaths among unvaccinated individuals, including two children and one adult[3]; and

Whereas, the measles, mumps and rubella (MMR) vaccine is highly effective, providing approximately 93% protection against measles with a single dose and 97% protection with two doses, making it by far the most effective method of preventing measles[4]; and

Whereas, extensive scientific research has found no evidence linking the MMR vaccine to autism[5]; and

Whereas, vitamin A supplementation at the proper dosage can reduce the risk of morbidity in children with measles, especially among those with severe measles disease or vitamin A deficiency, but does not cure or prevent the disease[6]; and

Whereas, there is also evidence that vitamin A supplementation in the treatment of measles in higher-income countries, such as the United States, may not show great benefit[7]; and

Whereas, there is an immense amount of misinformation regarding the prevention, treatment, and cure of measles being spread by both members of the public and some physicians[8,9]; and

Whereas, recent cases of severe liver injury from vitamin A toxicity have been reported, potentially resulting from misinformation about measles treatments[10,11]; therefore be it

RESOLVED, that our American Medical Association will make and widely distribute a public statement to actively counter misinformation regarding vitamin A as more than an adjunct for treatment, particularly claims that suggest it can replace vaccination, cure the disease, or be safely used as a self-treatment practice (Directive to Take Action); and be it further

RESOLVED, that our AMA will educate the public and healthcare professionals about the proper role of vitamin A in measles management—specifically, that while it may reduce the risk of measles-related complications, including but not limited to blindness, it neither prevents nor cures measles (Directive to Take Action); and be it further

RESOLVED, that our AMA will advocate for the use of vitamin A in the context of measles only under the supervision of a competent healthcare professional (Directive to Take Action); and be it further

RESOLVED, that our AMA will continue to support the use of FDA-licensed measles vaccines, currently measles-mumps-rubella (MMR) and measles-mumps-rubella varicella (MMRV) as the most effective method of preventing measles and will promote efforts to improve public confidence in immunization through transparent, science-based communication. (New HOD Policy)

Fiscal Note: (Assigned by HOD)

Received: 4/21/25

REFERENCES

1. Measles Cases and Outbreaks. Centers for Disease Control and Prevention. Updated April 18, 2025. Accessed April 18, 2025. Available from: https://www.cdc.gov/measles/data-research/index.html
2. Measles Outbreak – April 18, 2025. Texas Department of State Health Services. Published April 18, 2025. Accessed April 18, 2025. Available from: https://www.dshs.texas.gov/news-alerts/measles-outbreak-2025
3. Shastri D. Texas nears 500 measles cases; US now has three measles-related deaths. NBC 5 Dallas-Fort Worth. Published April 7, 2025.
4. Measles Vaccine Recommendations. Centers for Disease Control and Prevention. Updated September 20, 2024. Accessed April 18, 2025. Available from: https://www.cdc.gov/measles/hcp/vaccine-considerations/index.html
5. DeStefano, F., & Shimabukuro, T. T. (n.d.). The MMR vaccine and autism. Immunization Safety Office, Division of Healthcare Quality Promotion, National Center for Emerging and Zoonotic Infectious Diseases, Centers for Disease Control and Prevention. Available from: https://doi.org/10.1146/annurev-virology-092818-015515
6. Huiming Y, Smith KR, Goldblatt E. Vitamin A for treating measles in children. Cochrane Database Syst Rev. 2005;(4):CD001479. doi:10.1002/14651858.CD001479.pub3.
7. Barlow RS, Minniti CP, Marcuse EK. Vitamin A in children hospitalized for measles in a high-income country. Pediatr Infect Dis J. 2021 Aug 1;40(8):723-729. doi: 10.1097/INF.0000000000003156
8. American Academy of Pediatrics. Fact-checked: Vaccines are safe, effective, and not linked to autism. AAP.org. Published 2024. Accessed April 18, 2025. Available from: https://www.aap.org/en/news-room/fact-checked/fact-checked-vaccines-safe-and-effect-no-link-to-autism/#:~:text=%E2%80%9CMultiple%20studies%20from%20around%20the,worst%20measles%20outbreaks%20in%20decades.
9. De Serres G, Markowski F, Toth E, et al. Largest measles epidemic in North America in a decade—Quebec, Canada, 2011: contribution of susceptibility, serendipity, and superspreading events. J Infect Dis. 2013;207(6):990-998. doi:10.1093/infdis/jis923.
10. Alltucker K. Texas patients treated for vitamin A toxicity after measles hospitalization. USA Today. Published April 4, 2025. Accessed April 18, 2025.
11. MSN News Staff. West Texas children treated for vitamin A toxicity after measles hospitalizations. MSN News. Published April 4, 2025. Accessed April 18, 2025.

RELEVANT AMA POLICY

Complete and Prompt Reporting of Measles (Rubeola) H-440.995
Our AMA: (1) encourages and requests all physicians and others charged with the responsibility for reporting cases of measles to report them promptly to the local and state public health officials; and (2) encourages both public health officials and those in the private practice of medicine to intensify and expand their efforts at immunization of persons susceptible to measles whenever second or successive generation cases of measles are detected in a locality.
Citation: Res. 108, A-73; Reaffirmed: CLRPD Rep. C, A-89; Reaffirmed: Sunset Report, A-00; Modified: CSAPH Rep. 1, A-10; Reaffirmed: CSAPH Rep. 01, A-20;

Measles Vaccine H-440.956
It is the policy of the AMA (1) to encourage state medical societies through their state journals and other publications to campaign for measures that improve the delivery and storage of measles vaccine to inner city and other vulnerable populations; (2) to promote the development of guidelines for the proper vaccine storage and shipment to lower the incidence of measles vaccine failure; and (3) to use its publications to inform residents and house staff training programs and medical schools about appropriate measures to ensure that house staff and medical students have adequate immunity to measles.
Citation: Sub. Res. 192, A-90; Reaffirmed: Sunset Report, I-00; Reaffirmed: CSAPH Rep. 1, A-10; Reaffirmed: CSAPH Rep. 01, A-20;

Routine Immunization Against Measles in Children H-440.952
Our American Medical Association endorses recommendations of both the American Academy of Pediatrics and the Centers for Disease Control for a second dose of measles vaccine (in the form of MMR) for children.
Citation: Res. 85, I-90; Modified: Sunset Report, I-00; Modified: CSAPH Rep. 1, A-10; Reaffirmed: CSAPH Rep. 01, A-20;

Immunization Programs for Children H-440.991
...organizations to promote appropriate immunization programs for children throughout the world, especially in such critical and cost-effective areas as the prevention of poliomyelitis and measles; and (3) expresses the need for private and public research institutions to help develop more technically advanced products, such as new heat stable…
Policy for Physician Entrepreneur Activity H-140.926
Members of the AMA shall not: (1) coerce their patients to purchase medications, vitamins, nutritional supplements or medical devices from the physician's practice; and (2) recruit their patients to participate in marketing programs in which the...Res. 7 , A-99; Reaffirmed: CEJA Rep. 8, A-09; Reaffirmed: CEJA Rep. 03, A-19;

AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES

Resolution: 404
(A-25)

Introduced by: American College of Cardiology, Society of Cardiovascular Computed Tomography

Subject: Improving Public Awareness of Lung Cancer Screening and CAD in Chronic Smokers

Referred to: Reference Committee D

Whereas, lung cancer and atherosclerotic heart disease, leading causes of death and disability in America, share many demographics and predispositions, and

Whereas, both lung cancer and atherosclerotic heart disease are increasing in incidence and effective treatments are impaired by late diagnosis of advanced disease, and

Whereas, the American Cancer Society updated lung cancer screening guidelines with a non-contrast Chest CT to include adults aged 50-80 years with a 20+ pack year smoking history in November 2023[1], and lung cancer screening among chronic smokers has been shown to save lives in both large-scale randomized trials and real-world settings[2-4], and

Whereas, among smokers, the prevalence of lung cancer related mortality and cardiovascular mortality was similar in the NLST trial (22.9% vs. 26.1%)[2] and in the NELSON trial (18.4% vs. 21.8%)[3] respectively; smoking increased the risk of coronary heart disease by 2 to 4 times[5-6] and causes one of every fourth death from cardiovascular disease[7], and

Whereas, coronary artery disease on low dose lung cancer screening CT scans can be detected by the presence and burden of coronary artery calcification (CAC). The prevalence of CAC on low-dose lung cancer screening CT is 53%, with 15% of patients having severe CAC on visual estimation[8]. Of those who qualified for statin primary prevention, 56.8% did not report a history of statin use[9]. Compared with chronic smokers with CAC score of zero, patients with CAC score of >300 are two to five times more likely to have incident ASCVD events[10]. Detection of CAC on low-dose CT can result in change in management of 20% of patients[11], and

Whereas, CAC is a marker of coronary atherosclerosis and represents its burden. Its role in cardiac risk stratification has been established in multiple large population studies[12-16]. Studies have shown that patients undergoing CAC assessment are more likely to have improved compliance with preventive medications (3-fold greater likelihood of aspirin and statin usage)[13] and superior coronary artery disease risk factors control[14]. CAC can be easily detected on non-contrast chest CT scans performed for various reasons; and

Whereas, the improvement in machine learning has improved detection of CAC on non-contrast chest CT[17-18], thereby improving chances of detection and early intervention in such high-risk patients[19]. Detection of CAC on non-contrast non-gated chest CT scans performed for non-cardiac reasons can provide an opportunity for an aggressive and early preventive measure in such high-risk patients, and

Whereas, lung cancer screening remains underutilized with only 4.5% of the eligible population in the US received lung cancer screening in 2022[20] and there is a critical need to increase public awareness regarding the value of undergoing a non-contrast chest CT to detect lung cancer and coronary artery disease. Although the current focus of lung cancer screening is for early detection of lung cancer, the same scans can be used to detect CAC, a marker of coronary atherosclerosis and as such, can provide an opportunity for an aggressive and early preventive cardiovascular measure in such high-risk patients. Such an approach may help to improve lung cancer and cardiovascular outcomes in such patients through early detection and intervention; therefore be it

RESOLVED, that our American Medical Association will partner with other professional and public health organizations as well as key stakeholders in cardiology, pulmonology, oncology, and imaging specialties to increase awareness amongst chronic smokers (who would benefit from appropriate lung cancer screening) regarding their risk for both lung cancer and coronary artery disease and encourage their participation in screening programs through a joint public campaign effort (Directive to Take Action); and be it further

RESOLVED, that our AMA promote physician education and awareness regarding the value of chest CT in detecting both lung cancer and calcified atherosclerotic plaque and encourage reporting the extent of coronary artery calcification in non-contrast chest CT studies performed as a part of lung cancer screening program. (Directive to Take Action)

Fiscal Note: $43,166

Received: 4/22/25

REFERENCES

1. Wolf AMD, Oeffinger KC, Shih TY, Walter LC, Church TR, Fontham ETH, Elkin EB, Etzioni RD, Guerra CE, Perkins RB, Kondo KK, Kratzer TB, Manassaram-Baptiste D, Dahut WL, Smith RA. Screening for lung cancer: 2023 guideline update from the American Cancer Society. CA Cancer J Clin. 2024 Jan-Feb;74(1):50-81. doi: 10.3322/caac.21811. Epub 2023 Nov 1. PMID: 37909877.
2. Aberle, D. R., et al. Reduced lung-cancer mortality with low-dose computed tomographic screening. N Engl J Med. 2011;365(5), 395-409.
3. de Koning, H. J., et al. Reduced Lung-Cancer Mortality with Volume CT Screening in a Randomized Trial. New England Journal of Medicine. 2020;382(6), 503-513.
4. Potter, A. L., et al. Association of computed tomography screening with lung cancer stage shift and survival in the United States: quasi-experimental study. Bmj. 2022;376, e069008.
5. U.S. Department of Health and Human Services. The Health Consequences of Smoking—50 Years of Progress: A Report of the Surgeon General. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2014 [accessed 2017 Apr 20].
6. U.S. Department of Health and Human Services. Reducing the Health Consequences of Smoking: 25 Years of Progress. A Report of the Surgeon General. Rockville (MD): U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 1989 [accessed 2017 Apr 20].
7. U.S. Department of Health and Human Services. A Report of the Surgeon General. How Tobacco Smoke Causes Disease: What It Means to You. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2010 [accessed 2022 Feb 7].
8. Park C, Lee BC, Jeong WG, Park WJ, Jin GY, Kim YH. Coronary Artery Calcification on Low-Dose Lung Cancer Screening CT in South Korea: Visual and Artificial Intelligence-Based Assessment and Association With Cardiovascular Events. AJR Am J Roentgenol. 2024 May;222(5):e2430852.
9. Ruparel M, Quaife SL, Dickson JL, Horst C, Burke S, Taylor M, Ahmed A, Shaw P, Soo MJ, Nair A, Devaraj A, O'Dowd EL, Bhowmik A, Navani N, Sennett K, Duffy SW, Baldwin DR, Sofat R, Patel RS, Hingorani A, Janes SM. Evaluation of cardiovascular risk in a lung cancer screening cohort. Thorax. 2019 Dec;74(12):1140-1146.
10. Leigh A, McEvoy JW, Garg P, Carr JJ, Sandfort V, Oelsner EC, Budoff M, Herrington D, Yeboah J. Coronary Artery Calcium Scores and Atherosclerotic Cardiovascular Disease Risk Stratification in Smokers. JACC Cardiovasc Imaging. 2019 May;12(5):852-861.
11. Mendoza DP, Kako B, Digumarthy SR, Shepard JO, Little BP. Impact of Significant Coronary Artery Calcification Reported on Low-Dose Computed Tomography Lung Cancer Screening. J Thorac Imaging. 2020 Mar;35(2):129-135.

12. Detrano R, Guerci AD, Carr JJ, Bild DE, Burke G, Folsom AR, Liu K, Shea S, Szklo M, Bluemke DA, O'Leary DH, Tracy R, Watson K, Wong ND, Kronmal RA. Coronary calcium as a predictor of coronary events in four racial or ethnic groups. N Engl J Med. 2008 Mar 27;358(13):1336-45.
13. Taylor AJ, Bindeman J, Feuerstein I, Le T, Bauer K, Byrd C, Wu H, O'Malley PG. Community-based provision of statin and aspirin after the detection of coronary artery calcium within a community-based screening cohort. J Am Coll Cardiol. 2008 Apr 8;51(14):1337-41.
14. Rozanski A, Gransar H, Shaw LJ, Kim J, Miranda-Peats L, Wong ND, Rana JS, Orakzai R, Hayes SW, Friedman JD, Thomson LE, Polk D, Min J, Budoff MJ, Berman DS. Impact of coronary artery calcium scanning on coronary risk factors and downstream testing the EISNER (Early Identification of Subclinical Atherosclerosis by Noninvasive Imaging Research) prospective randomized trial. J Am Coll Cardiol. 2011 Apr 12;57(15):1622-32.
15. Elias-Smale SE, Proença RV, Koller MT, Kavousi M, van Rooij FJ, Hunink MG, Steyerberg EW, Hofman A, Oudkerk M, Witteman JC. Coronary calcium score improves classification of coronary heart disease risk in the elderly: the Rotterdam study. J Am Coll Cardiol. 2010 Oct 19;56(17):1407-14.
16. Miedema MD, Dardari ZA, Nasir K, Blankstein R, Knickelbine T, Oberembt S, Shaw L, Rumberger J, Michos ED, Rozanski A, Berman DS, Budoff MJ, Blaha MJ. Association of Coronary Artery Calcium With Long-term, Cause-Specific Mortality Among Young Adults. JAMA Netw Open. 2019 Jul 3;2(7):e197440.
17. Peng AW, Dudum R, Jain SS, Maron DJ, Patel BN, Khandwala N, Eng D, Chaudhari AS, Sandhu AT, Rodriguez F. Association of Coronary Artery Calcium Detected by Routine Ungated CT Imaging With Cardiovascular Outcomes. J Am Coll Cardiol. 2023 Sep 19;82(12):1192-1202.
18. Miller RJH, Killekar A, Shanbhag A, Bednarski B, Michalowska AM, Ruddy TD, Einstein AJ, Newby DE, Lemley M, Pieszko K, Van Kriekinge SD, Kavanagh PB, Liang JX, Huang C, Dey D, Berman DS, Slomka PJ. Predicting mortality from AI cardiac volumes mass and coronary calcium on chest computed tomography. Nat Commun. 2024 Mar 29;15(1):2747.
19. Parsa S, Saleh A, Raygor V, Hoeting N, Rao A, Navar AM, Rohatgi A, Kay F, Abbara S, Khera A, Joshi PH. Measurement and Application of Incidentally Detected Coronary Calcium: JACC Review Topic of the Week. J Am Coll Cardiol. 2024 Apr 23;83(16):1557-1567.
20. State of Lung Cancer | Key Findings | American Lung Association. https://www.lung.org/research/state-of-lung-cancer/key-findings

AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES

Resolution: 405
(A-25)

Introduced by: American College of Preventive Medicine

Subject: Health Warning Labels on Alcoholic Beverage Containers

Referred to: Reference Committee D

Whereas, alcohol use is a leading risk factor for premature death and disability[1]; and

Whereas, 1 in 8 deaths among U.S. adults aged 20-64 are attributable to alcohol use[1]; and

Whereas, the International Agency for Research on Cancer (IARC) has classified alcoholic beverages as a group 1 carcinogen since 1988[2]; and

Whereas, alcohol is the third leading modifiable risk factor for cancer, behind only tobacco and excess weight[3]; and

Whereas, even low levels of alcohol consumption can increase cancer risk, with no safe level of consumption[4,5]; and

Whereas, only 1 in 3 Americans are aware that alcohol use increases the risk of cancer[6,7]; and

Whereas, in 2017-18, a real-world alcohol warning label experiment in Canada found that the warning labels, which included a cancer warning, were associated with a 6.6% decrease in alcohol sales, increased recall of national drinking guidelines, and increased recall of the alcohol-cancer association[8-10]; and

Whereas, American Medical Association policy already supports health warning labels on containers of tobacco, a known carcinogen[11]; and

Whereas, a recent review published in 2022 found that there is good public support for alcohol warning labels[12]; and

Whereas, the World Health Organization published a 2021 policy brief recommending health warning labels on alcoholic beverages[13]; and

Whereas, the US Surgeon General has recommended updating health warning labels on alcohol containers to include a cancer risk warning and to be more visible, prominent, and effective in improving knowledge about the relationship between alcohol and cancer[14]; and

Whereas, labels displaying the number of standard drinks in the container and national dietary guidelines for alcohol use effectively increase consumer awareness of these components[10,15-21]; and

Whereas, a recent review on alcohol warning label effectiveness concluded there was evidence to support the use of large label size, contrasting colors, large text size and prominent position of the label on the product[22]; and

Whereas, the Pan American Health Organization recommends that alcohol warning labels be accompanied by graphics[23]; and

Whereas, the FDA sets requirements for nutritional labelling including requirements for sufficient lettering contrast, prominent font size and legible text[24]; therefore be it

RESOLVED, that our American Medical Association support regulations that mandate alcoholic beverage containers to display the number of standard drinks in the container, paired with national dietary guidelines for alcohol use (New HOD Policy); and be it further

RESOLVED, that our AMA support regulations that ensure alcohol containers have labels which are large in size, use contrasting colors, use large text, have accompanying graphics, and display in the label in a prominent position. (New HOD Policy)

Fiscal Note: Minimal – less than $1,000

Received: 04/21/25

REFERENCES

1. Esser MB, Leung G, Sherk A, et al. Estimated Deaths Attributable to Excessive Alcohol Use Among US Adults Aged 20 to 64 Years, 2015 to 2019. *JAMA Netw Open*. Nov 1 2022;5(11):e2239485. doi:10.1001/jamanetworkopen.2022.39485
2. Alcohol drinking. *IARC Monogr Eval Carcinog Risks Hum*. 1988;44:1-378.
3. Islami F, Goding Sauer A, Miller KD, et al. Proportion and number of cancer cases and deaths attributable to potentially modifiable risk factors in the United States. *CA Cancer J Clin*. Jan 2018;68(1):31-54. doi:10.3322/caac.21440
4. No level of alcohol consumption is safe for our health. January 4, 2023, 2023. https://www.who.int/europe/news/item/04-01-2023-no-level-of-alcohol-consumption-is-safe-for-our-health
5. Alcohol use and burden for 195 countries and territories, 1990-2016: a systematic analysis for the Global Burden of Disease Study 2016. *Lancet*. Sep 22 2018;392(10152):1015-1035. doi:10.1016/s0140-6736(18)31310-2
6. Seidenberg AB, Wiseman KP, Eck RH, Blake KD, Platter HN, Klein WMP. Awareness of Alcohol as a Carcinogen and Support for Alcohol Control Policies. *Am J Prev Med*. Feb 2022;62(2):174-182. doi:10.1016/j.amepre.2021.07.005
7. Kiviniemi MT, Orom H, Hay JL, Waters EA. Limitations in American adults' awareness of and beliefs about alcohol as a risk factor for cancer. *Prev Med Rep*. Sep 2021;23:101433. doi:10.1016/j.pmedr.2021.101433
8. Hobin E, Weerasinghe A, Vallance K, et al. Testing Alcohol Labels as a Tool to Communicate Cancer Risk to Drinkers: A Real-World Quasi-Experimental Study. *J Stud Alcohol Drugs*. Mar 2020;81(2):249-261. doi:10.15288/jsad.2020.81.249
9. Zhao J, Stockwell T, Vallance K, Hobin E. The Effects of Alcohol Warning Labels on Population Alcohol Consumption: An Interrupted Time Series Analysis of Alcohol Sales in Yukon, Canada. *J Stud Alcohol Drugs*. Mar 2020;81(2):225-237.
10. Schoueri-Mychasiw N, Weerasinghe A, Vallance K, et al. Examining the Impact of Alcohol Labels on Awareness and Knowledge of National Drinking Guidelines: A Real-World Study in Yukon, Canada. *J Stud Alcohol Drugs*. Mar 2020;81(2):262-272. doi:10.15288/jsad.2020.81.262
11. American Medical Association. Tobacco Product Labeling H-4959892019.
12. Giesbrecht N, Reisdorfer E, Rios I. Alcohol Health Warning Labels: A Rapid Review with Action Recommendations. *Int J Environ Res Public Health*. Sep 16 2022;19(18)doi:10.3390/ijerph191811676
13. World Health Organization. *Health warning labels on alcoholic beverages: opportunities for informed and healthier choices*. 2021. https://www.who.int/publications/i/item/9789240044449
14. Office of the U.S. Surgeon General. *Alcohol and Cancer Risk: The U.S. Surgeon General's Advisory*. 2025. https://www.hhs.gov/surgeongeneral/priorities/alcohol-cancer
15. Naimi T, Giesbrecht N, Stockwell T, et al. *Evidence-Based Recommendations for Labelling of Alcohol Products in Canada* 2022. https://www.uvic.ca/research/centres/cisur/assets/docs/cape/cape-evidenced-based-recommendations-for-labelling-of-alcohol-products-in-canada.pdf
16. Osiowy M, Stockwell T, Zhao J, Thompson K, Moore S. How much did you actually drink last night? An evaluation of standard drink labels as an aid to monitoring personal consumption. *Addiction Research & Theory*. 2014;23(2):163-169. doi:https://doi.org/10.3109/16066359.2014.955480
17. Hobin E, Vallance K, Zuo F, et al. Testing the Efficacy of Alcohol Labels with Standard Drink Information and National Drinking Guidelines on Consumers' Ability to Estimate Alcohol Consumption. *Alcohol Alcohol*. 2018;53(1):3-11. doi:10.1093/alcalc/agx052
18. Stockwell T, Blaze-Temple D, Walker C. A test of the proposal to label containers of alcoholic drink with alcohol content in Standard Drinks. *Health Promotion International*. 1991;6(3):207-215. doi:https://doi.org/10.1093/heapro/6.3.207
19. Stockwell T, Blaze-Temple D, Walker C. The effect of "standard drink" labelling on the ability of drinkers to pour a "standard drink." *Australian Journal of Public Health*. 2010;15(1):56-63. doi:https://doi.org/10.1111/j.1753-6405.1991.tb00011.x
20. Blackwell AKM, Drax K, Attwood AS, Munafò MR, Maynard OM. Informing drinkers: Can current UK alcohol labels be improved?. *Drug Alcohol Depend*. 2018;192:163-170. doi:10.1016/j.drugalcdep.2018.07.032
21. Schoueri-Mychasiw N, Weerasinghe A, Stockwell T, et al. Use as directed: do standard drink labels on alcohol containers help consumers drink (ir)responsibly? Real-world evidence from a quasi-experimental study in Yukon, Canada. *Drug Alcohol Rev*. 2021;40(2):247-257. doi:10.1111/dar.13165

22. Kokole D, Anderson P, Jané-Llopis E. Nature and Potential Impact of Alcohol Health Warning Labels: A Scoping Review. *Nutrients*. 2021;13(9):3065. Published 2021 Aug 31. doi:10.3390/nu13093065
23. Pan American Health Organization. *Alcohol Warning Labels*. 2022. https://www.paho.org/en/documents/alcohol-series-alcohol-warning-labels
24. Food and Drug Administration. *A Food Labeling Guide*. 2013. https://www.fda.gov/files/food/published/Food-Labeling-Guide-%28PDF%29.pdf

RELEVANT AMA POLICY

Alcohol Consumption and Health H-30.934
Our AMA recognizes that alcohol consumption at any level, not just heavy alcohol use or addictive alcohol use, is a modifiable risk factor for cancer. [Res. 516, A-19].

AMA Policy Consolidation: Labeling Advertising, and Promotion of Alcoholic Beverages H-30.940
Our AMA (1.) (a) Supports accurate and appropriate labeling disclosing the alcohol content of all beverages, including so-called "nonalcoholic" beer and other substances as well, including over-the-counter and prescription medications, with removal of "nonalcoholic" from the label of any substance containing any alcohol; (b) supports efforts to educate the public and consumers about the alcohol content of so-called "nonalcoholic" beverages and other substances, including medications, especially as related to consumption by minors; (c) urges the Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) and other appropriate federal regulatory agencies to continue to reject proposals by the alcoholic beverage industry for authorization to place beneficial health claims for its products on container labels; and (d) urges the development of federal legislation to require nutritional labels on alcoholic beverages in accordance with the Nutritional Labeling and Education Act.... [CSA Rep. 1, A-04 Reaffirmation A-08 Reaffirmed: CSAPH Rep. 01, A-18 Modified: Res. 427, A-22 Modified: Res. 918, I-22].

Setting Domestic and International Public Health Prevention Targets for Per Capita Alcohol Consumption as a Means of Reducing the Burden on Non-Communicable Diseases on Health Status H-30.937
Our AMA will: (1) continue to address the role of alcohol use on health status and the impact of behaviorally-associated chronic illnesses (including obesity, diabetes, heart disease, chronic respiratory diseases, and many cancers) on the overall burden of disease and the costs of health care services in America; (2) encourage federal health services planning agencies and public health authorities to address the role of alcohol and tobacco consumption on health and to promote environmental interventions including evidence based tobacco control and alcohol control policies to improve the health status of Americans; and (3) encourage the World Health Organization to continue its work on the impact of Non Communicable Diseases (NCDs) on health status and to include targets for reduced per capita alcohol consumption among its major proposed interventions in developed and developing nations to reduce the incidence of, prevalence of, and rates of disability and premature deaths attributable to chronic non-communicable diseases. [Res. 413, A-12 Reaffirmation: A-18].

Fetal Alcohol Syndrome Warning Legislation H-420.981
The AMA supports appropriate mechanisms, including legislation, intended to increase public awareness of Fetal Alcohol Syndrome. [Sub. Res. 76, I-87 Reaffirmed: Sunset Report, I-97 Reaffirmed: CSAPH Rep. 3, A-07 Reaffirmed: CSAPH Rep. 01, A-17].

Tobacco Product Labeling H-495.989
Our AMA: (1) supports requiring more explicit and effective health warnings, such as graphic warning labels, regarding the use of tobacco (and alcohol) products (including but not limited to, cigarettes, smokeless tobacco, chewing tobacco, and hookah/water pipe tobacco, and ingredients of tobacco products sold in the United States); (2) encourages the Food and Drug Administration, as required under Federal law, to revise its rules to require color graphic warning labels on all cigarette packages depicting the negative health consequences of smoking; (3) supports legislation or regulations that require (a) tobacco companies to accurately label their products, including electronic nicotine delivery systems (ENDS), indicating nicotine content in easily understandable and meaningful terms that have plausible biological significance; (b) picture-based warning labels on tobacco products produced in, sold in, or exported from the United States; (c) an increase in the size of warning labels to include the statement that smoking is ADDICTIVE and may result in DEATH; and (d) all advertisements for cigarettes and each pack

of cigarettes to carry a legible, boxed warning such as: "Warning: Cigarette Smoking causes CANCER OF THE MOUTH, LARYNX, AND LUNG, is a major cause of HEART DISEASE AND EMPHYSEMA, is ADDICTIVE, and may result in DEATH. Infants and children living with smokers have an increased risk of respiratory infections and cancer;" (4) urges the Congress to require that: (a) warning labels on cigarette packs should appear on the front and the back and occupy twenty-five percent of the total surface area on each side and be set out in black-and-white block; (b) in the case of cigarette advertisements, warning labels of cigarette packs should be moved to the top of the ad and should be enlarged to twenty-five percent of total ad space; and (c) warning labels following these specifications should be included on cigarette packs of U.S. companies being distributed for sale in foreign markets; and (5) supports requiring warning labels on all ENDS products, starting with the warning that nicotine is addictive [CSA Rep. 3, A-04 Modified: Res. 402, A-13 Modified: Res. 925, I-16 Modified: Res. 428, A-19].

AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES

Resolution: 406
(A-25)

Introduced by: Academic Physicians Section

Subject: Call for Study: Should Petroleum-Powered Emergency Medical Services (EMS) Vehicles in Urban Service Areas be Replaced by Renewably-Powered Electric Vehicles?

Referred to: Reference Committee D

Whereas, a 2022 report from the Commonwealth Fund noted that the health care industry worldwide produces as much as 4.6% of all of global "greenhouse gas" (GHG) emissions (chiefly carbon dioxide, methane and ozone), while in the United States, the health care industry contributes about 8.5% of the nation's GHG emissions[1]; and

Whereas, GHG emissions since the onset of the "Industrial Revolution" are widely understood to have contributed to a progressively increased carbon dioxide (CO2) fraction of the air, and to a progressively increased average temperature of the surface of the Earth (long-term, non-human-induced cyclical fluctuations of Earth temperatures not due to human-induced GHG emissions, such as volcanic activity and other influences notwithstanding); and

Whereas, these elevated temperatures have contributed measurably to increased morbidity and mortality of human inhabitants of the Earth, not limited to residents of warmer climates and occupational groups such as outdoor laborers; and

Whereas, these elevated temperatures are also adversely impacting the natural environment upon which all life depends in ways too numerous to list in this proposed Resolution; and

Whereas, these elevated temperatures are also clearly associated with increased numbers of extreme weather events; and

Whereas, American Medical Association policy D-135.966, most recently modified in 2022, has declared climate change to be a public health crisis[2], such that the goal of 50% reduction in greenhouse gas emissions by 2030 and "carbon neutrality" by 2050 are goals endorsed by this policy; and

Whereas, ambulances contribute significantly to health care's GHG burden, because they are large, petroleum-powered vehicles; and

Whereas, delivery vehicles powered by renewable energy (electricity) are currently being deployed in urban areas by the delivery services UPS[2] and FedEx,[3] suggesting an opportunity exists for the health care sector to replace petroleum-powered ambulances with renewable energy-powered electric ambulances of a similar size to these delivery vehicles, at least in urban areas of the United States, as older petroleum-powered ambulances are retired from service; and

Whereas, UPS is committed to “carbon neutrality” by 2050,[2] with FedEx pursuing “carbon neutrality” by 2040,[3] inclusive of their large ambulance-sized delivery vehicles, which they are already deploying for home package delivery; and

Whereas, the wide availability of petroleum-powered electrical generators at hospitals and government buildings should make concerns moot that electric-powered urban ambulances would become non-operational during widespread electrical outages such as can transiently occur with hurricanes, tornadoes, derechos and other large weather events; and

Whereas, the 15-20 minutes that an ambulance is out of service when parked at a hospital’s ambulance garage during the delivery of a patient to a hospital represents an opportunity for electric-powered ambulances to recharge their batteries, once ambulance bays became equipped with rapid recharging stations; and

Whereas, the National Health Service of Great Britain has moved beyond study of the matter, and has begun to purchase or lease only “Low Emission” and “Ultra Low Emission” vehicles as of 2021, with the goal that 90% of the NHS fleet will be low-emission or ultra-low emissions vehicles by 2028, with this specifically including electric-powered ambulances[4]; therefore be it

RESOLVED, that our American Medical Association study the potential feasibility that our nation’s urban ambulance fleet be replaced with renewably-powered electric vehicles when current petroleum-powered EMS ambulances become retired from service, with a report back at the next meeting of the AMA House of Delegates (Directive to Take Action); and be it further

RESOLVED, that our AMA will forward the results of this study to health care journalists, hospital regulators, hospital executives, EMS system leaders, and other relevant parties, toward the eventual implementation of the findings and recommendations that are anticipated to be reached. (Directive to Take Action)

Fiscal Note: Modest – Between $4,000 - $5,000

Received: 2/28/2025

REFERENCES

1. Commonwealth Fund "Explainer". How the U.S. Health Care System Contributes to Climate Change. Issued April 9, 2022. https://www.commonwealthfund.org/publications/explainer/2022/apr/how-us-health-care-system-contributes-climate-change. Accessed March 15, 2024
2. United Parcel System. Delivering for Our Planet. https://about.ups.com/us/en/our-impact/ups-sustainability-and-social-impact-report/delivering-for-our-planet.html. Accessed March 15, 2024
3. Federal Express. FedEx Commits to Carbon-Neutral Operations by 2040. March 3, 2021. https://investors.fedex.com/news-and-events/investor-news/investor-news-details/2021/FedEx-Commits-to-Carbon-Neutral-Operations-by-2040/. Accessed March 15, 2024
4. NHS England. Delivering a "Net Zero" National Health Service. https://www.england.nhs.uk/greenernhs/wp-content/uploads/sites/51/2022/07/B1728-delivering-a-net-zero-nhs-july-2022.pdf. Accessed March 15, 2024

RELEVANT AMA POLICY

D-135.966 Declaring Climate Change a Public Health Crisis

1. Our AMA declares climate change a public health crisis that threatens the health and well-being of all individuals.
2. Our AMA will protect patients by advocating for policies that: (a) limit global warming to no more than 1.5 degrees Celsius, (b) reduce US greenhouse gas emissions aimed at a 50 percent reduction in emissions by 2030 and carbon neutrality by 2050, and (c) support rapid implementation and

incentivization of clean energy solutions and significant investments in climate resilience through a climate justice lens.

3. Our AMA will consider signing on to the Department of Health and Human Services Health Care Pledge or making a similar commitment to lower its own greenhouse gas emissions.
4. Our AMA encourages the health sector to lead by example in committing to carbon neutrality by 2050.
5. Our AMA will develop a strategic plan for how we will enact our climate change policies including advocacy priorities and strategies to decarbonize physician practices and the health sector with report back to the House of Delegates at the 2023 Annual Meeting.

AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES

Resolution: 407
(A-25)

Introduced by: American Thoracic Society, American College of Chest Physicians (CHEST)

Subject: Sleep Deprivation as a Public Health Crisis

Referred to: Reference Committee D

Whereas, over one-third (36.8%) of US adults are sleeping less than 7 hours per night, which is the minimum recommended amount of sleep for adults;[1] and

Whereas, the problem of sleep deprivation is growing; the percent of US adults with a short sleep duration is believed to have increased over the last 40-70 years[2]; data show that since 2013, the percent of females with sleep deprivation has increased from 32.6% (CI: 32.1%-33.1%) to 36% (35.6 - 36.5) and the percent of males with sleep deprivation has increased from 33.9% (33.3 - 34.4) to 37.5% (37.0 - 37.9)[1]; and

Whereas, epidemiologic survey data show that rates of sleep deprivation are highest across Southeastern, Appalachian and Mississippi Delta/Ozarks regions, as well as in several island states/territories, and higher in Black/African American Adults (CI: 45.4%-47.4%) than the overall population (35.8-36.4);[1] and

Whereas, evidence and expert consensus now strongly support a causal relationship from sleep deprivation and poor sleep towards chronic physical and mental health conditions;[3] and

Whereas, sleep is a determinant of physical health, contributing to cardiovascular and metabolic health, with sleep deprivation (under 5-6 hours per day) increasing the risk of hypertension, type 2 diabetes, other cardiovascular disease;[4] and with inappropriate sleep duration increasing the risk of coronary artery disease;[5] and with short sleep duration increasing the risk of obesity in children and adults;[6,7] and

Whereas, sleep impacts the neuroendocrine system and neuroplasticity and is a major determinant of neurocognitive health, with sleep deficiency leading to impacts on executive function, attention, and memory loss;[4] and pathophysiologic models linking poor sleep quality to the pathology of Alzheimer's Disease;[3] and

Whereas, sleep and mental illnesses are tightly associated, particularly depression and anxiety, with mounting evidence that mental health is a consequence of poor sleep and not just a symptom;[3,4] and

Whereas, inadequate sleep is associated with errors in executive function, attention, and task performance, leading to inadequate sleep being a leading cause of all types of vehicular accidents,[8] for which the AMA has instituted policy on drowsy driving as a major public health issue; and

Whereas, social determinants of poor sleep include psychosocial stressors and environmental factors, leading to racial/ethnic and socioeconomic disparities in sleep health;[3,4] and

Whereas, the rising intake of caffeine is considered a reason for increases in sleep deprivation over the last several decades;[9] however, more recently high caffeine beverages like sports drinks, energy drinks, and wellness beverages are correlated with reduced sleep duration and quality;[10] they are being heavily marketed for energy, focus, concentration, and productivity but with little known about the long-term impacts on public health; and

Whereas, sleep disruption has also been tied to diet and physical activity, as well as to sugar, nicotine, cannabis, and alcohol consumption;[10] the impact of emerging nicotine products and legalized cannabis on the epidemiology of sleep problems is unknown; and

Whereas, the emergence in the last decades of increased screen time through digital tools and social media are an increasing disruptor of sleep onset, quality, and duration;[3,11] and

Whereas, the American Heart Association expanded its “Simple 7” rules for heart health to “Essential 8” in 2022 to include sufficient sleep for children and adults to promote heart health and improve brain function and published the change in an AHA Presidential Advisory;[5,12] and

Whereas, increasing the proportion of adults, high school students, and children who get enough sleep are Healthy People 2030 objectives, with a goal of improving health, productivity, well-being, quality of life, and safety;[13] therefore be it

RESOLVED, that our American Medical Association recognizes the role of sleep health for all people, the contributions of sleep duration and quality on chronic health outcomes, mental health, and trauma, and the systemic drivers of modern living contributing towards poorer sleep (New HOD Policy); and be it further

RESOLVED, that our AMA declare sleep deprivation a public health crisis in the United States and to declare sleep health a public health priority (New HOD Policy); and be it further

RESOLVED, that our AMA support efforts to increase research into the socioeconomic, psychosocial, environmental, technologic, and commercial drivers of sleep deprivation, poor sleep quality, and shortened sleep duration (Directive to Take Action); and be it further

RESOLVED, that our AMA advocate for public health interventions and policies to improve sleep health. (Directive to Take Action)

Fiscal Note: Modest – between $1,000 - $5,000

Received: 4/22/25

REFERENCES

1. Centers of Disease Control and Prevention, Sleep. “FastStats: Sleep in Adults.” Updated May 15, 2024. Accessed April 1, 2025 at https://www.cdc.gov/sleep/data-research/facts-stats/adults-sleep-facts-and-stats.html.
2. Knutson KL, Van Cauter E, Rathouz PJ, DeLeire T, Lauderdale DS. Trends in the prevalence of short sleepers in the USA: 1975-2006. Sleep. 2010;33(1):37-45.
3. Hale L, Troxel W, Buysse DJ. Sleep Health: An Opportunity for Public Health to Address Health Equity. *Annu Rev Public Health*. 2020;41:81-99.
4. Kim B, Branas CC, Rudolph KE, Morrison CN, Chaix B, Troxel WM, Duncan DT. Neighborhoods and sleep health among adults: A systematic review. *Sleep Health.* 2022 June; 8(3): 322–333
5. Lloyd-Jones DM, Allen NB, Anderson CAM, et al. Life's Essential 8: Updating and Enhancing the American Heart Association's Construct of Cardiovascular Health: A Presidential Advisory From the American Heart Association. Circulation. 2022;146(5):e18-e43.
6. Wu Y, Zhai L, Zhang D. Sleep duration and obesity among adults: a meta-analysis of prospective studies. *Sleep Med*. 2014;15(12):1456-1462.

7. Wu Y, Gong Q, Zou Z, Li H, Zhang X. Short sleep duration and obesity among children: A systematic review and meta-analysis of prospective studies. *Obes Res Clin Pract*. 2017;11(2):140-150.
8. Goel N, Rao H, Durmer JS, Dinges DF. Neurocognitive consequences of sleep deprivation. *Semin Neurol*. 2009;29(4):320-339.
9. Clark I, Landolt HP. Coffee, caffeine, and sleep: A systematic review of epidemiological studies and randomized controlled trials. *Sleep Med Rev*. 2017;31:70-78.
10. Young DR, Sidell MA, Grandner MA, Koebnick C, Troxel W. Dietary behaviors and poor sleep quality among young adult women: watch that sugary caffeine!. *Sleep Health*. 2020;6(2):214-219.
11. Kinsella JE, Chin BN. Mechanisms Linking Social Media Use and Sleep in Emerging Adults in the United States. Behav Sci (Basel). 2024;14(9):794. Published 2024 Sep 9.
12. American Heart Association. "Life's Essential 8™." Accessed April 15, 2025 at https://www.heart.org/en/healthy-living/healthy-lifestyle/lifes-essential-8
13. U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion, Healthy People 2030. "Sleep." Accessed April 2, 2025 at https://odphp.health.gov/healthypeople/objectives-and-data/browse-objectives/sleep.

RELEVANT AMA POLICY

Interrupted Patient Sleep H-373.991

1. Our American Medical Association encourages physicians, trainees, patient care teams, and hospital administration to reduce the number of patient sleep interruptions as much as possible, including considering the impact of circadian and environmental factors on sleep, to only those interruptions which are necessary and cannot be performed at another time.
2. Our AMA supports efforts to improve quality, duration, and timing of patient sleep. Res. 704, A-23

Insufficient Sleep in Adolescents H-60.930

1. Our AMA identifies adolescent insufficient sleep and sleepiness as a public health issue and supports education about sleep health as a standard component of care for adolescent patients.
2. Our AMA: (a) encourages school districts to aim for the start of middle schools and high schools to be no earlier than 8:30 a.m., in order to allow adolescents time for adequate sleep; (b) encourages physicians, especially those who work closely with school districts, to become actively involved in the education of parents, school administrators, teachers, and other members of the community to stress the importance of sleep and consequences of sleep deprivation among adolescents, and to encourage school districts to structure school start times to accommodate the biologic sleep needs of adolescents; and (c) encourages continued research on the impact of sleep on adolescent health and academic performance.

Fatigue, Sleep Disorders, and Motor Vehicle Crashes H-15.958

1. Our American Medical Association recognizes sleepiness behind the wheel as a major public health issue and continues to encourage a national public education campaign by appropriate federal agencies and relevant advocacy groups.
2. Our AMA recommends that the National Institutes of Health and other appropriate organizations support research projects to provide more accurate data on the prevalence of sleep-related disorders in the general population and in motor vehicle drivers, and provide information on the consequences and natural history of such conditions.
3. Our AMA recommends that the U.S. Department of Transportation (DOT) and other responsible agencies continue studies on the occurrence of highway crashes and other adverse occurrences in transportation that involve reduced operator alertness and sleep.
4. Our AMA encourages continued collaboration between the DOT and the transportation industry to support research projects for the devising and effectiveness- testing of appropriate countermeasures against driver fatigue, including technologies for motor vehicles and the highway environment.
5. Our AMA urges responsible federal agencies to improve enforcement of existing regulations for truck driver work periods and consecutive working hours and increase awareness of the hazards of driving while fatigued. If changes to these regulations are proposed on a medical basis, they should be justified by the findings of rigorous studies and the judgments of persons who are knowledgeable in ergonomics, occupational medicine, and industrial psychology.
6. Our AMA recommends that physicians:

a. become knowledgeable about the diagnosis and management of sleep-related disorders.
b. investigate patient symptoms of drowsiness, wakefulness, and fatigue by inquiring about sleep and work habits and other predisposing factors when compiling patient histories.
c. inform patients about the personal and societal hazards of driving or working while fatigued and advise patients about measures they can take to prevent fatigue-related and other unintended injuries.
d. advise patients about possible medication-related effects that may impair their ability to safely operate a moto vehicle or other machinery.
e. inquire whether sleepiness and fatigue could be contributing factors in motor vehicle-related and other unintended injuries.
f. become familiar with the laws and regulations concerning drivers and highway safety in the state(s) where they practice.

7. Our AMA encourages all state medical associations to promote the incorporation of an educational component on the dangers of driving while sleepy in all drivers education classes (for all age groups) in each state.
8. Our AMA recommends that states adopt regulations for the licensing of commercial and private drivers with sleep-related and other medical disorders according to the extent to which persons afflicted with such disorders experience crashes and injuries.
9. Our AMA reiterates its support for physicians' use of E-codes in completing emergency department and hospital records, and urges collaboration among appropriate government agencies and medical and public health organizations to improve state and national injury surveillance systems and more accurately determine the relationship of fatigue and sleep disorders to motor vehicle crashes and other unintended injuries.
CSA Rep. 1, A-96Appended: Res. 418, I-99Reaffirmed: CSAPH Rep. 1, A-09Modified: CSAPH Rep. 01, A-19Reaffirmation: A-22

Medical Education on Sleep and Sleep Disorders H-295.894
Our AMA supports diagnosis and management of sleep and sleep disorders as an essential and integral component of medical education. Res. 310 , I-98Reaffirmed: CME Rep. 2, A-08Reaffirmed: CME Rep. 01, A-18

Harmful Effects of Screen Time in Children H-60.911
Our AMA encourages: (1) primary and secondary schools to incorporate into health class curricula the topic of balancing screen time with physical activity and sleep; and (2) primary care physicians to assess pediatric patients and educate parents about amount of screen time, physical activity and sleep habits. Alt. Res. 901, I-17Reaffirmation: A-18

Light Pollution: Adverse Health Effects of Nighttime Lighting H-135.932
1. Our American Medical Association supports the need for developing and implementing technologies to reduce glare from vehicle headlamps and roadway lighting schemes, and developing lighting technologies at home and at work that minimize circadian disruption, while maintaining visual efficiency.
2. Our AMA recognizes that exposure to excessive light at night, including extended use of various electronic media, can disrupt sleep or exacerbate sleep disorders, especially in children and adolescents. This effect can be minimized by using dim red lighting in the nighttime bedroom environment.
3. Our AMA supports the need for further multidisciplinary research on the risks and benefits of occupational and environmental exposure to light-at-night.
4. Our AMA supports work environments operating in a 24/7 hour fashion have an employee fatigue risk management plan in place. CSAPH Rep. 4, A-12Reaffirmation: A-22Reaffirmed: CSAPH Rep. 1, A-22Reaffirmed: BOT Rep. 30, A-24

AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES

Resolution: 408
(A-25)

Introduced by: California

Subject: Removing Artificial Turf in Schools, Parks, and Public Places

Referred to: Reference Committee D

Whereas, in the past artificial (synthetic) turf was considered to be the best alternative to natural turfgrass because of overall reduced costs, including decreased water usage, and lower maintenance but newer information regarding the adverse direct and indirect environmental, health and economic impacts of synthetic grass and increased costs compared to natural turfgrass have been reported; and

Whereas, artificial turf creates significantly higher temperatures in local heat islands from the lack of evaporative cooling, posing a risk of burns, heat exhaustion, and heat stroke in athletes, including children, and this will be an increasing problem with climate change; and

Whereas, an increased incidence of sports injuries and infections is reported to occur on synthetic turf sports fields; and

Whereas, artificial turf contains hazardous chemicals, plasticizers, crumb rubber and heavy metals to which athletes and children come into close contact, resulting in their inhalation and/or ingestion, as well as their being brought into homes on clothing and shoes. In addition, these chemicals can leach into soil, therein posing risks to human health and the environment; and

Whereas, one artificial turf field weighs a total of 280,000 to 760,000 pounds, and is typically discarded in a landfill after 8 to 10 years of use, and, moreover, is not recyclable as artificial turf contains a mixture of plastics with continued leaching of chemicals in the landfill; and

Whereas, considering a full life cycle analysis, the cost of installing and maintaining a natural turfgrass field is much less than that of a synthetic field; and

Whereas, natural green spaces encourage physical activity, reduce stress and improve physical and mental wellbeing; and

Whereas, cities, such as Boston, are banning artificial turf because of health and environmental concerns; and

Whereas, California is proposing to ban the forever chemical PFAS in all artificial turf products, and also mandate that schools replace heat trapping surfaces, such as synthetic turf, with cooler and natural systems that mitigate heat and pollution as part of a School Extreme Heat Action Plan; therefore be it

RESOLVED, that our American Medical Association recommend replacing artificial turf with natural, drought-tolerant and hardiness zone appropriate turfgrass in parks, sports fields and lawns when it is to be replaced (New HOD Policy); and be it further

RESOLVED, that our AMA support natural, drought-tolerant and hardiness zone appropriate turfgrass as the preferred choice on sports fields or lawns, in all public and private schools and colleges, as well as in city parks. (New HOD Policy)

Fiscal Note: Minimal – less than $1,000

Received: 4/22/25

AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES

Resolution: 409
(A-24)

Introduced by: California

Subject: Guidelines for Restricting Cell Phones in K-12 Schools

Referred to: Reference Committee D

Whereas, smartphones have become an incredibly prevalent part of the lives of today's youth, with 75% of American children owning a cell phone by age 12.6, a figure that increases to almost all children owning a smartphone by age 15 (1); and

Whereas, cell phones are a major source of distraction that interferes with students' ability to focus on school-related activities, with the average student checking their phone over 11 times per school day and spending 20.9% of classroom time using their devices for non-academic activities (2), while the mere presence of a cell phone, even when on silent, is distracting and detrimental to an individual's ability to focus on cognitive tasks or acquire information, even when the individual is not checking or interacting with the device, with this distraction being reversible with the removal of the device from their presence (3); and

Whereas, while most schools enforce some restrictions on cellphone use (4), many still allow cell phones to be used during break periods, such as lunch and recess, which has been shown to limit students' engagement in social and physical activities compared to their peers who do not have cell phone access during these times (5); and

Whereas, schools that enforce a phone ban during school hours show a 6.41% increase in test scores on average, with the greatest benefit seen in students scoring in the lowest quintile (6) indicating banning phones is both effective and beneficial for students' ability to do well in school, with the greatest benefit to those students who need the most help in class; and

Whereas, the presence of media devices in adolescents' sleep area and the use of such devices around bedtime, as well as increased use of devices (>2hrs) during the day (7), has a deleterious effect on the sleep of adolescents, resulting in increased sleep deprivation, fewer hours of sleep per night, poor sleep quality, and increased daytime sleepiness (8), all of which contributes to poor health outcomes; and

Whereas, smartphones negatively impact adolescent mental health, with as many as 23% of children and adolescents report problematic smartphone usage, which has been associated with increased risk of depression, higher perceived stress, and anxiety (9), which is particularly problematic given that many adolescents use their smartphones to access social media, which has been shown to increase feelings of jealousy, negative body image, and eating disorders (10); therefore be it

RESOLVED, that our American Medical Association support the establishment of uniform guidelines for cell phone and smart device access in schools and best practices for use outside school including recommendations for nighttime device access for children (New HOD Policy); and be it further

RESOLVED, that our AMA support schools implementing limitations on smartphone usage during school hours (New HOD Policy); and be it further

RESOLVED, that our AMA encourage parents and children to limit children's nighttime phone usage before bedtime. (New HOD Policy)

Fiscal Note: Minimal – less than $1,000

Received: 4/22/25

RELEVANT AMA POLICY

Addressing Social Media and Social Networking Usage and its Impacts on Mental Health D-478.965

1. Our American Medical Association will collaborate with relevant professional organizations to:

    a. support the development of continuing education programs to enhance physicians' knowledge of the health impacts of social media and social networking usage; and

    b. support the development of effective clinical tools and protocols for the identification, treatment, and referral of children, adolescents, and adults at risk for and experiencing health sequelae of social media and social networking usage.

2. Our AMA advocates for schools to provide safe and effective, evidence-based educational programs so that:

    a. all students can learn to identify and mitigate the onset of mental health sequelae of social media and social networking usage; and

    b. all students develop skills in digital literacy to serve as an individual protective foundation for interaction with various types of digital media (including social media).

3. Our AMA affirms that use of social media and social networking has the potential to positively or negatively impact the physical and mental health of individuals, especially adolescents and those with preexisting psychosocial conditions.

4. Our AMA advocates for and support media and social networking services addressing and developing safeguards tailored to youth users, including ensuring robust protections for youth online privacy, providing effective tools to manage screentime content and access, considering special circumstances for certain youth populations (such as LGBTQ+ youth and youth with disabilities), and promoting the development and dissemination of age-appropriate digital literacy training.

5. Our AMA advocates for the study of the positive and negative biological, psychological, and social effects of social media and social networking services use.
Res. 905, I-17Modified: Res. 420, A-21Reaffirmation: A-23Modified: CSAPH Rep. 05, I-24

Teens and Social Media H-478.976
Our American Medical Association urges physicians to:

a. educate themselves about social media;

b. be prepared to counsel patients and/or their guardians about the potential risks and harms of social media; and

c. consider expanding clinical interviews to inquire about social media use.

2. Our AMA encourages further clinical, epidemiological, and interdisciplinary research on the impact of social media on health.

3. Our AMA supports education of clinicians, educators, and the public on digital media literacy and the health effects of social media.

4. Our AMA recognizes that the relative risks and benefits of social media may depend on individual differences (e.g., social media engagement, pre-existing traits, and environment).

5. Our AMA supports legislative, regulatory, and associated initiatives that, at a minimum, provide youth with strong data privacy protections, require platforms to be designed to align with child development, and provide transparency into the potential harms posed by platforms to young people and any steps taken to mitigate those harms.

6. Our AMA will collaborate with professional societies, industry, and other stakeholders to improve social media platform privacy protections, transparency (e.g., algorithmic, data, and process), data sharing processes, and systems for accountability and redress in response to online harassment.
(Res. 430, A-23Appended: CSAPH Rep. 05, I-24)

Medical and Public Health Misinformation Online D-440.915

1. Our American Medical Association encourages social media companies and organizations, search engine companies, online retail companies, online healthcare companies, and other entities owning websites to further strengthen their content moderation policies related to medical and public health misinformation, including, but not limited to enhanced content monitoring, augmentation of recommendation engines focused on false information, and stronger integration of verified health information.

2. Our AMA encourages social media companies and organizations, search engine companies, online retail companies, online healthcare companies, and other entities owning websites to recognize the spread of medical and public health misinformation over dissemination networks and collaborate with relevant stakeholders to address this problem as appropriate, including but not limited to altering underlying network dynamics or redesigning platform algorithms.

3. Our AMA will continue to support the dissemination of accurate medical and public health information by public health organizations and health policy experts.

4. Our AMA will work with public health agencies in an effort to establish relationships with journalists and news agencies to enhance the public reach in disseminating accurate medical and public health information.
Res. 421, A-21Reaffirmed: BOT Rep. 15, A-22Reaffirmation: A-23Modified: Res. 509, A-23

AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES

Resolution: 410
(A-24)

Introduced by: California

Subject: Hate Speech is a Public Health Concern

Referred to: Reference Committee D

Whereas, the United Nations Strategy and Plan of Action on Hate Speech defines hate speech as “any kind of communication in speech, writing or behavior that attacks or uses pejorative or discriminatory language with reference to a person or a group on the basis of who they are, in other words, based on their religion, ethnicity, nationality, race, color, descent, gender or other identity factor;” and

Whereas, hate speech is in general protected by law under the First Amendment unless it rises to the level of incitement; and

Whereas, hate speech has been recently amplified by internet social media platforms; and

Whereas, hate spreads like a communicable disease and hate speech is the vector for spread; and

Whereas, the progression from racist or prejudicial thoughts to words and violent actions can be slowed by discouraging and countering hate speech; and

Whereas, hatred is a public health threat and hate crimes have been recognized as a public health issue; and

Whereas, hate speech is a public health concern because it causes emotional, mental, social, and physical harm to our patients; therefore be it

RESOLVED, that our American Medical Association declare hate speech a public health concern (New HOD Policy); and be it further

RESOLVED, that our AMA support public and professional campaigns to educate against hate speech and its detrimental effects on the mental and physical well-being of the public (New HOD Policy); and be it further

RESOLVED, that our AMA encourage internet social media and search engines to establish and enforce meaningful content moderation to protect against the spread of hate speech on their platforms. (New HOD Policy)

Fiscal Note: Minimal – less than $1,000

Received: 4/22/25

RELEVANT AMA POLICY

Opposing Violence, Terrorism, Discrimination, and Hate Speech D-65.975
Our American Medical Association calls for continued collaboration and partnership with organizations representing diverse communities.
(Res 018, A-24)

Opposing Violence, Terrorism, Discrimination, and Hate Speech H-65.937
1. Our American Medical Association strongly condemns all acts of violence, terrorism, discrimination, and hate speech against any group or individual, regardless of race, ethnicity, religious affiliation, cultural affiliation, gender, sexual orientation, disability, or other factor.
2. Our AMA affirms its commitment to promoting dialogue, empathy, and mutual respect among diverse communities, recognizing the importance of fostering understanding and reconciliation.

3. Our AMA recognizes the importance of commemorating and honoring the victims of tragedies throughout human history, in a manner that respects the dignity and sensitivities of all affected communities.

4. Our AMA encourages initiatives that promote education, awareness, and solidarity to prevent future acts of violence and promote social cohesion.

5. Our AMA acknowledges the diverse perspectives and experiences within its membership and commits to facilitating constructive dialogue and engagement on sensitive and polarizing issues.
(Res 018, A-24)

AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES

Resolution: 411
(A-25)

Introduced by: Colorado

Subject: Protecting Access to mRNA Vaccines

Referred to: Reference Committee D

Whereas, 13 Billion doses of mRNA vaccine have been given world-wide as of August 2024; and

Whereas, estimates of lives saved in the first year alone are as high as 19.8 Million; and

Whereas, there are fewer than 1 case of severe allergic reactions or myocarditis/pericarditis (with most cases fully recovered) per 200,000 doses; and

Whereas, a CDC convened advisory committee in 2024 reported “no unusual patterns of death were detected that might suggest a potential safety concern”; and

Whereas, The FDA reviewed COVID-19 vaccine safety surveillance and reported in January 2025 that “FDA strongly believes that the known and potential benefits of COVID vaccination greatly outweigh their known and potential risks”; and

Whereas, mRNA vaccines hold great promise for Avian flu[1], HIV, Zika and cancers like melanoma[2] and renal cancer[3]; and

Whereas, misinformation and disinformation regarding mRNA vaccines have been and are extensively spread through multiple media sources; and

Whereas, according to a Kaiser Family Foundation poll[4] published in January 2025, 13% of Republicans think it is definitely true and 27% that it is “probably true” that “more people have died from COVID-19 vaccines than have died from the COVID-19 virus”; and

Whereas, seven states or more are debating bills to ban mRNA vaccines, sometimes with criminal penalties against physicians that administer them as well as revocation of their licenses; and

Whereas the current Secretary of Health and Human Services (which oversees the CDC and FDA) previously petitioned the FDA to rescind approval for COVID-19 vaccines and has called them the “deadliest vaccine ever made”; and

Whereas, in February, Rep Thomas Massey (R-KY) said on social media that the “FDA should immediately revoke approval of these shots” and Sen Ron Johnson (R-WI) is leading an investigation into the safety of the vaccines; therefore be it

RESOLVED, that our American Medical Association actively lobby for protections for use, research and development of mRNA vaccines for infectious diseases and cancer treatment (Directive to Take Action); and be it further

RESOLVED, that our AMA develop state level model legislation to promote state level protections for use, research and development of mRNA vaccines with report back at I-25. (Directive to Take Action)

Fiscal Note: Moderate – between $5,000 - $10,000

Received: 4/15/25

REFERENCES

1 https://public3.pagefreezer.com/browse/HHS.gov/21-01-2025T07:38/https:/www.hhs.gov/about/news/2025/01/17/hhs-provides-590-million-accelerate-pandemic-influenza-mrna-based-vaccine-development-enhance-platform-capability-other-emerging-infectious-disease.html

2 https://nyulangone.org/news/perlmutter-cancer-center-clinical-trial-tests-personalized-mrna-vaccine-treating-metastatic-melanoma

3 https://medicine.yale.edu/news-article/personalized-therapeutic-vaccine-steers-the-immune-system-to-fight-kidney-cancer/

4 https://www.kff.org/health-information-and-trust/poll-finding/kff-tracking-poll-on-health-information-and-trust-january-2025/

RELEVANT AMA POLICY

Assuring Access to ACIP/AAFP/AAP-Recommended Vaccines H-440.875

1. It is our American Medical Policy that all persons, regardless of economic and insurance status, receive all Advisory Committee on Immunization Practices (ACIP)-recommended vaccines as soon as possible following publication of these recommendations in the Centers for Disease Control and Prevention's (CDC) Morbidity and Mortality Weekly Report (MMWR).
2. Our AMA will continue to work with the federal government, Congress, and other stakeholders to improve liability protection for vaccine manufacturers and health care professionals who provide immunization services and to examine and improve compensation mechanisms for patients who were legitimately injured by a vaccine.
3. Our AMA will continue to work with the federal government, Congress, and other appropriate stakeholders to enhance public opinion of vaccines and to monitor and ensure the continued safety of existing and newly approved vaccines (including providing adequate resources for post-approval surveillance) so as to maintain and improve public confidence in the safety of vaccines.
4. Our AMA will work with appropriate stakeholders, including vaccine manufacturers, vaccine distributors, the federal government, medical specialty societies, and third party payers, to guarantee a robust vaccine delivery infrastructure (including but not limited to, the research and development of new vaccines, the ability to track the real-time supply status of ACIP-recommended vaccines, and the timely distribution of ACIP-recommended vaccines to providers).
5. Our AMA will work with appropriate federal and state agencies and private sector entities to ensure that state Medicaid agencies and private insurance plans pay health care professionals at least the approved Relative Value Unit (RVU) administration Medicare rates for payment when they administer ACIP-recommended vaccines.
6. Our AMA will work with the Centers for Medicare and Medicaid Services (CMS) to address barriers associated with Medicare recipients receiving live zoster vaccine and the routine boosters Td and Tdap in physicians' offices.
7. Our AMA will work through appropriate state entities to ensure all health insurance plans rapidly include newly ACIP-recommended vaccines in their list of covered benefits, and to pay health care professionals fairly for the purchase and administration of ACIP-recommended vaccines.
8. Our AMA will urge Medicare to include Tdap (Tetanus, Diphtheria, Acellular Pertussis) under Medicare Part B as a national public health measure to help prevent the spread of Pertussis.

9. Until compliance of our AMA Policy H-440.875(6) is actualized to the AMA's satisfaction regarding the tetanus vaccine, our AMA will aggressively petition CMS to include tetanus and Tdap at both the "Welcome to Medicare" and Annual Medicare Wellness visits, and other clinically appropriate encounters, as additional "triggering event codes" (using the AT or another modifier) that allow for coverage and payment of vaccines to Medicare recipients.
10. Our AMA will aggressively petition CMS to include coverage and payment for any vaccinations administered to Medicare patients that are recommended by the ACIP, the US Preventive Services Task Force (USPSTF), or based on prevailing preventive clinical health guidelines.

BOT Action in response to referred for decision Res. 524, A-06Reaffirmation A-07, Appended: Res. 531, A-07Reaffirmation A-09Reaffirmed: Res. 501, A-09Reaffirmation I-10Reaffirmation A-11Reaffirmed in lieu of Res. 422, A-11Reaffirmation: I-12Appended: Res. 824, I-14Reaffirmed: Res. 411, A-17Reaffirmed: CMS Rep. 3, I-20Reaffirmed: Res.228, A-21

Secure National Vaccine Policy H-440.882
Our American Medical Association advocates for and supports programs that ensure the production, quality assurance and timely distribution of sufficient quantities of those vaccines recommended by the Centers for Disease Control and Prevention to the US population at risk.
Res. 709, I-04Reaffirmation A-05Reaffirmed in lieu of Res. 422, A-11: BOT action in response to referred for decision Res. 422, A-11Reaffirmed: CSAPH Rep. 1, A-21

Pandemic Preparedness H-440.847
In order to prepare for a pandemic, our American Medical Association:

1. urges the Department of Health and Human Services Emergency Care Coordination Center, in collaboration with the leadership of the Centers for Disease Control and Prevention (CDC), state and local health departments, and the national organizations representing them, to urgently assess the shortfall in funding, staffing, supplies, vaccine, drug, and data management capacity to prepare for and respond to a pandemic or other serious public health emergency.
2. urges Congress and the Administration to work to ensure adequate funding and other resources: (a) for the CDC, the National Institutes of Health (NIH), the Strategic National Stockpile and other appropriate federal agencies, to support the maintenance of and the implementation of an expanded capacity to produce the necessary **vaccines**, anti- microbial drugs, medical supplies, and personal protective equipment, and to continue development of the nation's capacity to rapidly manufacture the necessary supplies needed to protect, treat, test and vaccinate the entire population and care for large numbers of seriously ill people, without overreliance on unreliable international sources of production; and (b) to bolster the infrastructure and capacity of state and local health departments to effectively prepare for and respond to a pandemic or other serious public health emergency.
3. encourages states to maintain medical and personal protective equipment stockpiles sufficient for effective preparedness and to respond to a pandemic or other major public health emergency.
4. urges the federal government to meet treaty and trust obligations by adequately sourcing medical and personal protective equipment directly to tribal communities and the Indian Health Service for effective preparedness and to respond to a pandemic or other major public emergency.
5. urges the CDC to develop and disseminate electronic instructional resources on procedures to follow in an epidemic, pandemic, or other serious public health emergency, which are tailored to the needs of health care personnel in direct patient care settings;
6. supports the position that:
    a. relevant national and state agencies (such as the CDC, NIH, and the state departments of health) continue to plan and test distribution activities in advance of a public health emergency, to assure that physicians, nurses, other health care personnel, and first responders having direct patient contact, receive any

appropriate vaccination or medical countermeasure in a timely and efficient manner, in order to reassure them that they will have first priority in the event of such a pandemic.

b. such agencies should publicize now, in advance of any such pandemic, what the plan will be to provide immunization to health care provider.

7. will monitor progress in developing a contingency plan that addresses future vaccine production or distribution problems and in developing a plan to respond to a pandemic in the United States.
8. will encourage state and federal efforts to locate the manufacturing of goods used in healthcare and healthcare facilities in the United States.
9. will support federal efforts to encourage the purchase of domestically produced personal protective equipment.

CASPH Rep. 5, I-12Reaffirmation A-15Modified: Res. 415, A-21Reaffirmed: CASPH Rep. 1, I-22Appended: Res. 924, I-22

AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES

Resolution: 412
(A-25)

Introduced by: LGBTQ+ Section

Subject: Supporting inclusive long-term care facilities

Referred to: Reference Committee D

Whereas, the American Medical Association has argued that LGBTQ+ seniors often experience greater social isolation than their heterosexual peers due to estranged family relationships or the loss of a partner or close friends. Many may not have children or a support network, which is critical as they age[1]; and

Whereas, survey studies have shown that many LGBTQ+ seniors fear discrimination in mainstream long-term care facilities[2,3]. Staff or other residents may harbor biases, leading to mistreatment, neglect, or isolation. Some seniors may feel compelled to hide their sexual orientation or gender identity, reversing the openness they had embraced in earlier life stages[4]; and

Whereas, a significant proportion of LGBTQ+ seniors face financial hardship due to lifelong employment discrimination, lack of legal recognition for their relationships (prior to marriage equality), or barriers in accessing retirement benefits[5,6]; and

Whereas, Section 1557 of the ACA explicitly prohibits discrimination on the basis of sex, which includes gender identity and sexual orientation, meaning that long-term care facilities receiving federal funding (like Medicare or Medicaid) cannot discriminate against LGBTQ+ individuals[10]; and

Whereas, several states provide funding for senior housing, healthcare, and anti-discrimination initiatives that can be leveraged for LGBTQ+ care[11]; and

Whereas, AMA policy seeks to support LGBTQ+ older adults (D-65.979) and prevent discrimination of sexual and gender minorities (D-65.996), which should extend to LGBTQ+ people in long-term care facilities; therefore be it

RESOLVED, that our American Medical Association supports federal and state policies for making long-term care facilities LGBTQ+ inclusive. (New HOD Policy)

Fiscal Note: Minimal – less than $1,000

Received: 4/21/25

REFERENCES

1. Strazewski, Len. “LGBTQ+ Seniors Have Seen Lifelong Discrimination. Doctors Can Help.” American Medical Association, 22 Aug. 2022, www.ama-assn.org/delivering-care/population-care/lgbtq-seniors-have-seen-lifelong-discrimination-doctors-can-help.
2. Kortes-Miller K, Boulé J, Wilson K, Stinchcombe A. Dying in Long-Term Care: Perspectives from Sexual and Gender Minority Older Adults about Their Fears and Hopes for End of Life. Journal of Social Work in End-of-Life & Palliative Care. 2018;14(2-3):209-224. doi:https://doi.org/10.1080/15524256.2018.1487364
3. Putney JM, Keary S, Hebert N, Krinsky L, Halmo R. “Fear Runs Deep:” The Anticipated Needs of LGBT Older Adults in Long-Term Care. Journal of Gerontological Social Work. 2018;61(8):887-907. doi:https://doi.org/10.1080/01634372.2018.1508109
4. Fahey MJC. Culture Change in Long-Term Care Facilities. Journal of Social Work in Long-Term Care. 2003;2(1-2):35-51. doi:https://doi.org/10.1300/j181v02n01_03
5. NEW DATA: LGBTQ+ Community Continues to Face Financial Challenges Compared to Peers. Human Rights Campaign. Published April 3, 2024. https://www.hrc.org/press-releases/new-data-lgbtq-community-continues-to-face-financial-challenges-compared-to-peers
6. LGBTQ+ Retirees vs. LGBTQ+ Non-Retirees. Accessed September 8, 2024. https://assets-us-01.kc-usercontent.com/ffacfe7d-10b6-0083-2632-604077fd4eca/e16ea251-2513-4731-8150-4d5908aefbac/2023_LGBTQ%2B_Study_Infographic_3.pdf
7. Carnahan JL, Pickett AC. Postacute Care and Long-term Care for LGBTQ+ Older Adults. Clinics in Geriatric Medicine. Published online November 1, 2023. doi:https://doi.org/10.1016/j.cger.2023.10.005
8. Buczak-Stec, Elżbieta, et al. “Long-term care preferences and sexual orientation–A systematic review and meta-analysis.” Journal of the American Medical Directors Association, vol. 24, no. 3, Mar. 2023, https://doi.org/10.1016/j.jamda.2022.11.020.
9. Almack K, Seymour J, Bellamy G. Exploring the Impact of Sexual Orientation on Experiences and Concerns about End of Life Care and on Bereavement for Lesbian, Gay and Bisexual Older People. Sociology. 2010;44(5):908-924. doi:https://doi.org/10.1177/0038038510375739
10. Office for Civil Rights (OCR). Section 1557 of the Patient Protection and Affordable Care Act. HHS.gov. Published July 22, 2010. https://www.hhs.gov/civil-rights/for-individuals/section-1557/index.html
11. .Long-term Care Considerations for LGBT Adults | ACL Administration for Community Living. acl.gov. https://acl.gov/ltc/basic-needs/pathfinder/long-term-care-considerations-lgbt-adults

RELEVANT AMA POLICY

Senior Care H-25.993
Our AMA supports accelerating its ongoing efforts to work responsibly with Congress, senior citizen groups, and other interested parties to address the health care needs of seniors. These efforts should address but not be limited to: (1) multiple hospital admissions in a single calendar year; (2) long-term care; (3) hospice and home health care; and (4) pharmaceutical costs. [Sub Res. 181, I-89 Reaffirmed: Sunset Report, A-00 Reaffirmed: CSAPH Rep. 1, A-10 Reaffirmed: CSAPH Rep. 01, A-20]

LGBTQ+ Older Adults D-65.979
1. Our American Medical Association will disseminate educational content to increase awareness and understanding of LGBTQ+ health aging issues among the general public, healthcare professionals, and policy makers.
2. Our AMA will promote cultural competency training for clinicians in caring for LGBTQ+ older adults.
3. Our AMA will promote policies and practices for implementation within all healthcare settings that are inclusive and affirming for LGBTQ+ older adults.
4. Our AMA will advocate for increased funding and resources for research into health issues of LGBTQ+ older adults. [Res. 424, A-24]

Nondiscriminatory Policy for the Health Care Needs of LGBTQ Populations D-65.996
Our AMA will encourage and work with state medical societies to provide a sample printed nondiscrimination policy suitable for framing, and encourage individual physicians to display for patient and staff awareness-as one example: "This office appreciates the diversity of human beings and does not discriminate based on race, age, religion, ability, marital status, sexual orientation, sex, or gender identity." [Res. 414, A-04 Modified: BOT Rep. 11, A-07 Modified: Res. 08, A-16Res. 16, A-18

AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES

Resolution: 413
(A-25)

Introduced by: LGBTQ+ Section

Subject: Preservation of Public Funding for Physicians and Hospitals Providing LGBTQ+ Care

Referred to: Reference Committee D

Whereas, care tailored to the LGBTQIA+ population has been consistently recognized as medically necessary, evidenced-based healthcare supported by major medical organizations including the American Association of Pediatrics (AAP), the American College of Obstetrics and Gynecology (ACOG), the Endocrine Society, and the American Medical Association[1]; and

Whereas, physicians rely on stable public funding through sources such as Medicare, Medicaid, and federal grants to provide patient care, train student doctors, and conduct medical research, and restrictions on this funding jeopardize both LGBTQ+ healthcare and the broader medical system[2]; and

Whereas, existing AMA policies H-185.950 and H-185.905 affirm support for public and private insurance coverage of gender-affirming care, but do not recognize the growing threats to federal funding, medical education, and physician autonomy posed by restrictions on care; and

Whereas, existing AMA policy H-290.963 opposes caps on federal Medicaid funding and advocates for AMA input in Medicaid funding decisions, but does not account for limitations on federal Medicaid funding related to provision of certain categories of healthcare; and

Whereas, current federal and state governmental actions and propositions such as Executive Order 14187[3], Georgia's SB 39[4], Kansas' SB 63[5], and Kentucky's HB 154[6] all intend to limit or prohibit federal funding based on provision of evidence-based and life-saving care for transgender and gender diverse people, which sets a dangerous precedent for government control of healthcare and loss of physician autonomy; therefore be it

RESOLVED, that our American Medical Association supports preservation and maintenance of federal and state public funding for physicians and institutions engaged in clinical care, research, and medical education regarding LGBTQ+ populations. (New HOD Policy)

Fiscal Note: Minimal – less than $1,000

Received: 4/21/25

REFERENCES

1. Poteat T, Davis AM, Gonzalez A. Standards of Care for Transgender and Gender Diverse People. JAMA. 2023;329(21):1872–1874. doi:10.1001/jama.2023.8121
2. Gruppen LD, Frohna AZ, Anderson RM. Funding Medical Education Research: Opportunities and Issues. Acad Med. 2003;78(5):468-476. doi:10.1097/00001888-200305000-00016
3. Trump D. Executive Order 14187: Protecting Children from Chemical and Surgical Mutilation. Federal Register. Published January 28, 2025. Accessed February 28, 2025. https://www.federalregister.gov/documents/2025/02/03/2025-02194/protecting-children-from-chemical-and-surgical-mutilation
4. Georgia General Assembly. Senate Bill 39: An Act to amend Chapter 18 of Title 45, Chapter 4 of Title 49, and Chapter 1 of Title 50 of the Official Code of Georgia Annotated. Introduced January 2025. Accessed February 28, 2025. https://www.legis.ga.gov/api/legislation/document/20252026/230415
5. Kansas State Legislature. Senate Bill 63: Enacting the Help Not Harm Act. Introduced January 22, 2025. Accessed February 28, 2025. https://www.kslegislature.gov/li/b2025_26/measures/sb63/
6. Kentucky General Assembly. House Bill 154: An Act relating to gender transition services. Introduced February 4, 2025. Accessed February 28, 2025. https://apps.legislature.ky.gov/record/25rs/hb154.html

RELEVANT AMA POLICY

The Physician's Right to Exercise Independent Judgement in All Organized Medical Staff Affairs H-225.952
Our American Medical Association supports the unfettered right of a physician to exercise personal and professional judgment in voting, speaking and advocating on any matter regarding:

1. patient care interests;
2. the profession;
3. health care in the community;
4. medical staff matters;
5. the independent exercise of medical judgment as appropriate interests to be incorporated into physician employment and independent contractor agreements; the right
6. not to be deemed in breach of their employment or independent contractor agreement for asserting the foregoing enumerated rights; and
7. not to be retaliated against by his/her employer in any way, including, but not limited to, termination of employment or independent contractor agreement, commencement of any disciplinary action, or any other adverse action against them based on the exercise of the foregoing rights.

Nondiscriminatory Policy for the Health Care Needs of LGBTQ Populations H-65.976
Our American Medical Association encourages physician practices, medical schools, hospitals, and clinics to broaden any nondiscriminatory statement made to patients, health care workers, or employees to include "sexual orientation, sex, or gender identity" in any nondiscrimination statement.

Removing Financial Barriers to Care for Transgender Patients H-185.950
Our American Medical Association supports public and private health insurance coverage for evidence-based treatment of gender-affirming care gender dysphoria as recommended by the patient's physician.

Health Care Disparities in Same-Sex Partner Households H-65.973
Our American Medical Association recognizes that denying civil marriage based on sexual orientation is discriminatory and imposes harmful stigma on gay and lesbian individuals and couples and their families.

1. Our AMA recognizes that exclusion from civil marriage contributes to health care disparities affecting same-sex households.
2. Our AMA will work to reduce health care disparities among members of same-sex households including minor children.
3. Our AMA will support measures providing same-sex households with the same rights and privileges to health care, health insurance, and survivor benefits, as afforded opposite-sex households.

AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES

Resolution: 414
(A-25)

Introduced by: LGBTQ+ Section

Subject: Expanding Sexually Transmitted Infection Care for Persons with Unstable or No Housing

Referred to: Reference Committee D

Whereas, the number of people with unstable or no housing in the United States reached an all-time high in 2023, with over 771,000 individuals recorded in a single night[1]; and

Whereas, one in three individuals with unstable or no housing in the United States in 2023 experienced chronic homelessness[1]; and

Whereas, Whereas, in 2023 in the United States there was a 33% increase in children with unstable or no housing and a 10% rise in unaccompanied youth[1]; and

Whereas, structural inequities continue to disproportionately affect marginalized communities—Black, African American, and African individuals remain overrepresented among the population with unstable or no housing[1]; and

Whereas, 17% of LGBTQ+ adults report having unstable or no housing, and up to 40% of youth with unstable or no housing identify as LGBTQ+[2]; and

Whereas, in 2023 over 2.4 million cases of syphilis, gonorrhea, and chlamydia were diagnosed in the United States[3]; and

Whereas, congenital syphilis rates in the United States reached all time high since 1992 with a 235% increase since 2016[3]; and

Whereas, the CDC has estimated that 1 in 5 people had an STI on any given day in 2018[3]; and

Whereas, adolescent and young adult populations (15-24yo) accounted for 53% of new STI diagnoses in 2020[4]; and

Whereas, only 51% of sexually active adolescents reported using condoms[4,5]; and

Whereas, men who have sex with men were disproportionately impacted by STIs such as gonorrhea, syphilis, and HIV co-infection in 2023[6]; and

Whereas, although non-Hispanic Black and African American persons represented 12.6% of the United States population in 2023, they accounted for 32.4% of all cases of chlamydia, gonorrhea, and syphilis[6]; and

Whereas, rates of primary, secondary, and congenital syphilis were highest among American Indian and Alaska Native persons in 2023[6]; and

Whereas, people with unstable or no housing have a higher prevalence of acute and chronic physical and mental health conditions and higher mortality rates[7]; and

Whereas, people with unstable or no housing have higher rates of emergency room utilization[8], longer hospital stay[9], and higher hospital readmission rates[10] compared to the housed population; and

Whereas, a higher rate of sexually transmitted infections and HIV among people with unstable or no housing indicates suboptimal STI testing and underutilization of prevention services, despite a higher percentage of healthcare visits compared to the housed population[11]; and

Whereas, transactional sex survival behavior among women with low socioeconomic status correlates with diverse racial identities, lesbian or bisexual identities, childhood trauma, experiencing unstable or no housing, substance use, and condomless sex. Moreover, women engaging in transactional sex have higher rates of bacterial STIs and hepatitis and lower rates of HIV screening and prophylaxis[12]; and

Whereas, untreated STIs increase long-term risks of infertility, ectopic pregnancy, heart failure, seizures, nerve damage, blurry vision, blindness, hearing loss, and balance dysfunctions[13,14]; and

Whereas, the average annual unadjusted total Medicaid spending for people who experienced episodes of homelessness was 2.5 times greater than that of the comparison population[15]; and

Whereas, unstably housed people who are living with HIV have challenges with daily oral antiretroviral therapy (ART) adherence and experience significantly higher rates of viremia and onward HIV transmission than housed people living with HIV[16]; and

Whereas, existing AMA STI prevention policies do not sufficiently address the needs of LGBTQ+ individuals with unstable or no housing manifesting in significant disparities in health outcomes and access to care for this population; therefore be it

RESOLVED, that our American Medical Association support federal and state efforts to expand access to comprehensive sexually transmitted infection (STI) screening, treatment, and prevention services for persons with unstable or no housing. (New HOD Policy)

Fiscal Note: Minimal – less than $1,000

Received: 4/21/25

REFERENCES

1. 2023 annual Homelessness assessment report (ahar to ... Accessed March 1, 2025. https://www.huduser.gov/portal/sites/default/files/pdf/2023-AHAR-Part-1.pdf.
2. LGBTQ homelessness - national coalition for the homeless. National Coalition for the Homeless - Building a movement to End Homelessness. March 8, 2023. Accessed February 28, 2025. https://nationalhomeless.org/lgbtq-homelessness/#:~:text=LGBTQ%20Youth%20Homelessness%20in%20America&text=Up%20to%2040%25%20of%20homeless,population%20is%20only%2010%25%20LGBTQ.
3. National overview of stis in 2023. Centers for Disease Control and Prevention. November 12, 2024. Accessed February 28, 2025. https://www.cdc.gov/sti-statistics/annual/summary.html#:~:text=Findings&text=In%202023%2C%20over%202.4%20million,1.6%20million%20cases%20of%20chlamydia.
4. The Lancet Child & Adolescent Health. Youth Stis: An epidemic fuelled by shame. The Lancet Child & Adolescent Health. 2022;6(6):353. doi:10.1016/s2352-4642(22)00128-6
5. Halverson M, Hatchimonji DR, Treglia D, Flatley CA, Herbers JE, Cutuli JJ. Risky sexual behavior and STI testing among teens experiencing homelessness. Children and Youth Services Review. 2022;139:106538. doi:10.1016/j.childyouth.2022.106538

6. Sexually transmitted infections prevalence, incidence, and cost estimates in the United States. Centers for Disease Control and Prevention. Accessed February 28, 2025. https://www.cdc.gov/sti/php/communication-resources/prevalence-incidence-and-cost-estimates.html.
7. Garcia C, Doran K, Kushel M. Homelessness And Health: Factors, Evidence, Innovations That Work, And Policy Recommendations. Health Aff (Millwood). 2024;43(2):164-171. doi:10.1377/hlthaff.2023.01049
8. Vohra N, Paudyal V, Price MJ. Homelessness and the use of emergency department as a source of healthcare: a systematic review. Int J Emerg Med. 2022;15(1):32
9. Wadhera RK, Choi E, Shen C, Yeh RW, Joynt Maddox KE. Trends, causes, and outcomes of hospitalizations for homeless individuals: a retrospective cohort study. Med Care. 2019;57(1):21–7
10. Khatana SAM, Wadhera RK, Choi E, Groeneveld PW, Culhane DP, Kushel Met al. Association of homelessness with hospital readmissions—an analysis of three large states. J Gen Intern Med. 2020;35(9):2576–83.
11. Patel CG, Williams SP, Tao G. Access to Healthcare and the Utilization of Sexually Transmitted Infections Among Homeless Medicaid Patients 15 to 44 Years of Age. J Community Health. 2022;47(5):853-861. doi:10.1007/s10900-022-01119-y
12. Menza TW, Lipira L, Bhattarai A, Leon VC, Orellana ER. Prevalence and correlates of transactional sex among women of low socioeconomic status in Portland, OR [published correction appears in BMC Womens Health. 2020 Oct 20;20(1):238. doi: 10.1186/s12905-020-01098-z.]. BMC Womens Health. 2020;20(1):219. Published 2020 Oct 2.
13. Tsevat DG, Wiesenfeld HC, Parks C, Peipert JF. Sexually transmitted diseases and infertility. Am J Obstet Gynecol. 2017;216(1):1-9. doi:10.1016/j.ajog.2016.08.008
14. 2021-2023 progress report for STI National strategic plan. Accessed March 1, 2025. https://www.hhs.gov/sites/default/files/sti-progress-report-2021-2023.pdf.
15. Koh KA, Racine M, Gaeta JM, et al. Health Care Spending And Use Among People Experiencing Unstable Housing In The Era Of Accountable Care Organizations. Health Aff (Millwood). 2020;39(2):214-223. doi:10.1377/hlthaff.2019.00687
16. Velloza J, Mehtani NJ, Hickey MD, Imbert E, Appa A, Riley ED. A Review of Implementation Strategies to Enhance PrEP Delivery for People Experiencing Housing Insecurity: Advancing a Multifaceted High-Touch, Low-Barrier Approach. Curr HIV/AIDS Rep. 2024;22(1):4. Published 2024 Nov 22. doi:10.1007/s11904-024-00714-z

RELEVANT AMA POLICY

Sexually Transmitted Infections Control H-440.996
Our AMA (1) supports continued action to assert appropriate leadership in a concerted program to control sexuallytransmitted infection; (2) urges physicians to take all appropriate measures to reverse the rise in sexually transmitted infection and bring it under control; (3) encourages constituent and component societies to support and initiate efforts to gain public support for increased appropriations for public health departments to fund research in development of practical methods for prevention and detection of sexually transmitted infection, with particular emphasis on control of gonorrhea; and (4) in those states where state consent laws have not been modified, encourages the constituent associations to support enactment of statutes that permit physicians and their co-workers to treat and search for sexually transmitted infection in minors legally without the necessity of obtaining parental consent. Sub. Res. 6, I-72 Reaffirmed: CLRPD Rep. C, A-89 Reaffirmed: Sunset Report, A-00 Modified: CSAPH Rep. 1, A-10 Modified: CSAPH Rep. 01, A-20

Update on Sexually Transmitted Infections H-440.983
The AMA (1) urges medical students, primary care residents, and physicians in all specialties to familiarize themselves with sexually transmitted infections (STI), so that they will be better able to diagnose and treat them; (2) encourages physicians to always include a sexual history as part of their routine history and physical exam; (3) encourages STI instruction, both didactic and clinical, in all medical school and primary residency programs; (4) encourages the establishment of STI fellowships by primary care specialties in order to develop a pool of clinical and research expertise in the area; (5) encourages state and local medical societies to promote STI public service TV and radio announcements in their communities; and (6) supports continued communication of updated STI information regularly through AMA publications. CSA Rep. E, A-83 Reaffirmed: CLRPD Rep. 1, I-93 Reaffirmation A-99 Modified and Reaffirmed: CSAPH Rep. 1, A-09 Reaffirmed: CSAPH Rep. 01, A-19

Contraception and Sexually Transmitted Infections H-75.994
Our American Medical Association, in cooperation with state, county, and specialty medical societies, encourages physicians to educate their patients about sexually transmitted infections, including HIV disease, and condom use. While such counseling may not be appropriate for all contraception patients, physicians should be encouraged to provide this information to any contraception patient who may benefit from being more aware of the risks of sexuallytransmitted infections. BOT Rep. E, A-89 Reaffirmation A-99 Reaffirmed and Title Change: CSA Rep. 4, A-03 Reaffirmed: CSAPH Rep. 1, A-13 Modified: CSAPH Rep. 8, A-23

Control of Sexually Transmitted Infections H-440.979
The AMA urges increased efforts at all levels of organized medicine to bring sexually transmitted infections under control, through professional and public education, and support of the efforts of state Departments of Health, the Centers for Disease Control and Prevention, the National Institutes of Health, and other appropriate organizations. Res. 84, A-84 Reaffirmed by CLRPD Rep. 3 - I-94 Reaffirmation A-99 Modified and Reaffirmed: CSAPH Rep. 1, A-09Reaffirmation A-10 Reaffirmed: CSAPH Rep. 01, A-20

Health Care Needs of Lesbian, Gay, Bisexual, Transgender and Queer Populations H-160.991
1. [...] 2. Our AMA will collaborate with our partner organizations to educate physicians regarding: (i) the need for sexual and gender minority individuals to undergo regular cancer and sexually transmitted infection screenings based on anatomy due to their comparable or elevated risk for these conditions; and (ii) the need for comprehensive screening for sexually transmitted diseases in men who have sex with men; (iii) appropriate safe sex techniques to avoid the risk for sexually transmitted diseases; and (iv) that individuals who identify as a sexual and/or gender minority (lesbian, gay, bisexual, transgender, queer/questioning individuals) experience intimate partner violence, and how sexual and gender minorities present with intimate partner violence differs from their cisgender, heterosexual peers and may have unique complicating factors. 3. [...] 4. [...] CSA Rep. C, I-81 Reaffirmed: CLRPD Rep. F, I-91 CSA Rep. 8 - I-94 Appended: Res. 506, A-00 Modified and Reaffirmed: Res. 501, A-07 Modified: CSAPH Rep. 9, A-08 Reaffirmation A-12 Modified: Res. 08, A-16 Modified: Res. 903, I-17 Modified: Res. 904, I-17 Res. 16, A-18 Reaffirmed: CSAPH Rep. 01, I-18 Reaffirmed: CSAPH Rep. 08, A-24

AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES

Resolution: 415
(A-25)

Introduced by: Minority Affairs Section

Subject: Promoting Child Welfare and Communication Rights in Immigration Detention

Referred to: Reference Committee D

Whereas, detention centers have been shown to increase the risk of depression, anxiety, Post-Traumatic Stress Disorder, injury and abuse, Adverse Childhood Experiences, and chronic conditions exacerbated by lack of access to care amongst detainees[1-4]; and

Whereas, maternal deprivation and family separation through institutionalization increase stress responses in children, hindering brain development and emotional resilience, while comforting touch, such as hugging, has been shown to reduce stress, balance cortisol levels, and support healthy brain development, with daily affective touch proving particularly effective in mitigating attachment disorders and fostering resilience in institutionalized children[5-14]; and

Whereas, despite no formal policies prohibiting detained youth and siblings from hugging, reports reveal detention agents mistakenly enforcing no-touch rules, preventing youth from offering comfort, while such blanket policies ignore the critical need for physical affection to help mitigate the severe trauma of family separation[15-18]; and

Whereas, the American Academy of Pediatrics has stated that the conditions in immigration detention centers are not appropriate for children and can lead to significant psychological and emotional distress[19]; and

Whereas, due to current overcrowding in detention facilities and limited transparency in the immigration court process, many detained individuals in detention centers suffer from cramped living quarters and are unaware of their status in the court proceedings[20,21]; and

Whereas, Office of Refugee Resettlement (ORR) policy mandates placing unaccompanied minors in “the least restrictive setting that is in the best interests of the child” with consideration for special needs, but children with disabilities are disproportionately housed in ORR’s most restrictive placement settings[22]; and

Whereas, immigration detention centers previously allowed free phone calls for detained individuals; however, recent ICE policy changes have caused detainees to pay for phone access despite the nearly nonexistent income of many detained individuals, thus effectively losing access to external communication with social support networks and legal services, a barrier that may impede the detained individual’s right to a fair trial[23-25]; and

Whereas, regular contact with familial and social support networks have been shown to mitigate the many adverse mental health outcomes of detained individuals in detention facilities, such as depression, anxiety, and post-traumatic stress disorder[26]; and

Whereas, The National Institutes of Corrections suggests that people in correctional facilities should have free, unfettered access to telephone and mail communication to their family members, support system, and legal counsel[27]; and

Whereas, current AMA policy prioritizes health disparities faced by immigrant communities (H-350.957); and

Whereas, the limited communication access offered to detainees based on payment of monetary fees exacerbates the unique health conditions in immigrants, especially those in detention facilities[28]; therefore be it

RESOLVED, that our American Medical Association advocate for the implementation of evidence-based, child-centered, and trauma-informed policies across all detention centers, ensuring detained minors have access to developmentally appropriate socioemotional care, including physical contact, and for all detained people, free, unfettered communication access including regular in-person communication, phone calls, and letters (Directive to Take Action); and be it further

RESOLVED, that our AMA support efforts to address and mitigate concerns and accusations of child abuse and neglect in detention centers. (New HOD Policy)

Fiscal Note: Modest – between $1,000 - $5,000

Date Received: 4/21/25

REFERENCES

1. Sirota AF, Crouse V, Dreier A. The ACE of ICE: How Current Immigration Enforcement and Deportation Hurts Children. North Carolina Justice Center. Published June 27, 2023. Accessed August 25, 2024. https://www.ncjustice.org/publications/the-ace-of-ice-how-current-immigration-enforcement-and-deportation-hurts-children/
2. Cohodes EM, Kribakaran S, Odriozola P, et al. Migration-related trauma and mental health among migrant children emigrating from Mexico and Central America to the United States: Effects on developmental neurobiology and implications for policy. Dev Psychobiol. 2021;63(6):e22158. doi:10.1002/dev.22158
3. National Immigrant Justice Center. Mental Health in Detention. Published 2024. Accessed August 25, 2024. https://immigrantjustice.org/issues/mental-health-detention
4. Helen Bamber Foundation. Impact of Detention: Research Summary. Published September 2022. Accessed August 25, 2024. https://www.helenbamber.org/sites/default/files/2022-09/Impact%20of%20detention%20research%20summary%20Final.pdf
5. Feldman R, Singer M, Zagoory O. Touch Attenuates Infants' Physiological Reactivity to Stress. Dev Sci. 2010;13(2):271-278. doi:10.1111/j.1467-7687.2009.00890.x. Accessed August 25, 2024. https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1467-7687.2009.00890.x
6. Stanton ME, Wallstrom J, Levine S. Maternal Contact Inhibits Pituitary-Adrenal Stress Responses in Prewanling Rats. Dev Psychobiol. 1987;20(2):131-145. doi:10.1002/dev.420200203. Accessed August 25, 2024. https://pubmed.ncbi.nlm.nih.gov/3582776/
7. van Oers HJ, de Kloet ER, Whelan T, Levine S. Maternal deprivation effect on the infant's neural stress markers is reversed by tactile stimulation and feeding but not by suppressing corticosterone. J Neurosci. 1998;18(23):10171-10179. doi:10.1523/JNEUROSCI.18-23-10171. Accessed August 25, 2024. https://pubmed.ncbi.nlm.nih.gov/9822770/
8. Dobrova-Krol NA, van IJzendoorn MH, Bakermans-Kranenburg MJ, Cyr C, Juffer F. Physical Growth Delays and Stress Dysregulation in Stunted and Non-Stunted Ukrainian Institution-Reared Children. Physiol Behav. 2008;94(4):637-645. doi:10.1016/j.physbeh.2008.07.018. Accessed August 25, 2024. https://www.sciencedirect.com/science/article/pii/S0163638308000404
9. Gunnar MR, Donzella B. Social Regulation of Cortisol Levels in Early Human Development. Psychoneuroendocrinology. 2002;27(1-2):199-220. doi:10.1016/S0306-4530(01)00045-2. Accessed August 25, 2024. https://www.sciencedirect.com/science/article/pii/S0306453001000452

10. Gunnar MR, Bowen M. What Was Learned from Studying the Effects of Early Institutional Deprivation. Horm Behav. 2021;131:105942. doi:10.1016/j.yhbeh.2021.105942. Accessed August 25, 2024. https://www.sciencedirect.com/science/article/pii/S0091305721001714
11. Lahousen T, Unterrainer HF, Kapfhammer HP. Psychobiology of Attachment and Trauma—Some General Remarks From a Clinical Perspective. Front Psychiatry. 2019;10:914. Published December 12, 2019. doi:10.3389/fpsyt.2019.00914. Accessed August 25, 2024. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6920243/
12. Cassidy J, Jones JD, Shaver PR. Contributions of Attachment Theory and Research: A Framework for Future Research, Translation, and Policy. Dev Psychopathol. 2013;25(4 Pt 2):1415-1434. doi:10.1017/S0954579413000699. Accessed August 25, 2024. https://ncbi.nlm.nih.gov/pmc/articles/PMC4085672/
13. von Werthern M, Robjant K, Chui Z, et al. The Impact of Immigration Detention on Mental Health: A Systematic Review. BMC Psychiatry. 2018;18:382. doi:10.1186/s12888-018-1945-y. Accessed August 25, 2024. https://bmcpsychiatry.biomedcentral.com/articles/10.1186/s12888-018-1945-y
14. Nikolaeva EI, Dydenkova EA, Mayorova LA, Portnova GV. The impact of daily affective touch on cortisol levels in institutionalized & fostered children. Physiol Behav. 2024;277:114479. doi:10.1016/j.physbeh.2024.114479
15. Phillips C. Reports Have Spread That Shelter Staff Can't Comfort Migrant Children. Rules Aren't That Simple. The Washington Post. Published June 20, 2018. Accessed August 25, 2024. https://www.washingtonpost.com/news/post-nation/wp/2018/06/20/reports-have-spread-that-shelter-staff-cant-comfort-migrant-children-rules-arent-that-simple/
16. Fetters A. The Exceptional Cruelty of a No-Hugging Policy. The Atlantic. Published June 19, 2018. Accessed August 25, 2024. https://www.theatlantic.com/family/archive/2018/06/family-separation-no-hugging-policy/563294/
17. Burke G, Mendoza M. At least 3 "tender age" shelters set up for child migrants. AP News. Published June 20, 2018. Accessed August 25, 2024. https://apnews.com/article/north-america-us-news-ap-top-news-mi-state-wire-immigration-dc0c9a5134d14862ba7c7ad9a811160e
18. Linton JM, Griffin M, Shapiro AJ, Council on Community Pediatrics, Chilton LA, Flanagan PJ, Dilley KJ, Duffee JH, Green AE, Gutierrez JR, Keane VA, Krugman SD, McKelvey CD, Nelson JL. Detention of Immigrant Children. Pediatrics. 2017;139(5). doi:10.1542/peds.2017-0483. Accessed August 25, 2024. https://publications.aap.org/pediatrics/article/139/5/e20170483/38727/Detention-of-Immigrant-Children
19. https://www.aacap.org/AACAP/Policy_Statements/2018/Separating_Immigrant_Children_From_Their_Families.aspx
20. Shah A. Without Access to Counsel, Detained Immigrants Face Increased Risks of Prolonged Detention and Unlawful Deportation | News & Commentary. American Civil Liberties Union. Published June 22, 2022. https://www.aclu.org/news/immigrants-rights/without-access-to-counsel-detained-immigrants-face-increased-risks-of-prolonged-detention-and-unlawful-deportation
21. American Oversight. Conditions in Migrant Detention Centers. American Oversight. Published January 20, 2021. https://www.americanoversight.org/investigation/conditions-in-migrant-detention-centers
22. The Detention of Immigrant Children with Disabilities in California: A Snapshot the Detention of Immigrant Children with Disabilities in California: A Snapshot. https://www.ndrn.org/wp-content/uploads/2020/03/Detention_of_Immigrant_Children.pdf
23. Perez C. Loss of Free Phone Access – A Critical Lifeline in Detention – Triggers Hunger Strikes. Detention Watch Network. Published June 13, 2024. Accessed July 17, 2024. https://www.detentionwatchnetwork.org/pressroom/releases/2024/loss-free-phone-access-critical-lifeline-detention-triggers-hunger-strikes
24. Morrissey K. Detained Immigrants Lose a Lifeline as ICE Ends Free Phone Time Program. Capital & Main. Published April 14, 2024. Accessed August 25, 2024. https://nmpoliticalreport.com/news/detained-immigrants-lose-a-lifeline-as-ice-ends-free-phone-time-program/
25. Conlin M, Cooke K. $11 toothpaste: Immigrants Pay Big for Basics at private ice lock-ups | reuters. Reuters. January 18, 2019. Accessed July 17, 2024. https://www.reuters.com/article/world/11-toothpaste-immigrants-pay-big-for-basics-at-private-ice-lock-ups-idUSKCN1PC0DX/.
26. Wang L. Research roundup: The positive impacts of family contact for incarcerated people and their families. Prison Policy Initiative. Published December 21, 2021. https://www.prisonpolicy.org/blog/2021/12/21/family_contact/
27. Umpierre M. Rights and Responsibilities of Youth, Families, and Staff. In: National Institute of Corrections. Desktop Guide to Good Juvenile Detention Practice. Accessed August 25, 2024. https://info.nicic.gov/desktop-guide/principles-and-concepts/ch5-rights-and-responsibilities-youth-families-and-staff
28. Detention Watch Network. Loss of Free Phone Access, a Critical Lifeline in Detention, Triggers Hunger Strikes. Published August 23, 2024. Accessed August 25, 2024. https://www.detentionwatchnetwork.org/pressroom/releases/2024/loss-free-phone-access-critical-lifeline-detention-triggers-hunger-strikes

RELEVANT AMA POLICY

H-350.955 Care of Women and Children in Family Immigration Detention

1. Our American Medical Association recognizes the negative health consequences of the detention of families seeking safe haven.
2. Due to the negative health consequences of detention, our AMA opposes the expansion of family immigration detention in the United States.
3. Our AMA opposes the separation of parents from their children who are detained while seeking safe haven.
4. Our AMA will advocate for access to health care for women and children in immigration detention.

5. Our AMA will advocate for the preferential use of alternatives to detention programs that respect the human dignity of immigrants, migrants, and asylum seekers who are in the custody of federal agencies. [Res. 002, A-17; Appended: Res. 218, A-21; Reaffirmed: Res. 234, A-22]

H-350.957 Addressing Immigrant Health Disparities

1. Our American Medical Association recognizes the unique health needs of refugees, and encourages the exploration of issues related to refugee health and support legislation and policies that address the unique health needs of refugees.
2. Our AMA: (A) urges federal and state government agencies to ensure standard public health screening and indicated prevention and treatment for immigrant children, regardless of legal status, based on medical evidence and disease epidemiology; (B) advocates for and publicizes medically accurate information to reduce anxiety, fear, and marginalization of specific populations; and (C) advocates for policies to make available and effectively deploy resources needed to eliminate health disparities affecting immigrants, refugees or asylees.
3. Our AMA calls for asylum seekers to receive medically-appropriate care, including vaccinations, in a patient centered, language and culturally appropriate way upon presentation for asylum regardless of country of origin.
4. Our AMA supports efforts to train physicians to conduct medical and psychiatric forensic evaluations for asylum seekers.
5. Our AMA supports medical education that addresses the challenges of life-altering events experienced by asylum seekers.
6. Our AMA urges physicians to provide medically-appropriate care for asylum seekers.
7. Our AMA encourages physicians to seek out organizations or agencies in need of physicians to provide these services.
8. Our AMA encourages provision of resources to assist people seeking asylum, including social and legal services. [Res. 804, I-09; Appended: Res. 409, A-15; Reaffirmation: A-19; Appended: Res. 423, A-19; Reaffirmation: I-19; Modified: BOT Rep. 08, I-24]

D-160.921 Presence and Enforcement Actions of Immigration and Customs Enforcement (ICE) in Healthcare

Our AMA: (1) advocates for and supports legislative efforts to designate healthcare facilities as sensitive locations by law; (2) will work with appropriate stakeholders to educate medical providers on the rights of undocumented patients while receiving medical care, and the designation of healthcare facilities as sensitive locations where U.S. Immigration and Customs Enforcement (ICE) enforcement actions should not occur; (3) encourages healthcare facilities to clearly demonstrate and promote their status as sensitive locations; and (4) opposes the presence of ICE enforcement at healthcare facilities. [Res. 232, I-17]

H-315.966 Patient and Physician Rights Regarding Immigration Status

Our AMA supports protections that prohibit U.S. Immigration and Customs Enforcement, U.S. Customs and Border Protection, or other law enforcement agencies from utilizing information from medical records to pursue immigration enforcement actions against patients who are undocumented. [Res. 018, A-17]

D-350.983 Improving Medical Care in Immigrant Detention Centers

Our AMA will: (1) issue a public statement urging U.S. Immigrations and Customs Enforcement Office of Detention Oversight to (a) revise its medical standards governing the conditions of confinement at detention facilities to meet those set by the National Commission on Correctional Health Care, (b) take necessary steps to achieve full compliance with these standards, and (c) track complaints related to substandard healthcare quality; (2) recommend the U.S. Immigrations and Customs Enforcement refrain from partnerships with private institutions whose facilities do not meet the standards of medical, mental, and dental care as guided by the National Commission on Correctional Health Care; and (3) advocate for access to health care for individuals in immigration detention. [Res. 017, A-17]

H-65.958 Opposing Office of Refugee Resettlement's Use of Medical and Psychiatric Records for Evidence in Immigration Court

Our AMA will: (1) advocate that healthcare services provided to minors in immigrant detention and border patrol stations focus solely on the health and well-being of the children; and (2) condemn the use of confidential medical and psychological records and social work case files as evidence in immigration courts without patient consent. [Res. 013, A-19]

D-350.975 Immigration Status is a Public Health Issue

1. Our American Medical Association declares that immigration status is a public health issue that requires a comprehensive public health response and solution.
2. Our AMA recognizes interpersonal, institutional, structural, and systemic factors that negatively affect immigrants' health.
3. Our AMA will promote the development and implementation of educational resources for healthcare professionals to better understand health and healthcare challenges specific for the immigrant population.
4. Our AMA will support the development and implementation of public health policies and programs that aim to improve access to healthcare and minimize systemic health barriers for immigrant communities. [Res. 904, I-22Reaffirmed: Res. 210, A-23]

D-60.968 Ensuring Access to Health Care, Mental Health Care, Legal and Social Services for Unaccompanied Minors and Other Recently Immigrated Children and Youth

Our American Medical Association will work with medical societies and all clinicians to (i) work together with other child-serving sectors to ensure that new immigrant children receive timely and age-appropriate services that support their health and well-being, and (ii) secure federal, state, and other funding sources to support those services. [Res. 8, I-14BOT Rep. 09, A-24]

AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES

Resolution: 416
A-25

Introduced by: Minority Affairs Section

Subject: Culturally and Religiously Inclusive Food Options

Referred to: Reference Committee D

Whereas, access to culturally and religiously appropriate food is a fundamental aspect of dignified, patient-centered care, encompassing Halal, Kosher, and other foods that honor the heritage, beliefs, and dietary practices of diverse populations; and

Whereas, nearly one in four individuals in the United States identifies as part of an ethnic minority group, and by 2044, minority groups are estimated to make up 50% of the US population, highlighting the need for more inclusive healthcare practices for patients[1-2]; and

Whereas, studies have demonstrated that offering culturally appropriate foods in healthcare settings enhances nutritional intake, leading to better overall health outcomes[3]; and

Whereas, having culturally and religiously appropriate food options improves patient trust and satisfaction, directly improving well-being[4]; and

Whereas, providing meals that align with patients' cultural and religious beliefs is not only essential for fostering equitable, inclusive, and patient-centered healthcare services but is also shown to have a direct positive correlation to their health[5-6]; and

Whereas, a study in Malaysia found that Muslim patient satisfaction significantly increased when halal food options were made available, demonstrating the importance of culturally aligned dietary accommodations[7]; and

Whereas, healthcare provider knowledge on halal food and dietary restrictions are simplistic and more policies are needed to educate staff to accommodate Muslim patients[8]; and

Whereas, institutions and hospitals report some of the greatest perceived barriers to implementing diverse cuisines are due to the time it takes to learn and cook additional foods, as well as the willingness of administrators and staff to implement culturally inclusive foods[9]; and

Whereas, one study noted that individuals who handle food at the hospital have varying knowledge about what a gluten-free meal is which could affect the safety of patients with celiac disease[10]; and

Whereas, adopting halal food options expands our reach to a global patient population, as seen in South Korea, which attracts many medical tourists from the Middle East[11]; and

Whereas, New York City Health + Hospitals implemented an innovative menu featuring plant-based culturally sensitive foods that yielded a 95% acceptance from patients in addition to a $0.59 cost reduction per meal[12]; and

Whereas, renowned American hospital systems such as the Johns Hopkins Health System have implemented significant accommodations for Jewish patients by providing a fully stocked Kosher Food Pantry for both patients and their families in collaboration with the Bikur Cholim of Baltimore, a local Jewish volunteer group[13-14]; and

Whereas, the American Medical Association has written a letter to the U.S. Food and Drug Administration advocating for clearer labeling of foods by their culture or religion, for example, as Kosher or Halal[15]; and

Whereas, the AMA is committed to embedding racial justice and advancing health equity, as outlined in its 2024–2025 Organizational Strategic Plan to Advance Health Equity, which emphasizes the need for equitable healthcare practices that respect and accommodate the diverse cultural and religious backgrounds of patients[16]; and

Whereas**,** AMA policy H-150.949 states the AMA already encourages healthy and nutritious food options in health care facility cafeteria and inpatient meal menus, but does not include support for culturally and religiously sensitive food options[17]; therefore be it

RESOLVED, that our American Medical Association amend Policy H-150.949 “Healthful Food Options in Health Care Facilities” by addition to read as follows:

Healthful <u>Culturally and Religiously Inclusive</u> Food Options in Health Care Facilities H-150.949

1. Our American Medical Association encourages healthful<u>, culturally and religiously inclusive</u> food options be available, at reasonable prices and easily accessible, on the premises of health care facilities.
2. Our AMA hereby calls on all health care facilities to improve the health of patients, staff, and visitors by:
    a. Providing a variety of healthy food, including plant-based meals, and meals that are low in saturated and trans fat, sodium, and added sugars.
    b. Eliminating processed meats from menus.
    c. Providing and promoting healthy beverages.
    d. <u>Improving access to culturally and religiously inclusive food options.</u>
3. Our AMA hereby calls for health care facility cafeterias and inpatient meal menus to publish nutrition information.
4. Our AMA will work with relevant stakeholders to define “access to food” for medical trainees to include overnight access to fresh<u>, culturally and religiously inclusive</u> food and healthy meal options within all training hospitals.

(Modify Current HOD Policy)

Fiscal Note: Minimal – less than $1,000

Received: 4/21/25

REFERENCES

1. Coronado F, Beck AJ, Shah G, Young JL, Sellers K, Leider JP. Understanding the Dynamics of Diversity in the Public Health Workforce. J Public Health Manag Pract. 2020;26(4):389-392. doi:10.1097/PHH.0000000000001075
2. Kai J, Beavan J, Faull C, Dodson L, Gill P, Beighton A. Professional uncertainty and disempowerment responding to ethnic diversity in health care: a qualitative study. PLoS Med. 2007;4(11):e323. doi:10.1371/journal.pmed.0040323
3. Alpers LM. Hospital food: When nurses' and ethnic minority patients' understanding of Islamic dietary needs differ. Nurs Open. 2019;6(4):1455-1463. Published 2019 Aug 10. doi:10.1002/nop2.343
4. Raj M, Quintero Silva L, Khan N. Building an Inclusive Health Care System Requires Offering Culturally Inclusive Foods in Health Care Environments. J Acad Nutr Diet. 2024;124(6):669-673. doi:10.1016/j.jand.2023.12.013
5. AMA J Ethics. 2023;25(4):E256-263. doi: 10.1001/amajethics.2023.256.

6. Mozaffarian D, Blanck HM, Garfield KM, Wassung A, Petersen R. A Food is Medicine approach to achieve nutrition security and improve health. Nat Med. 2022;28(11):2238-2240. doi:10.1038/s41591-022-02027-3
7. Rahman MK, Zainol NR, Nawi NC, Patwary AK, Zulkifli WFW, Haque MM. Halal Healthcare Services: Patients' Satisfaction and Word of Mouth Lesson from Islamic-Friendly Hospitals. Sustainability. 2023; 15(2):1493. https://doi.org/10.3390/su15021493
8. Alpers LM. Hospital food: When nurses' and ethnic minority patients' understanding of Islamic dietary needs differ. Nurs Open. 2019;6(4):1455-1463. Published 2019 Aug 10. doi:10.1002/nop2.343
9. Raj M, Oleschuk M, Chapman-Novakofski K, Levine SK. Perceived Facilitators and Barriers to Implementing Culturally Inclusive Diets into Hospitals and Long-Term Care Facilities. J Am Med Dir Assoc. 2023;24(10):1503-1507. doi:10.1016/j.jamda.2023.04.018
10. Zhou F MD, Mullen T MD, FRCPC, Kulai T MD, FRCPC, Rashid M MD, MEd, FRCPC. Assessment of Knowledge of Gluten-Free Diet Amongst Food Handlers in Hospitals. Can J Diet Pract Res. 2023;84(2):63-68. doi:10.3148/cjdpr-2022-029
11. Alfarajat L. Halal Food and Medical Tourism: Muslim Patients' Experiences and Satisfaction in South Korea. J Relig Health. 2024;63(5):3291-3310. doi:10.1007/s10943-022-01727-x
12. Morgenstern S, Redwood M, Herby A. An Innovative Program for Hospital Nutrition. Am J Lifestyle Med. Published online September 12, 2024. doi:10.1177/15598276241283158
13. Patient Meals. Johns Hopkins Medicine. Accessed April 6, 2025. https://www.hopkinsmedicine.org/patient-care/patients-visitors/admission-discharge/patient-meals.
14. Bikur Cholim of Baltimore - Johns Hopkins Hospital. Bikur Cholim of Baltimore. Accessed April 6, 2025. https://baltimorebikurcholim.org/hospitals/johns-hopkins-hospital/.
15. Madara J. Docket No. FDA-2019-N-4824, Office of Minority Health and Health Equity Strategic Priorities; Establishment of a Public Docket; Request for Comments. Published online February 28, 2020. Available at https://searchlf.ama-assn.org/letter/documentDownload?uri=/unstructured/binary/letter/LETTERS/2020-2-28-Letter-to-Hahn-re-CHE-FDA-OMHHE-Equity.pdf
16. American Medical Association. 2024-2025 AMA Organizational Strategic Plan to Advance Health Equity. Available at https://www.ama-assn.org/about/leadership/ama-s-strategicplan-embed-racial-justice-and-advance-health-equity.
17. American Medical Association. Healthful Food Options in Health Care Facilities H-150.949. AMA Policy Finder. Published June 2021. https://policysearch.ama-assn.org/policyfinder/detail/H-150.949?uri=%2FAMADoc%2FHOD.xml-0-627.xml

RELEVANT AMA POLICY

H-150.949 Healthful Food Options in Health Care Facilities

1. Our American Medical Association encourages healthful food options be available, at reasonable prices and easily accessible, on the premises of health care facilities.
2. Our AMA hereby calls on all health care facilities to improve the health of patients, staff, and visitors by:
    a. Providing a variety of healthy food, including plant-based meals, and meals that are low in saturated and trans fat, sodium, and added sugars.
    b. Eliminating processed meats from menus.
    c. Providing and promoting healthy beverages.
3. Our AMA hereby calls for health care facility cafeterias and inpatient meal menus to publish nutrition information.
4. Our AMA will work with relevant stakeholders to define "access to food" for medical trainees to include overnight access to fresh food and healthy meal options within all training hospitals. [Res. 410, A-04; Reaffirmed: CSAPH Rep. 1, A-14; Appended: Res. 406, A-17; Modified: Res. 425, A-18; Modified: Res. 904, I-19; Appended: Res. 304, A-21]

AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES

Resolution: 417
(A-25)

Introduced by: Minority Affairs Section, National Medical Association, American Academy of Addiction Psychiatry, American Academy of Family Physicians, American Association of Public Health Physicians, American College of Obstetricians and Gynecologists, American Psychiatric Association, American Society of Addiction Medicine

Subject: Updating Alcohol Health Warning Labels to Reflect Evidence-Based Health Risks and Supporting National Labeling and Signage Policy Reform

Referred to: Reference Committee D

Whereas, alcohol is classified by both the World Health Organization and the U.S. National Cancer Institute as a Group 1 carcinogen, causally linked to at least seven types of cancer, including breast, liver, and colorectal cancers[1-2]; and

Whereas, public awareness of alcohol's carcinogenicity remains low, and the federally mandated warning under the Alcoholic Beverage Labeling Act (ABLA) of 1988 has not been updated in over 35 years, currently limited to warnings about pregnancy and impaired driving[3]; and

Whereas, research demonstrates that alcohol health warning labels, particularly those focused on cancer risk, can increase consumer awareness, reduce misperceptions, improve knowledge, influence behavioral intentions, and reduce alcohol consumption, including findings from a quasi-experimental study in Yukon, Canada, which showed statistically significant improvements in awareness and purchasing behavior in response to warning labels[4-9]; and

Whereas, systematic reviews, international policy analyses, and experimental studies in the U.S. and globally suggest that health warnings using direct language and clear visual design, particularly when paired with point-of-sale signage, have a stronger impact on risk perception, can disrupt the social normalization of alcohol use, and serve as a cost-effective, population-wide public health intervention[7-8, 10]; and

Whereas, jurisdictions including California (Prop 65), Alaska (SB15/HB37), and countries such as Ireland (Public Health Alcohol Act, 2018) and South Korea (National Health Promotion Act, 2016) have implemented or proposed container labels and/or point-of-sale signage highlighting alcohol's link to cancer and other health harms[11-15]; and

Whereas, public support for clearer, science-based health warnings on alcohol products and signage is consistently high, especially when messages are prominently displayed and focus on known harms such as cancer, liver disease, and fetal injury[9,16,17]; and

Whereas, the American Medical Association has longstanding policies supporting health and nutritional labeling in other domains - most notably tobacco, nicotine, and food products - and existing AMA Policy H-30.940 supports nutritional labeling of alcohol products, but does not yet explicitly address alcohol's health harms such as cancer; and

Whereas, the AMA publicly supported the January 2025 U.S. Surgeon General's Advisory on alcohol's cancer-causing risk, reinforcing the importance of accurate public health communication[18,19]; and

Whereas, the AMA's February 6, 2025 public comment letter on the 2025–2030 Dietary Guidelines for Americans urged stronger federal recommendations on alcohol use, highlighting that the risk of harm increases with greater alcohol consumption[20]; therefore be it

RESOLVED, that our American Medical Association support the modernization of alcohol health warning labels to reflect the best available science, including explicit acknowledgment of alcohol's causal link to cancer and the evidence that the risk of harm increases with greater alcohol consumption (New HOD Policy); and be it further

RESOLVED, that our AMA support federal and state policy measures requiring clear, evidence-based point-of-sale warning signage in physical and digital retail environments where alcohol is sold (New HOD Policy); and be it further

RESOLVED, that our AMA support research and evaluation initiatives to study the impact of alcohol warning labels and signage on consumer knowledge and behavior, health outcomes, and alcohol sales patterns, with ongoing assessment to ensure future labeling interventions are evidence-informed and population-appropriate. (New HOD Policy)

Fiscal Note: Minimal – less than $1,000

Received: 4/21/25

REFERENCES

1. International Agency for Research on Cancer (IARC). *Alcohol Drinking*. IARC Monographs on the Evaluation of Carcinogenic Risks to Humans. Vol 44. Lyon, France: IARC; 1988:1-378. PMID: 3236394.
2. National Cancer Institute, Division of Cancer Control and Population Sciences. Alcohol and cancer. https://cancercontrol.cancer.gov/brp/hbrb/alcohol-and-cancer. Accessed March 23, 2025.
3. Alcoholic Beverage Labeling Act (ABLA) of 1988 (27 U.S.C. §215).
4. Zhao J, Stockwell T, Martin G, et al. The effects of alcohol warning labels on population alcohol consumption: an interrupted time series analysis of alcohol sales in Yukon, Canada. *J Stud Alcohol Drugs.* 2020;81(2):225-237.
5. Weerasinghe A, Schoueri-Mychasiw N, Vallance K, et al. Consumer awareness and responses to alcohol labels: results from a quasi-experimental study in Yukon, Canada. Int J Environ Res Public Health. 2020;17(2):398. doi:10.3390/ijerph17020398
6. Hall MG, Grummon AH, Maynard OM, Kameny MR, Jenson D, Brewer NT. Impact of cancer warning statements on alcohol consumption intentions: a randomized experiment with U.S. adults. Prev Med. 2020;132:105984. doi:10.1016/j.ypmed.2020.105984
7. Clarke N, Pechey R, Mantzari E, Blackwell AKM, Marteau TM. Impact of health warning labels on selection and consumption of food and alcohol products: a systematic review with meta-analysis. Health Psychol Rev. 2021;15(1):43-67. doi:10.1080/17437199.2019.1701506
8. Petticrew M, Maani Hessari N, Knai C, Weiderpass E. Warnings on alcohol: a disjointed response to a global health challenge. Lancet. 2020;395(10231):1027-1028. doi:10.1016/S0140-6736(20)30563-3
9. Bui D, Grummon AH, Hall MG, et al. Perceptions of health warning labels on alcoholic beverages: a cross-sectional survey of U.S. adults. Prev Med. 2023;175:107628. doi:10.1016/j.ypmed.2023.107628
10. Wigg S, Stafford LD. Health warnings on alcoholic beverages: perceptions of the health risks and intentions towards alcohol consumption. PLoS One. 2016;11(4):e0153027. doi:10.1371/journal.pone.0153027
11. California Office of Environmental Health Hazard Assessment. Proposition 65. https://oehha.ca.gov/proposition-65. Accessed March 23, 2025.
12. Alaska State Legislature. SB 15: Alcoholic Beverages; Warning Labels. https://www.akleg.gov/basis/Bill/Detail/34?Root=SB15. Accessed March 23, 2025.
13. Alaska State Legislature. HB 37: Alcoholic Beverages; Warning Labels. https://www.akleg.gov/basis/Bill/Detail/34?Root=hb37. Accessed March 23, 2025.
14. Public Health (Alcohol) (Labelling) Regulations 2023 (S.I. No. 249/2023) (Ireland). https://www.irishstatutebook.ie/eli/2023/si/249/made/en/print. Accessed March 23, 2025.
15. Ministry of Government Legislation, Republic of Korea. National Health Promotion Act. https://elaw.klri.re.kr/eng_service/lawView.do?hseq=43278&lang=ENG. Accessed March 23, 2025.
16. Pew Research Center. How Americans view alcohol's benefits and risks. Published March 7, 2025. Accessed March 23, 2025. https://www.pewresearch.org/short-reads/2025/03/07/how-americans-view-alcohols-benefits-and-risks/

17. Rubin R. Drinking alcohol causes certain cancers, so why don't labels warn about that? JAMA. 2025;333(10):832-834. doi:10.1001/jama.2025.0073
18. U.S. Department of Health and Human Services. Alcohol and Cancer: A Report of the Surgeon General. https://www.hhs.gov/surgeongeneral/reports-and-publications/alcohol-cancer/index.html. Accessed March 23, 2025.
19. American Medical Association. AMA applauds Surgeon General advisory on alcohol's cancer-causing risk. Published January 3, 2025. https://www.ama-assn.org/press-center/press-releases/ama-applauds-surgeon-general-advisory-alcohol-cancer-causing-risk. Accessed March 23, 2025.
20. American Medical Association. Comment letter to HHS and USDA re: Scientific Report of the 2025 Dietary Guidelines Advisory Committee. February 6, 2025. https://searchlf.ama-assn.org/letter/documentDownload?uri=/unstructured/binary/letter/LETTERS/lfct.zip/2025-2-6-Letter-to-Fink-and-Washington-re-Dietary-Guidelines-v2.pdf. Accessed March 23, 2025.

RELEVANT AMA POLICY

H-30.940 AMA Policy Consolidation: Labeling Advertising, and Promotion of Alcoholic Beverages

1. Our American Medical Association:
    a. supports accurate and appropriate labeling disclosing the alcohol content of all beverages, including so-called "nonalcoholic" beer and other substances as well, including over-the-counter and prescription medications, with removal of "nonalcoholic" from the label of any substance containing any alcohol.
    b. supports efforts to educate the public and consumers about the alcohol content of so-called "nonalcoholic" beverages and other substances, including medications, especially as related to consumption by minors.
    c. urges the Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) and other appropriate federal regulatory agencies to continue to reject proposals by the alcoholic beverage industry for authorization to place beneficial health claims for its products on container labels.
    d. urges the development of federal legislation to require nutritional labels on alcoholic beverages in accordance with the Nutritional Labeling and Education Act.
2. Our AMA:
    a. expresses its strong disapproval of any consumption of "nonalcoholic beer" by persons under 21 years of age, which creates an image of drinking alcoholic beverages and thereby may encourage the illegal underaged use of alcohol.
    b. recommends that health education labels be used on all alcoholic beverage containers and in all alcoholic beverage advertising (with the messages focusing on the hazards of alcohol consumption by specific population groups especially at risk, such as pregnant people, as well as the dangers of irresponsible use to all sectors of the populace).
    c. recommends that the alcohol beverage industry be encouraged to accurately label all product containers as to ingredients, preservatives, and ethanol content (by percent, rather than by proof).
3. Our AMA actively supports and will work for a total statutory prohibition of advertising of all alcoholic beverages except for inside retail or wholesale outlets. Pursuant to that goal, our AMA:
    a. supports federal and/or state oversight for all forms of alcohol advertising.
    b. supports continued research, educational, and promotional activities dealing with issues of alcohol advertising and health education to provide more definitive evidence on whether, and in what manner, advertising contributes to alcohol abuse.
    c. opposes any form of advertising which links alcoholic products to agents of socialization in order to promote drinking.
    d. will work with state and local medical societies to support the elimination of advertising of alcoholic beverages from all mass transit systems.
    e. urges college and university authorities to bar alcoholic beverage companies from sponsoring athletic events, music concerts, cultural events, and parties on school campuses, and from advertising their products or their logo in school publications.
    f. urges its constituent state associations to support state legislation to bar the promotion of alcoholic beverage consumption on school campuses and in advertising in school publications.
4. Our AMA:
    a. urges producers and distributors of alcoholic beverages to discontinue all advertising directed toward youth, including promotions on high school and college campuses.

b. urges advertisers and broadcasters to cooperate in eliminating television program content that depicts the irresponsible use of alcohol without showing its adverse consequences (examples of such use include driving after drinking, drinking while pregnant, or drinking to enhance performance or win social acceptance).
c. supports continued warnings against the irresponsible use of alcohol and challenges the liquor, beer, and wine trade groups to include in their advertising specific warnings against driving after drinking.
d. commends those automobile and alcoholic beverage companies that have advertised against driving while under the influence of alcohol. [CSA Rep. 1, A-04; Reaffirmation A-08; Reaffirmed: CSAPH Rep. 01, A-18; Modified: Res. 427, A-22; Modified: Res. 918, I-22; Modified: Speakers Rep. 02, I-24]

H-420.977 Posting of Warnings Against Use of Alcohol During Pregnancy
The AMA supports seeking appropriate federal or state legislation to require that warning signs stating that drinking alcoholic beverages during pregnancy can cause birth defects be posted in a prominently visible location in all places where alcoholic beverages are sold. [Sub. Res. 123, I-88; Reaffirmed: Sunset Report, I-98; Reaffirmed: CSAPH Rep. 2, A-08; Reaffirmed: CSAPH Rep. 01, A-18]

H-30.934 Alcohol Consumption and Health
Our AMA recognizes that alcohol consumption at any level, not just heavy alcohol use or addictive alcohol use, is a modifiable risk factor for cancer. [Res. 516, A-19]

AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES

Resolution 418
(A-25)

Introduced by: Medical Student Section, Oregon, Washington

Subject: AMA Study on Plastic Pollution Reduction

Referred to: Reference Committee D

Whereas, plastic products comprise up to 13% of the planet's total carbon budget, prompting global concerns about climate change, marine life, and human health[1]; and

Whereas, exposure to toxic chemicals that are found in plastic products during manufacturing, usage, and disposal have been associated with adverse human health outcomes such as cancers, birth defects, and endocrine and reproductive disruptions[2]; and

Whereas, studies have shown a significant relationship between urine levels of bisphenol A, a plastic metabolite, and cardiovascular disease, type II diabetes, and liver enzyme abnormalities[2, 3]; and

Whereas, implementation of plastic product consumption accountability measures such as taxes and fees is shown to be one of the most successful initiatives to reduce plastic products consumption, and to promote alternatives to plastic products[4-10]; and

Whereas, the $1.3 billion revenue generated by leveraging taxes against single-use plastics in Spain, Italy, and the United Kingdoms provided funds for renewables advocacy campaigns, plastic alternatives research, and offsetting the costs associated with transitioning to clean energy[11]; and

Whereas, the United States loses $255 million in revenue annually due to marine plastic pollution and paid an estimate of $24.5 billion of taxpayer money in 2019 for waste management and cleaning[12, 13]; and

Whereas, avoiding a plastic tax on single-use consumer goods such as cups, straws, bottles, and caps by switching to reusable products can save the US single consumer $5,279 and businesses up to $10 billion annually[13,14]; and

Whereas, this issue could benefit from American Medical Association study and involvement given its significant implications on patient health, and opportunities for state and federal regulations; therefore be it

RESOLVED, that our American Medical Association will study and report back with policy recommendations on ways to reduce plastic pollution and its impact on climate change and health, including but not limited to federal, state, and local taxes and limitations on the use of single-use plastic consumer products and other types of plastic, interventions to reduce microplastics, and alternatives to plastic. (Directive to Take Action)

Fiscal Note: Modest – between $1,000 - $5,000

Date Received: 4/10/25

REFERENCES

1. Sharma S, Sharma V, Chatterjee S. Contribution of plastic and microplastic to global climate change and their conjoining impacts on the environment - A review. Science of The Total Environment. 2023;875:162627. doi:https://doi.org/10.1016/j.scitotenv.2023.162627
2. Rustagi N, Pradhan SK, Singh R. Public health impact of plastics: An overview. Indian J Occup Environ Med. 2011;15(3):100-103. doi:10.4103/0019-5278.93198
3. Thompson RC, Moore CJ, vom Saal FS, Swan SH. Plastics, the environment and human health: current consensus and future trends. Philos Trans R Soc Lond B Biol Sci. 2009;364(1526):2153-2166. doi:10.1098/rstb.2009.0053
4. Heidbreder LM, Steinhorst J, Schmitt M. Plastic-Free July: An Experimental Study of Limiting and Promoting Factors in Encouraging a Reduction of Single-Use Plastic Consumption. Sustainability. 2020;12(11):4698. doi:https://doi.org/10.3390/su12114698
5. Borg K, Lennox A, Kaufman S, et al. Curbing plastic consumption: A review of single-use plastic behaviour change interventions. Journal of Cleaner Production. 2022;344:131077. doi:https://doi.ogy/marine-plastic-pollution.html
6. 1.Reuse vs Single-use: Economics. Upstream. Accessed September 17, 2023. https://upstreamsolutions.org/reuse-vs-single-use-economics#resources
7. 1.Going Green by Generation (2023) | ConsumerAffairs. www.consumeraffairs.com. https://www.consumeraffairs.com/solar-energy/going-grg/10.1016/j.jclepro.2022.131077
8. Xanthos D, Walker TR. International policies to reduce plastic marine pollution from single-use plastics (plastic bags and microbeads): A review. Marine Pollution Bulletin.
9. Martinho G, Balaia N, Pires A. The Portuguese plastic carrier bag tax: The effects on consumers' behavior. Waste Management. 2017;61:3-12. doi:https://doi.org/10.1016/j.wasman.2017.01.023
10. Senturk G, Dumludag D. An evaluation of the effect of plastic bag fee on consumer behavior: Case of Turkey. Waste Management. 2020;120. doi:https://doi.org/10.1016/j.wasman.2020.10.042
11. Adeyanju GC, Augustine TM, Volkmann S, et al. Effectiveness of intervention on behaviour change against use of non-biodegradable plastic bags: a systematic review. Discover Sustainability. 2021;2(1). doi:https://doi.org/10.1007/s43621-021-00015-0
12. Homonoff T, Nyu, School R, Seybolt C. Skipping The Bag Assessing the impact of Chicago's tax on disposable bags. of Public Service) Lee-Sien Kao. 2018;(ideas42). https://urbanlabs.uchicago.edu/attachments/a2bdfd83de8279fa83d9b2ab2d7fd38c926e3ab6/store/3a763ff7774ea3a6547be38d253c958248bcfb0573c436cc5409d4b82f69/I42-1033_BagTaxPaper_final.pdf
13. Plastic taxes: a guide to new legislation in Europe. ITR. Published February 15, 2023. https://www.internationaltaxreview.com/article/2ba9a65l5p74ycisjwagw/plastic-taxes-a-guide-to-new-legislation-in-europe
14. Marine plastic pollution. Deloitte Insights. Accessed September 17, 2023. https://www2.deloitte.com/za/en/insights/topics/stratereen-by-generation.html

RELEVANT AMA POLICY

Toxic Disposable Consumer Products H-135.940
Our AMA supports federal legislation to create standardized and easily recognizable sites for safe disposal and/or recycling of toxic substances and electronic waste materials in easily accessible locations. [Res. 416, A-08; Reaffirmed: CSAPH Rep. 01, A-18]

Policy to Reduce Waste from Pharmaceutical Sample Packaging H-115.979
Our AMA: (1) supports reducing waste from pharmaceutical sample packaging by making sample containers as small as possible and by using biodegradable and recycled materials whenever possible; and (2) supports the modification of any federal rules or regulations that may be in conflict with this policy. [Res. 508, I-91; Modified: Sunset Report, I-01; Modified: CSAPH Rep. 1, A-11; Reaffirmed: CSAPH Rep. 1, A-21]

Conservation, Recycling and Other "Green" Initiatives G-630.100
AMA policy on conservation and recycling include the following: (1) Our AMA directs its offices to implement conservation-minded practices whenever feasible and to continue to participate in "green" initiatives. (2) It is the policy of our AMA to use recycled paper whenever reasonable for its in-house printed matter and publications, including JAMA, and materials used by the House of Delegates, and that AMA printed material using recycled paper should be labeled as such. (3) During meetings of the American Medical Association House of Delegates, our AMA Sections, and all other AMA meetings, recycling bins, where and when feasible, for white (and where possible colored) paper will be made

prominently available to participants. [CCB/CLRPD Rep. 3, A-12; Modified: Speakers Rep., A-15; Reaffirmed: CCB/CLRPD Rep. 1, A-22]

Declaring Climate Change a Public Health Crisis D-135.966

1. Our American Medical Association declares climate change a public health crisis that threatens the health and well-being of all individuals.
2. Our AMA will protect patients by advocating for policies that:
    a. Limit global warming to no more than 1.5 degrees Celsius.
    b. Reduce US greenhouse gas emissions aimed at a 50 percent reduction in emissions by 2030 and carbon neutrality by 2050.
    c. Support rapid implementation and incentivization of clean energy solutions and significant investments in climate resilience through a climate justice lens.
3. Our AMA will consider signing on to the Department of Health and Human Services Health Care Pledge or making a similar commitment to lower its own greenhouse gas emissions.
4. Our AMA encourages the health sector to lead by example in committing to carbon neutrality by 2050.
5. Our AMA will develop a strategic plan for how we will enact our climate change policies including advocacy priorities and strategies to decarbonize physician practices and the health sector with report back to the House of Delegates at the 2023 Annual Meeting.
6. Our AMA supports the use of international, federal, regional, and state carbon pricing systems as an important tool to reduce global greenhouse gas emissions and achieve net-zero targets. Our AMA recommends that carbon dividends or energy subsidies for low-income households be a key component of any established carbon pricing system, to reduce the potential economic burden on households with lower incomes. [Res. 420, A-22; Appended: CSAPH Rep. 02, I-22; Appended: BOT Rep. 11, I-24]

AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES

Resolution: 419
(A-25)

Introduced by: Medical Student Section

Subject: Advocating for Universal Summer Electronic Benefit Transfer Program for Children (SEBTC)

Referred to: Reference Committee D

Whereas, in 2022, 8.8% of all food-insecure U.S. households included children, and overall food insecurity increased from 10.2% in 2021 to 12.8% in 2022, affecting an additional 4.1 million children, along with bringing forward developmental concerns by parents via screening tests[1-,6]; and

Whereas, food insecurity disproportionately affects children with disabilities, Black, Native American/Alaska Native, other children of color, and children with low socioeconomic status while also being a toxic stressor and is recognized as an Adverse Childhood Experience[7-10]; and

Whereas, access to healthy food early in life improves educational outcomes, promotes good nutrition, and provides significant health benefits to children across all developmental stages by reducing the risk of psychiatric illness, cognitive deficits, asthma, and anemia[9,11-14,17-19]; and

Whereas, infants and children in families participating in Supplemental Nutrition Assistance Program (SNAP) are more likely to regularly see a primary care physician for checkups and have improved long-term health as adults[14]; and

Whereas, evidence shows that universal free school meal programs improve school attendance and academic performance[14-19]; and

Whereas, school-aged children experience higher rates of food insecurity during the summer months when school is not in session, and USDA-funded Summer Feeding programs have been shown to improve food security, diet quality, and nutrition in low-income children[4,20,21]; and

Whereas, the Summer Electronic Benefits Transfer for Children (SEBTC) program reduced food insecurity by one-third and can benefit over 29 million children across the U.S., however only 37 states have implemented SEBTC with the remaining states having high childhood food insecurity rates[22-24,26]; and

Whereas, the American Academy of Pediatrics advocates for SEBTC and policies to combat food insecurity, urging collaboration with governments to ensure equitable access to healthy food for all children[25]; therefore be it

RESOLVED, that our American Medical Association support federal and state efforts to reduce childhood food insecurity, including expansion of the Summer Electronic Benefits Transfer for Children Program. (Directive to Take Action)

Fiscal Note: Modest – between $1,000 - $5,000

Date Received: 4/17/25

REFERENCES

1. Rabbitt, M.P., Hales, L.J., Burke, M.P., & Coleman-Jensen, A. Household food security in the United States in 2022 (Report No. ERR-325). *U.S. Department of Agriculture, Economic Research Service*. 2023. https://doi.org/10.32747/2023.8134351.ers
2. USDA. USDA ERS - Food Security and Nutrition Assistance. Usda.gov. Published July 19, 2023. https://www.ers.usda.gov/data-products/ag-and-food-statistics-charting-the-essentials/food-security-and-nutrition-assistance/
3. Rabbitt M, Hales L, Burke M, Coleman-Jensen A. *Statistical Supplement to Household Food Security in the United States in 2022*.; 2023. Accessed August 26, 2024. https://www.ers.usda.gov/webdocs/publications/107710/ap-119.pdf?v=8620.5
4. Huang J, Barnidge E, Kim Y. Children Receiving Free or Reduced-Price School Lunch Have Higher Food Insufficiency Rates in Summer. J Nutr. 2015;145(9):2161-2168. doi:10.3945/jn.115.214486
5. Gallegos D, Eivers A, Sondergeld P, Pattinson C. Food Insecurity and Child Development: A State-of-the-Art Review. *Int J Environ Res Public Health*. 2021;18(17):8990. Published 2021 Aug 26. doi:10.3390/ijerph18178990
6. Ullmann H, Weeks JD, Madans JH. Children living in households that experienced food insecurity: United States, 2019–2020. NCHS Data Brief, no 432. Hyattsville, MD: National Center for Health Statistics. 2021. DOI: https://dx.doi.org/10.15620/cdc:113966
7. Ullmann H, Weeks J, Madans J. Products - Data Briefs - Number 432 - February 2022. www.cdc.gov. Published February 25, 2022. https://www.cdc.gov/nchs/products/databriefs/db432.htm
8. Leung CW, Odoms-Young A, Essel K. Food Insecurity Is a Source of Toxic Stress. *JAMA Pediatr*. Published online February 5, 2024. doi:10.1001/jamapediatrics.2023.6400
9. Baiden P, LaBrenz CA, Thrasher S, Asiedua-Baiden G, Harerimana B. Adverse childhood experiences and household food insecurity among children aged 0–5 years in the USA. *Public Health Nutrition*. 2021;24(8):2123-2131. doi:10.1017/S1368980020002761
10. Drewnowski A. Food insecurity has economic root causes. *Nat Food*. 2022;3(8):555-556. doi:10.1038/s43016-022-00577-w
11. American Academy of Pediatrics. Nutrition and food insecurity. *American Academy of Pediatrics, Patient Care*. https://www.aap.org/en/patient-care/early-childhood/early-childhood-health-and-development/nutrition-and-food-insecurity/ Published August 8, 2022. Accessed January 29, 2024.
12. Lin WC, Liu C, Kosillo P, et al. Transient food insecurity during the juvenile-adolescent period affects adult weight, cognitive flexibility, and dopamine neurobiology. *Curr Biol*. 2022;32(17):3690-3703.e5. doi:10.1016/j.cub.2022.06.089
13. Feeding America. Childhood Food Insecurity. *Feeding America Map the Meal Gap 2019*. chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.feedingamerica.org/sites/default/files/2019-05/2017-map-the-meal-gap-child-food-insecurity_0.pdf
14. Laura Pryor, Maria Melchior, Mauricio Avendano, Pamela J. Surkan. Childhood food insecurity, mental distress in young adulthood and the supplemental nutrition assistance program. *Preventive Medicine*. 2023; 168,(107409): 0091-7435. https://doi.org/10.1016/j.ypmed.2022.107409
15. Royer MF, Guerithault N, Braden BB, Laska MN, Bruening M. Food Insecurity Is Associated with Cognitive Function: A Systematic Review of Findings across the Life Course. *International Journal of Translational Medicine*. 2021; 1(3):205-222. https://doi.org/10.3390/ijtm1030015
16. Iowa governor says it's "not sustainable" to give $40 per month to kids from low-income families for food. Fortune. https://fortune.com/2023/12/25/iowa-governor-kim-reynolds-40-per-month-food-costs-federal-program-pandemic-non-sustainable/
17. Schwartz, A.E. and Rothbart, M.W. (2020), Let Them Eat Lunch: The Impact of Universal Free Meals on Student Performance. J. Pol. Anal. Manage., 39: 376-410. https://doi.org/10.1002/pam.22175
18. Cohen JFW, Hecht AA, McLoughlin GM, Turner L, Schwartz MB. Universal School Meals and Associations with Student Participation, Attendance, Academic Performance, Diet Quality, Food Security, and Body Mass Index: A Systematic Review. *Nutrients*. 2021;13(3):911. Published 2021 Mar 11. doi:10.3390/nu13030911
19. Bartfeld JS, Berger L, Men F, Chen Y. Access to the School Breakfast Program Is Associated with Higher Attendance and Test Scores among Elementary School Students. *The Journal of Nutrition*. 2019;149(2):336-343. doi:https://doi.org/10.1093/jn/nxy267
20. Anna M. Localio, Melissa A. Knox, Anirban Basu, Tom Lindman, Lina Pinero Walkinshaw, Jessica C. Jones-Smith; Universal Free School Meals Policy and Childhood Obesity. *Pediatrics* April 2024; 153 (4): e2023063749. 10.1542/peds.2023-063749

21. Kingshipp BJ, Scinto-Madonich S, Bahnfleth C, et al. USDA-Funded Summer Feeding Programs and Key Child Health Outcomes of Public Health Importance: A Rapid Review [Internet]. Alexandria (VA): USDA Nutrition Evidence Systematic Review; 2022 Jun. Available from: https://www.ncbi.nlm.nih.gov/books/NBK597950/ doi: 10.52570/NESR.FNSRR.RR2
22. Summer EBT — A Tested and Effective Strategy for Ending Summer Hunger | Food and Nutrition Service. www.fns.usda.gov. Reviewed January 17, 2024. https://www.fns.usda.gov/sebt/evidence
23. Collins AM, Klerman JA, Briefel R, et al. A Summer Nutrition Benefit Pilot Program and Low-income Children's Food Security. *Pediatrics*. 2018;141(4):e20171657. doi:10.1542/peds.2017-1657
24. Rothstein M, Burr D, Kriviski D, Buhrig C. *Summer EBT Administrative Funding Process for FY2024*. USDA Food and Nutrition Service Department of Agriculture ; 2023. https://www.fns.usda.gov/sebt/administrative-funding-process-fy24
25. COUNCIL ON COMMUNITY PEDIATRICS; COMMITTEE ON NUTRITION. Promoting Food Security for All Children. *Pediatrics*. 2015;136(5):e1431-e1438. doi:10.1542/peds.2015-3301
26. States and Tribes Partner with USDA to Kick Off New Summer EBT Program | Food and Nutrition Service. www.fns.usda.gov. https://www.fns.usda.gov/news-item/fns-020.23

RELEVANT AMA POLICY

H-150.937 Improvements to Supplemental Nutrition Programs
Our American Medical Association supports:

a. improvements to the Supplemental Nutrition Assistance Program (SNAP) and Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) that are designed to promote adequate nutrient intake and reduce food insecurity and obesity;
b. efforts to decrease the price gap between calorie-dense, nutrition-poor foods and naturally nutrition-dense foods to improve health in economically disadvantaged populations by encouraging the expansion, through increased funds and increased enrollment, of existing programs that seek to improve nutrition and reduce obesity, such as the Farmer's Market Nutrition Program as a part of the Women, Infants, and Children program; and
c. the novel application of the Farmer's Market Nutrition Program to existing programs such as the Supplemental Nutrition Assistance Program (SNAP), and apply program models that incentivize the consumption of naturally nutrition-dense foods in wider food distribution venues than solely farmer's markets as part of the Women, Infants, and Children program.

Our AMA will request that the federal government support SNAP initiatives to:

a. incentivize healthful foods and disincentivize or eliminate unhealthful foods; and
b. harmonize SNAP food offerings with those of WIC.

Our AMA will actively lobby Congress to preserve and protect the Supplemental Nutrition Assistance Program through the reauthorization of the 2018 Farm Bill in order for Americans to live healthy and productive lives. [Res. 414, A-10; Reaffirmation A-12; Reaffirmation A-13; Appended: CSAPH Rep. 1, I-13; Reaffirmation A-14; Reaffirmation I-14; Reaffirmation A-15; Appended: Res. 407, A-17; Appended: Res. 233, A-18; Reaffirmed: Res. 259, A-23]

D-150.978 Sustainable Food
Our AMA: (1) supports practices and policies in medical schools, hospitals, and other health care facilities that support and model a healthy and ecologically sustainable food system, which provides food and beverages of naturally high nutritional quality; (2) supports sustained funding for evidence-based policies and programs to eliminate disparities in healthy food access, particularly for populations vulnerable to food insecurity, through measures such as tax incentive programs, community-level initiatives and federal legislation; and (3) will consider working with other health care and public health organizations to educate the health care community and the public about the importance of healthy and ecologically sustainable food systems. [CSAPH Rep. 8, A-09; Reaffirmed in lieu of Res. 411, A-11; Reaffirmation A-12; Reaffirmed in lieu of Res. 205, A-12; Modified: Res. 204, A-13; Reaffirmation A-15; Modified: CSAPH Rep. 2, I-22]

H-150.925 Food Environments and Challenges Accessing Healthy Food
Our AMA (1) encourages the U.S. Department of Agriculture and appropriate stakeholders to study the national prevalence, impact, and solutions to challenges accessing healthy affordable food, including, but not limited to, food environments like food mirages, food swamps, and food deserts; (2) recognizes that food access inequalities are a major contributor to health inequities, disproportionately affecting marginalized communities and people of color; (3) supports policy promoting community-based initiatives

that empower resident businesses, create economic opportunities, and support sustainable local food supply chains to increase access to affordable healthy food; and (4) will advocate for CMS and other relevant agencies to develop, test, and then implement evidence-based innovative models to address food insecurity, such as food delivery and transportation services to supermarkets, food banks and pantries, and local farmers markets for healthy food options. [Res. 921, I-18; Modified: Res. 417, A-21; Appended: Res. 117, A-22]

AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES

Resolution: 420
(A-25)

Introduced by: Medical Student Section

Subject: Study of Plant-Based & Lab-Grown Meat

Referred to: Reference Committee D

Whereas, alternatives to animal meat are a growing industry, prompting the global food sector undertake efforts to ensure the safety of foods in this category[1-7]; and

Whereas, meat alternatives are either plant-based (structured plant-derived products designed to resemble animal meat) and lab-grown meat (animal cells cultured in vitro)[8-9]; and

Whereas, plant-based meat presents economic, and environmental benefits without the ethical conflicts, antibiotic resistance, and climate impact of animal meat production[6-7,10]; and

Whereas, emerging studies suggest health benefits of both plant-based meat and lab-grown meat, including reduced risk of bacterial contamination, effects on the gut microbiome, absence of antibiotics and growth hormones, lower saturated fats and cholesterol, and reduced incidence of heart disease, obesity, and some cancers[3,7,11,13-21]; and

Whereas, production of both plant-based and lab-grown meats has potential economic and environmental benefits with decreased greenhouse gas emissions, land and water use, risk for antibiotic resistance, and ethical considerations for animal safety[6,7,10,22,23]; and

Whereas, plant-based meat is primarily regulated by the FDA, and lab-grown meat is dually regulated by both the FDA (cell collection and differentiation) and USDA (cell harvesting), but states also regulate labeling of both plant-based and lab-grown meats[24,25]; therefore be it

RESOLVED, that our American Medical Association study and report back with policy recommendations on the health- and climate-related effects of consuming plant-based and lab-grown meat. (Directive to Take Action)

Fiscal Note: Modest – between $1,000 - $5,000

Received: 4/17/25

REFERENCES

1. Lawrence AS, Huang H, Johnson BJ, Wycherley TP. Impact of a Switch to Plant-Based Foods That Visually and Functionally Mimic Animal-Source Meat and Dairy Milk for the Australian Population-A Dietary Modelling Study. Nutrients. 2023;15(8):1825. doi:10.3390/nu15081825
2. Andreani G, Sogari G, Marti A, Froldi F, Dagevos H, Martini D. Plant-Based Meat Alternatives: Technological, Nutritional, Environmental, Market, and Social Challenges and Opportunities. Nutrients. 2023;15(2):452. doi:10.3390/nu15020452
3. Rizzolo-Brime L, Orta-Ramirez A, Puyol Martin Y, Jakszyn P. Nutritional Assessment of Plant-Based Meat Alternatives: A Comparison of Nutritional Information of Plant-Based Meat Alternatives in Spanish Supermarkets. Nutrients. 2023;15(6):1325. doi:10.3390/nu15061325
4. Salomé M, Mariotti F, Dussiot A, Kesse-Guyot E, Huneau JF, Fouillet H. Plant-based meat substitutes are useful for healthier dietary patterns when adequately formulated - an optimization study in French adults (INCA3). Eur J Nutr. 2023;62(4):1891-1901. doi:10.1007/s00394-023-03117-9

5. Alessandrini R, Brown MK, Pombo-Rodrigues S, Bhageerutty S, He FJ, MacGregor GA. Nutritional Quality of Plant-Based Meat Products Available in the UK: A Cross-Sectional Survey. Nutrients. 2021;13(12):4225. doi:10.3390/nu13124225
6. Guess N, Klatt K, Wei D, et al. A Cross-Sectional Analysis of Products Marketed as Plant-Based Across the United States, United Kingdom, and Canada Using Online Nutrition Information. Curr Dev Nutr. 2023;7(3):100059. doi:10.1016/j.cdnut.2023.100059
7. Munialo CD, Vriesekoop F. Plant-based foods as meat and fat substitutes. Food Sci Nutr. 2023;11(9):4898-4911. doi:10.1002/fsn3.3421
8. Bryant CJ. Culture, meat, and cultured meat. *J Anim Sci*. 2020;98(8):skaa172. doi:10.1093/jas/skaa172
9. Clayton, EM., Berke, AP., et al. Plant Based Meat. Encyclopedia of Food Chemistry. 2019;3. https://www.sciencedirect.com/topics/food-science/plant-based-meat
10. Hadi J, Brightwell G. Safety of Alternative Proteins: Technological, Environmental and Regulatory Aspects of Cultured Meat, Plant-Based Meat, Insect Protein and Single-Cell Protein. Foods Basel Switz. 2021;10(6):1226. doi:10.3390/foods10061226
11. Hu FB, Otis BO, McCarthy G. Can Plant-Based Meat Alternatives Be Part of a Healthy and Sustainable Diet? JAMA. 2019;322(16):1547-1548. doi:10.1001/jama.2019.13187
12. Curtain F, Grafenauer S. Plant-Based Meat Substitutes in the Flexitarian Age: An Audit of Products on Supermarket Shelves. Nutrients. 2019;11(11):2603. doi:10.3390/nu11112603
13. Crimarco A, Landry MJ, Carter MM, Gardner CD. Assessing the effects of alternative plant-based meats v. animal meats on biomarkers of inflammation: a secondary analysis of the SWAP-MEAT randomized crossover trial. J Nutr Sci. 2022;11:e82. doi:10.1017/jns.2022.84
14. Toribio-Mateas MA, Bester A, Klimenko N. Impact of Plant-Based Meat Alternatives on the Gut Microbiota of Consumers: A Real-World Study. Foods Basel Switz. 2021;10(9):2040. doi:10.3390/foods10092040
15. Xiao X, Zou PR, Hu F, Zhu W, Wei ZJ. Updates on Plant-Based Protein Products as an Alternative to Animal Protein: Technology, Properties, and Their Health Benefits. Mol Basel Switz. 2023;28(10):4016. doi:10.3390/molecules28104016
16. Tyndall SM, Maloney GR, Cole MB, Hazell NG, Augustin MA. Critical food and nutrition science challenges for plant-based meat alternative products. Crit Rev Food Sci Nutr. Published online August 16, 2022:1-16. doi:10.1080/10408398.2022.2107994
17. Flint M, Bowles S, Lynn A, Paxman JR. Novel plant-based meat alternatives: future opportunities and health considerations. Proc Nutr Soc. 2023;82(3):370-385. doi:10.1017/S0029665123000034
18. Romão B, Botelho RBA, Torres ML, et al. Nutritional Profile of Commercialized Plant-Based Meat: An Integrative Review with a Systematic Approach. Foods Basel Switz. 2023;12(3):448. doi:10.3390/foods12030448
19. Augustin Mihalache O, Dellafiora L, Dall'Asta C. A systematic review of natural toxins occurrence in plant commodities used for plant-based meat alternatives production. Food Res Int Ott Ont. 2022;158:111490. doi:10.1016/j.foodres.2022.111490
20. Chriki S, Hocquette JF. The Myth of Cultured Meat: A Review. *Front Nutr*. 2020;7:7. Published 2020 Feb 7. doi:10.3389/fnut.2020.00007
21. Treich N. Cultured Meat: Promises and Challenges. *Environ Resour Econ (Dordr)*. 2021;79(1):33-61. doi:10.1007/s10640-021-00551-3
22. Stephens N, Di Silvio L, Dunsford I, Ellis M, Glencross A, Sexton A. Bringing cultured meat to market: Technical, socio-political, and regulatory challenges in cellular agriculture. Trends Food Sci Technol. 2018;78:155-166. doi:10.1016/j.tifs.2018.04.010
23. Xin Li Ching, Nur Anis Athira Binti Zainal, Vijitra Luang-In, Nyuk Ling Ma. Lab-based meat the future food. Environmental Advances. 2022;10:100315. https://doi.org/10.1016/j.envadv.2022.100315
24. Tao, X., Razick, G. Alternative Proteins: Navigating the Maze of U.S. Federal and State Meat Labeling. Food & Drug Law Institute. 2023. https://www.fdli.org/2023/05/alternative-proteins-navigating-the-maze-of-u-s-federal-and-state-meat-labeling-requirements
25. Benson, LS., Greene, JL. Cell-Cultivated Meat: An Overview. Congressional Research Service. 2023. https://crsreports.congress.gov/product/pdf/R/R47697

RELEVANT AMA POLICY

H-150.922 Reduction in Consumption of Processed Meats

Our AMA supports: (1) reduction of processed meat consumption, especially for patients diagnosed or at risk for cardiovascular disease, type 2 diabetes, and cancer; (2) initiatives to reduce processed meats consumed in public schools, hospitals, food markets and restaurants while promoting healthy alternatives such as a whole foods and plant-based nutrition; (3) public awareness of the risks of processed meat consumption; and (4) educational programs for health care professionals on the risks of processed meat consumption and the benefits of healthy alternatives. [Res. 406, A-19]

AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES

Resolution: 421
(A-25)

Introduced by: New York

Subject: Mitigating Air and Noise Pollution from Aviation in Minority Communities Disproportionately Impacted and Vulnerable Communities

Referred to: Reference Committee D

Whereas, studies have shown that minority populations, including African Americans, Latinx, and low-income communities, are disproportionately exposed to aircraft noise and its associated health risks; and

Whereas, exposure to persistent noise pollution can lead to numerous health issues, including hearing impairment, sleep disturbances, cardiovascular problems, and increased stress levels; and;

Whereas, air pollution from aviation contributes to respiratory diseases, cardiovascular diseases, and other serious health effects, with minority communities often facing higher exposure levels; therefore be it

RESOLVED, that our American Medical Association seek a study and report back providing recommendations at the federal level to reduce the adverse impact of air and noise pollution in disproportionately impacted and vulnerable communities from aviation, including the following areas:

1. Promotion of Sustainable Aviation Fuels: Advocate for the adoption of sustainable alternative jet fuels, which have been shown to decrease premature death rates in communities near airports and downwind.

2. Implementation of Noise Abatement Procedures: Encourage the use of flight paths and operational procedures that minimize noise impact on residential areas, particularly those inhabited by minority populations disproportionately impacted communities.

3. Investment in Noise Mitigation Infrastructure: Support the installation of soundproofing materials in homes, schools, and healthcare facilities located in high-noise areas to reduce the adverse health effects of noise pollution as well as non-combustion engines (i.e. solar or electric).

4. Community Engagement and Education: Foster partnerships with affected communities to raise awareness about the health impacts of air and noise pollution and involve them in decision-making processes regarding aviation operations.

5. Research and Monitoring: Advocate for ongoing research to monitor air and noise pollution levels in minority populations disproportionately impacted communities and study the effectiveness of implemented interventions. (Directive to Take Action)

REFERENCES

1. Basner M, Clark C, Hansell A, Hileman JI, Janssen S, Shepherd K, Sparrow V. Aviation Noise Impacts: State of the Science. Noise Health. 2017 Mar-Apr;19(87):41-50..
2. Understanding aircraft noise - Aviation Environment FederationAviation Environment Federation
Huss, Ankea,b; Spoerri, Adriana; Egger, Matthiasa; Röösli, Martinc,d for the Swiss National Cohort Study Group. Aircraft Noise, Air Pollution, and Mortality From Myocardial Infarction. Epidemiology. November 2010; 21(6):829-836
3. Mahashabde A, Wolfe P, Ashok A, Dorbian C, He Q, Fan A, Lukachko S, Mozdzanowska A, Wollersheim C, Barrett S, Locke M, Waitz I. Assessing the environmental impacts of aircraft noise and emissions. Progress in Aerospace Sciences. 2011;47(1): 2011;15-52
4. https://www.bu.edu/sph/news/articles/2024/airplane-noise-exposure-may-increase-risk-of-chronic-disease/
5. https://en.wikipedia.org/wiki/Environmental_health?
6. ttps://www.epa.gov/clean-air-act-overview/progress-cleaning-air-and-improving-peoples-health
7. https://www.bu.edu/articles/2024/airplane-noise-may-be-bad-for-your-health/
8. https://ie.unc.edu/news/new-study-finds-alternative-jet-fuels-decrease-health-impacts-near-airports-and-downwind

AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES

Resolution: 422
(A-25)

Introduced by: New York

Subject: Protecting the Integrity of the U.S. Healthcare System from Misinformation and Policy

Referred to: Reference Committee D

Whereas, the healthcare system in the United States is built upon scientific integrity, evidence-based medicine, and public trust; and

Whereas, the dissemination of medical misinformation poses a significant risk to public health, leading to decreased vaccine confidence, increased preventable disease burden, and mistrust in medical institutions; and

Whereas, Robert F. Kennedy Jr. the new Secretary of Health and Human Services has consistently promoted scientifically unsubstantiated and widely debunked views on vaccines, public health policies, and medical science; and

Whereas, the influence of misinformation-driven policies could undermine critical public health initiatives, including vaccine programs, pandemic preparedness, and environmental health protections; and

Whereas, it is the responsibility of the medical community to uphold ethical standards, promote fact-based healthcare policy, and advocate for the well-being of patients and communities; therefore be it

RESOLVED, that our American Medical Association will work to educate both medical professionals and the public on the importance of scientific literacy and medical accuracy, the risks associated with healthcare misinformation, and the importance of continued advancement of evidence-based healthcare. (Directive to Take Action)

Fiscal Note: $102,954

Received: 4/22/25

REFERENCES

1. https://www.brookings.edu/articles/rfk-jr-s-history-of-medical-misinformation-raises-concerns-over-hhs-nomination/
2. https://www.nytimes.com/article/rfk-conspiracy-theories-fact-check.html

AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES

Resolution: 423
(A-25)

Introduced by: New York

Subject: Requiring Universal Vaccine reporting to a National Immunization Registry and Access to a National Immunization Information System

Referred to: Reference Committee D

Whereas, access to comprehensive, up-to-date immunization records for individuals is critical in preventing gaps in vaccination coverage, and supporting public health initiatives; and

Whereas, the New York State Immunization Information System (NYSIIS) and the Citywide Immunization Registry (CIR) serve as vital public health tools to track and monitor immunization records, ensure vaccine coverage, reduce the risk of vaccine-preventable diseases, and improve the overall health of the population; and

Whereas, we live in a fluid society where many people move throughout the state and most parents believe that all medical records are accessible to all medical practices throughout the state; and

Whereas, physicians and medical practices are only permitted access to NYSIIS if the practice is located within New York State and are outside of New York City, and are only permitted access to CIR if the practice is within the five boroughs of NYC; and

Whereas, the New York State Immunization Information System (NYSIIS) and the Citywide Immunization Registry (CIR) serve as vital public health tool to track and monitor immunization records, ensure vaccine coverage, reduce the risk of vaccine-preventable diseases, and improve the overall health of the population; and

Whereas, all childhood vaccines are required to be reported to the New York State Immunization Information System (NYSIIS) or the Citywide Immunization Registry (CIR) but for adults it is an opt-in reporting and not required; and

Whereas, New York State law requires all vaccinations administered to children be submitted to the respective registry and requires that all vaccines ever given to the child if a vaccine record is provided be inputted into the respective registry; and

Whereas, some practices are not in compliance with this law, causing the unnecessary re-administration often by schools and turmoil for parents due to the lack of oversight and consequences in the law; and

Whereas, pharmacies across New York State are increasingly becoming an important point of access for vaccinations, particularly for routine vaccines, flu shots, and other immunization services; and

Whereas, hospitals across New York State administer vaccines (influenza and COVID) to hospital employees including nurses and practitioners to protect patients, as well as to inpatients; and

Whereas, accurate and timely reporting of vaccination data to the NYSIIS and CIR is critical to maintaining comprehensive, up-to-date immunization records for individuals, preventing gaps in vaccination coverage, and supporting public health initiatives; and

Whereas, currently, not all pharmacies, providers and hospitals may consistently report immunization data to the NYSIIS and CIR, which can lead to incomplete vaccination records, potential duplication of vaccinations, and missed opportunities to identify under-immunized individuals; and

Whereas, many adult patients receive their vaccinations outside of their primary care providers' offices and do not always recall which vaccines they received, nor do they carry a record of the vaccine administered. This practice often leads to duplicate administration, which results in denied insurance claims; and

Whereas, a comprehensive, real-time record of vaccinations will enhance patient care, facilitate better public health responses, and improve the accuracy of immunization data for state and federal health agencies; and

Whereas, the reporting of vaccinations by pharmacies, hospitals and all providers to NYSIIS and CIR is a necessary step in the modernization and improvement of New York State's immunization infrastructure; therefore be it

RESOLVED, that our American Medical Association seek legislation for a national immunization registry as well as universal mandatory vaccine reporting for all vaccines administered in the United States and its territories to improve the public health of our society. (Directive to Take Action)

Fiscal Note: Modest – between $1,000 - $5,000

Received: 4/22/25

AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES

Resolution: 424
(A-25)

Introduced by: Ohio

Subject: Supporting the Integration of Blood Pressure Variability Data in Electronic Medical Records

Referred to: Reference Committee D

Whereas, blood pressure variability (BPV) refers to the dynamic and continuous fluctuations in blood pressure that occur over different time frames, ranging from seconds to years, influenced by factors such as environmental conditions, physical activities, emotional states, and the body's cardiovascular regulatory systems, which ensure proper blood flow to organs[1]; and

Whereas, despite growing recognition of BPV as an important cardiovascular risk factor by major medical journals and healthcare entities including the American Heart Association and The Lancet, the lack of established thresholds to differentiate normal from pathological BPV and limited clinical data have delayed its inclusion in standardized management guidelines as a therapeutic target[2-3]; and

Whereas, a study conducted on a cohort of 221,803 adults found that one-third of hypertensive and one-sixth of normotensive patients had high BPV[4]; and

Whereas, blood pressure variability has a prognostic value comparable to cholesterol levels in predicting cardiovascular disease, with hazard ratios for BPV similar to those observed for cholesterol measures[5]; and

Whereas, long-term blood pressure variability is associated with an 18% increased risk of cardiovascular mortality, an increased risk of macrovascular and microvascular events, and a 15% higher risk of all-cause mortality, independent of mean blood pressure levels[5-6]; and

Whereas, among patients with an average systolic blood pressure under 140 mmHg, patients with higher BPV had a 16% increased risk of heart attack, stroke, and other cardiovascular events compared to those with lower BPV[7]; and

Whereas, studies suggest that BPV is similarly predictive of adverse outcomes across varying patient populations, including those with hypertension, hypotension, and those taking antihypertensive medications[8]; and

Whereas, higher blood pressure variability is associated with increased risk of recurrent ischemic stroke, major cardiovascular events, and all -cause death, and increased systolic BPV after hemorrhagic stroke is associated with worse functional outcomes[9]; and

Whereas, diastolic blood pressure variability (DBPV) independently predicts worse clinical outcomes related to death from cardiovascular causes, acute coronary syndrome (ACS), acute decompensated heart failure, coronary revascularization, atrial fibrillation, and stroke[10]; and

Whereas, DBPV is associated with increased risk for readmission and wound infection and should, therefore, be factored into presurgical risk assessment[11]; and

Whereas, although an effective medical treatment for BPV has not yet been established, patients can reduce their risk of BPV-related complications through lifestyle modifications, including adopting a healthy diet to reduce obesity, smoking cessation, engaging in aerobic and resistance training, and getting adequate quality sleep[12-14]; and

Whereas, BPV can be manually estimated by calculating the greatest change between two consecutive blood pressure measurements, making it a reasonable and immediate tool for incorporation into clinical practice until automated solutions become available[11]; and

Whereas, other studies have demonstrated that BPV can feasibly be determined through automated calculations within electronic medical records (EMR), and these visit-to-visit variations are associated with mortality in diverse populations at high risk of coronary artery disease[15]; therefore be it

RESOLVED, that our American Medical Association support the integration of blood pressure variability data into electronic medical records, emphasizing automated calculation capabilities similar to those established for body mass index (New HOD Policy); and be it further

RESOLVED, that our AMA support research efforts to establish pathological BPV thresholds to guide dietary and exercise recommendations, sleep evaluation, risk stratification, and other evidence-based interventions by healthcare providers. (New HOD Policy)

Fiscal Note: Minimal – less than $1,000

Received: 4/22/25

REFERENCES

1. Parati G, Stergiou GS, Dolan E, Bilo G. Blood pressure variability: clinical relevance and application. J Clin Hypertens (Greenwich). 2018;20(7):1133-1137. doi:10.1111/jch.13304
2. Ebinger JE, Driver M, Ouyang D, et al. Variability independent of mean blood pressure as a real-world measure of cardiovascular risk. eClinicalMedicine. 2022;48. doi:10.1016/j.eclinm.2022.101442
3. Sheikh AB, Sobotka PA, Garg I, et al. Blood Pressure Variability in Clinical Practice: Past, Present and the Future. Journal of the American Heart Association. 2023;12(9):e029297. doi:10.1161/JAHA.122.029297
4. McAlister FA, Lethebe BC, Leung AA, Padwal RS, Williamson T. Visit-to-visit blood pressure variability is common in primary care patients: Retrospective cohort study of 221,803 adults. PLoS One. 2021;16(4):e0248362. Published 2021 Apr 2. doi:10.1371/journal.pone.0248362
5. Stevens S L, Wood S, Koshiaris C, Law K, Glasziou P, Stevens R J et al. Blood pressure variability and cardiovascular disease: systematic review and meta-analysis BMJ 2016; 354 :i4098 doi:10.1136/bmj.i4098
6. Mezue K, Goyal A, Pressman GS, Matthew R, Horrow JC, Rangaswami J. Blood pressure variability predicts adverse events and cardiovascular outcomes in SPRINT. J Clin Hypertens (Greenwich). 2018 Sep;20(9):1247-1252. doi: 10.1111/jch.13346. Epub 2018 Jul 9. PMID: 29984884; PMCID: PMC8031192.
7. Blood pressure variability is a major predictor of heart attack and stroke risk | Imperial News | Imperial College London. Imperial News. January 31, 2024. Accessed December 6, 2024. https://www.imperial.ac.uk/news/251055/blood-pressure-variability-major-predictor-heart/
8. Basson MD, Klug MG, Hostetter JE, Wynne J. Visit-to-Visit Variability of Blood Pressure Is Associated With Hospitalization and Mortality in an Unselected Adult Population. Am J Hypertens. 2018;31(10):1113-1119. doi:10.1093/ajh/hpy088
9. de Havenon A, Fino NF, Johnson B, Wong KH, Majersik JJ, Tirschwell D, Rost N. Blood Pressure Variability and Cardiovascular Outcomes in Patients With Prior Stroke: A Secondary Analysis of PRoFESS. Stroke. 2019 Nov;50(11):3170-3176. doi: 10.1161/STROKEAHA.119.026293. Epub 2019 Sep 20. PMID: 31537194; PMCID: PMC6817411.
10. Yu J, Song Q, Bai J, Wu S, Bu P, Li Y, Cai J. Visit-to-Visit Blood Pressure Variability and Cardiovascular Outcomes in Patients Receiving Intensive Versus Standard Blood Pressure Control: Insights From the STEP Trial. Hypertension. 2023 Jul;80(7):1507-1516. doi: 10.1161/HYPERTENSIONAHA.122.20376. Epub 2023 May 12. PMID: 37170806.

11. Benolken MM, Meduna AE, Klug MG, Basson MD. Preoperative and Intraoperative Blood Pressure Variability Independently Correlate with Outcomes. J Surg Res. 2021;266:387-397. doi:10.1016/j.jss.2021.04.027
12. Caminiti G, Iellamo F, Mancuso A, et al. Effects of 12 weeks of aerobic versus combined aerobic plus resistance exercise training on short-term blood pressure variability in patients with hypertension. J Appl Physiol (1985). 2021;130(4):1085-1092. doi:10.1152/japplphysiol.00910.2020
13. Nardin C, Rattazzi M, Pauletto P. Blood Pressure Variability and Therapeutic Implications in Hypertension and Cardiovascular Diseases. High Blood Press Cardiovasc Prev. 2019;26(5):353-359. doi:10.1007/s40292-019-00339-z
14. Al Haddad N, Costanian C, Zibara V, et al. The association between sleep disturbances and blood pressure variability: a review of the literature. J Clin Sleep Med. 2023;19(8):1533-1544. doi:10.5664/jcsm.10566
15. Dasa O, Smith SM, Howard G, et al. Association of 1-Year Blood Pressure Variability With Long-term Mortality Among Adults With Coronary Artery Disease: A Post Hoc Analysis of a Randomized Clinical Trial. JAMA Network Open. 2021;4(4):e218418. doi:10.1001/jamanetworkopen.2021.8418

AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES

Resolution: 425
(A-25)

Introduced by: Oklahoma

Subject: Alcohol Consumption and Health

Referred to: Reference Committee D

Whereas, the U.S. Department of Health and Human Services (HHS) and the U.S. Department of Agriculture (USDA) update The Dietary Guidelines every five years, as required by law; Each update provides advice about healthy eating patterns to promote health and prevent disease[1]; and

Whereas, guidance on the consumption of alcoholic beverages has been included in the Dietary Guidelines since the first edition in 1980[1]; and

Whereas, the current guidelines recommend no more than one drink per day for women and two per day for men, based on an overall assessment of the health risks associated with alcohol[2]; and

Whereas, the number of deaths caused by alcohol-associated diseases more than doubled during the years 1999-2020[3]; and

Whereas, in an advisory in January 2025, Surgeon General Dr. Vivek Murthy notes that alcohol consumption is the third leading preventable cause of cancer in the United States; contributes to almost 100,000 cancer cases and nearly 20,000 deaths every year[4]; and

Whereas, the Surgeon General writes, drinking alcohol increases the risk for at least seven types of cancers, most notably breast, colon and rectum, esophagus, larynx, liver, and throat cancers; fewer than half of Americans are aware of the relationship and he recommends updating the health warning label on alcoholic beverages[4]; and

Whereas, on Feb. 6, 2025, the AMA submitted comments on the draft report for the 2026-2030 Dietary Guidelines for Americans during the public comment period; The AMA commended the Dietary Guideline Advisory Committee's (DGAC) focus on the link between diet and chronic disease and the AMA strongly urges the DGAC to update its 2025-2030 guidance to explicitly warn about the risks of alcohol consumption and its relationship to certain cancers and other diseases and affirm that there is no safe threshold for alcohol consumption[5]; and

Whereas, regarding alcohol, the AMA appreciates that the DGAC recognizes that alcohol contains sugars, is not essential to a nutritious diet, and recommends limiting alcohol[5]; and

Whereas, AMA understands that the DGAC scientific committee is largely relying on two reports to determine updates to its 2025-2030 recommendations regarding alcohol consumption[5 6 7]; and

Whereas, there are additional materials that the AMA believe are important for the DGAC to consider; The recent Surgeon General's advisory describes in detail scientific evidence for the

causal link between alcohol consumption and increased risk for at least seven different types of cancer[5]; and

Whereas, the draft Dietary Guidelines report states: “Two separate scientific reviews on adult alcohol consumption and health are being conducted as of the time of this report’s preparation, one by an interagency committee led by HHS, the Interagency Coordinating Committee on the Prevention of Underage Drinking (ICCPUD), and the other by the National Academies of Sciences, Engineering, and Medicine (NASEM);These reviews are independent of each other yet are working on complementary tracks. Both projects include external scientific peer review and opportunities for public participation; Each will result in a report with scientific findings—not recommendations—on alcohol consumption; These findings will be considered by HHS and USDA as the Departments develop the Dietary Guidelines for Americans, 2025-2030” [8 9 10]; therefore be it

RESOLVED, that our American Medical Association encourage the US Department of Health and Human Services and the U.S. Department of Agriculture to reassess alcohol limit guidelines based on an overall assessment of the health risks associated with alcohol consumption as stated in the Surgeon General’s 2025 advisory report and make recommendations for the next edition of the Dietary Guidelines that is scheduled to be released in 2025 (Directive to Take Action); and be it further

RESOLVED, that our AMA encourage the US Department of Treasury to reassess the health warning label required to appear on distilled spirit labels as per the Alcoholic Beverage Labeling Act (ABLA) of 1988 with the recent data on cancer risk included in the Surgeon General’s 2025 advisory report and subsequently send an updated warning label to congress that includes cancer risk. (Directive to Take Action)

Fiscal Note: Minimal – less than $1,000

Received: 4/17/25

REFERENCES

1. https://www.dietaryguidelines.gov/alcohol/info#how-and-when-will-alcohol-guidance-in-the-dietary-guidelines-be-updated-
2. https://www.dietaryguidelines.gov/alcohol/info
3. https://www.amjmed.com/action/showPdf?pii=S0002-9343%2824%2900704-6
4. https://www.hhs.gov/surgeongeneral/reports-and-publications/alcohol-cancer/index.html
5. https://searchlf.ama-assn.org/letter/documentDownload?uri=/unstructured/binary/letter/LETTERS/lfct.zip/2025-2-6-Letter-to-Fink-and-Washington-re-Dietary-Guidelines-v2.pdf
6. Interagency Coordinating Committee on the Prevention of Underage Drinking (ICCPUD) Alcohol Intake and Health Draft Report.
7. National Academies of Sciences, Engineering, and Medicine (NASEM) Review of Evidence on Alcohol and Health Report
8. https://www.dietaryguidelines.gov/sites/default/files/2024-12/Scientific_Report_of_the_2025_Dietary_Guidelines_Advisory_Committee_508c.pdf
9. http://www.stopalcoholabuse.gov/
10. https://www.nationalacademies.org/our-work/review-of-evidence-on-alcohol-and-health

RELEVANT AMA POLICY

Alcohol Consumption and Health H-30.934
Our AMA recognizes that alcohol consumption at any level, not just heavy alcohol use or addictive alcohol use, is a modifiable risk factor for cancer

AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES

Resolution: 426
(A-25)

Introduced by: Organized Medical Staff Section

Subject: Addressing Patient Safety and Environmental Stewardship of Single-Use and Reusable Medical Devices

Referred to: Reference Committee D

Whereas, the Council on Science & Public Health *Report Improving Research Standards, Approval processes Post-Market and Surveillance Standards for Medical Devices* published in 2023 opened the door for the American Medical Association to develop further policy that specifically addresses concerns about the design, use, and maintenance of reusable medical devices in the context of antibiotic-resistant microbes; and

Whereas, the same report also opened the door for the AMA to consider policy that addresses single-use/disposable medical devices with regard to adverse environmental consequences and the balance of fiscal expense versus patient safety; and

Whereas, the presence of antibiotic-resistant microbes leading to the shutdown of surgical suites is well documented as is the relationship between these events and the use of inadequately reprocessed reusable devices[1,2]; and

Whereas, there is not currently a universal standard or rubric for evaluating the costs and benefits of single-use and reprocessed reusable medical devices relative to the risk and cost to patients, though some public bodies have attempted to craft such a standard[3]; and

Whereas, without an industry standard approach that has been evaluated and carefully considered by physicians, the creation of such a standard is falling to private industries which are free to develop the standards without physician input[4]; and

Whereas, medical device spending increased at an average rate of 5.8 percent in 2021 and inflationary pressure is expected to continue to push spending higher in the coming years[5,6]; and

Whereas, the development of a gold standard “cradle-to-grave” lifecycle assessment tool that can evaluate single-use and reusable medical equipment, developed between physicians and other key stakeholders, holds the best promise for a fruitful and meaningful method of containing costs, maintaining a minimal environmental impact, and protecting patient safety[7,8]; therefore be it

RESOLVED, that our American Medical Association work with interested stakeholders to develop and/or confirm a comprehensive cradle-to-grave life-cycle assessment for single-use versus reusable medical devices factoring safety relative to cost effectiveness and environmental impact (Directive to Take Action); and be it further

RESOLVED, that our AMA advocate for federal regulation on medical devices that addresses patient safety as it intersects with fiscal and environmental considerations and promotes the use

of a “gold standard” life-cycle assessment for single-use and reusable medical devices (Directive to Take Action).

Fiscal Note: Modest – between $1,000 - $5,000

Received: 2/28/2025

REFERENCES

1. Rauwers, A.W. et al. (2019). Independent root-cause analysis of contributing factors, including dismantling of 2 duodenoscopes, to investigate an outbreak of multi-drug resistant Klebsiella pneumoniae. *Gastrointestinal Endoscopy*. 90 (5): 793-804. https://pubmed.ncbi.nlm.nih.gov/31102643/

2. Davis, Henry L. (2017). VA medical center warning 526 patients of infection risk from scopes. *The Buffalo News*. August 16, 2017. https://buffalonews.com/news/local/business/va-medical-center-warning-526-patients-of-infection-risk-from-scopes/article_843b31e7-54a9-5658-bdef-47f0d0a62915.html

3. Agency for Healthcare Research and Quality. (2023). Healthcare industry waste and lifecycle assessment. Research protocol: Sep 21, 2023. https://effectivehealthcare.ahrq.gov/products/lifecycle-assessment

4. Morris, Will. (2023). Life cycle assessment: A tool for sustainable medical device development. Haughton Design. January 3, 2023. https://haughtondesign.co.uk/life-cycle-assessment-lca-sustainable-medical-device-development/

5. Donahoe, G. F. (2021). *Estimates of medical device spending in the United States*. Advanced Medical Technology Association. June 2021. https://www.advamed.org/wp-content/uploads/2021/12/Estimates-Medical-Device-Spending-United-States-Report-2021.pdf

6. PwC Health Research Institute. (2024) *Medical cost trend: Behind the numbers 2025*. PricewaterhouseCoopers Health Research Institute. https://www.pwc.com/us/en/industries/health-industries/library/behind-the-numbers.html

7. European Environment Agency. *Term: Cradle to grave.* Accessed October 25, 2024: https://www.eea.europa.eu/help/glossary/eea-glossary/cradle-to-grave#:~:text='Cradle%2Dto%2Dgrave',use%2C%20and%20ultimately%2C%20disposal.

8. Science Direct. (2024). *Cradle-to-grave assessment*. Sciencedirect.com. Accessed October 25, 2024: https://www.sciencedirect.com/topics/engineering/cradle-to-grave-assessment

RELEVANT AMA POLICY

Improving Research Standards, Approval Processes, and Post-Market Surveillance Standards for Medical Devices H-480.934

Our AMA believes that to support innovation while protecting patient safety, approval pathways for medical devices should incorporate the following principles:

a. Evidence-based, measurable performance benchmarks, such as those used in the Safety and Performance Based Pathway, should be used wherever possible for classes of known, well-studied medical devices;

b. For a subset of higher risk devices receiving approval but have not completed clinical trials, time-limited approvals may be appropriate, after which the manufacturer may be required to provide post-market data to support full device approval;

c. Medical devices with known safety concerns should not be usable as predicate devices for the purposes of proving substantial equivalence. In the event safety concerns of predicate devices arise after approval has been granted, additional due diligence should be initiated as appropriate; and

d. Approval for medical devices should include criteria for adequate performance in racialized, minoritized, or otherwise historically excluded groups when feasible.

Citation: CSAPH Rep. 02, A-23

Reprocessing of Single-Use Medical Devices H-480.959
1. Our AMA: (a) supports the Food and Drug Administration (FDA) guidance titled "Enforcement Priorities for Single-Use Devices Reprocessed by Third Parties and Hospitals" that was issued on August 2, 2000; (b) supports the development of device-specific standards for the reuse and reprocessing of single-use medical devices involving all appropriate medical and professional organizations and the medical device industry; (c) encourages increased research by the appropriate organizations and federal agencies into the safety and efficacy of reprocessed single-use medical devices; and (d) supports the proper reporting of all medical device failures to the FDA so that surveillance of adverse events can be improved.
2. Our AMA strongly opposes any rules or regulations regarding the repair or refurbishment of medical tools, equipment, and instruments that are not based on objective scientific data.
Citation: CSA Rep. 3, I-00; Reaffirmed: CSAPH Rep. 1, A-10; Appended: Res. 217, I-17; Reaffirmed: Res. 936, I-22

Stewardship of the Environment H-135.973
The AMA: (1) encourages physicians to be spokespersons for environmental stewardship, including the discussion of these issues when appropriate with patients; (2) encourages the medical community to cooperate in reducing or recycling waste; (3) encourages physicians and the rest of the medical community to dispose of its medical waste in a safe and properly prescribed manner; (4) supports enhancing the role of physicians and other scientists in environmental education; (5) endorses legislation such as the National Environmental Education Act to increase public understanding of environmental degradation and its prevention; (6) encourages research efforts at ascertaining the physiological and psychological effects of abrupt as well as chronic environmental changes; (7) encourages international exchange of information relating to environmental degradation and the adverse human health effects resulting from environmental degradation; (8) encourages and helps support physicians who participate actively in international planning and development conventions associated with improving the environment; (9) encourages educational programs for worldwide family planning and control of population growth; (10) encourages research and development programs for safer, more effective, and less expensive means of preventing unwanted pregnancy; (11) encourages programs to prevent or reduce the human and environmental health impact from global climate change and environmental degradation.(12) encourages economic development programs for all nations that will be sustainable and yet nondestructive to the environment; (13) encourages physicians and environmental scientists in the United States to continue to incorporate concerns for human health into current environmental research and public policy initiatives; (14) encourages physician educators in medical schools, residency programs, and continuing medical education sessions to devote more attention to environmental health issues;
(15) will strengthen its liaison with appropriate environmental health agencies, including the National Institute of Environmental Health Sciences (NIEHS); (16) encourages expanded funding for environmental research by the federal government; and (17) encourages family planning through national and international support.
Citation: CSA Rep G, I-89; Amended: CLRPD Rep. D, I-92; Amended: CSA Rep. 8, A-03; Reaffirmed in lieu of Res. 417, A-04; Reaffirmed in lieu of Res. 402, A-10, Reaffirmed: I-16

Environmental Preservation H-135.972

It is the policy of the AMA to support state society environmental activities by:
(1) identifying areas of concern and encouraging productive research designed to provide authoritative data regarding health risks of environmental pollutants;
(2) encouraging continued efforts by the CSAPH to prepare focused environmental studies, where these studies can be decisive in the public consideration of such problems;
(3) maintaining a global perspective on environmental problems;
(4) considering preparation of public service announcements or other materials appropriate for public/patient education; and
(5) encouraging state and component societies that have not already done so to create environmental committees.
Citation: Res. 52, A-90; Reaffirmed: Sunset Report, I-00; Modified: CSAPH Rep. 1, A-10; Reaffirmed: CSAPH Rep. 01, A-20

AMA Advocacy for Environmental Sustainability and Climate H-135.923
Our AMA (1) supports initiatives to promote environmental sustainability and other efforts to halt global climate change; (2) will incorporate principles of environmental sustainability within its business operations; and (3) supports physicians in adopting programs for environmental sustainability in their practices and help physicians to share these concepts with their patients and with their communities.
Citation: Res. 924, I-16; Reaffirmed: I-19

AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES

Resolution: 427
(A-25)

Introduced by: Obesity Medicine Association, American Society for Metabolic and Bariatric Surgery, Endocrine Society, American Association of Clinical Endocrinology

Subject: Elevate Obesity as a Strategic Objective

Referred to: Reference Committee D

Whereas, obesity has been recognized by our American Medical Association as a disease[1]; and

Whereas, the primary drivers of obesity are genetics and environment, and the current American environment is causing obesity rates to spiral out of control; and

Whereas, public perception of obesity is still that it is the fault of the individual. This is akin to blaming a person for developing cancer or heart disease. Just like those diseases, people with obesity deserve evidence-based treatment by a properly trained physician; and

Whereas, without substantial environmental change, obesity threatens to reverse the increases in lifespan we have experienced, and cause extreme financial strain on the healthcare system; and

Whereas, a top strategic objective of our AMA is to improve health outcomes with regards to pre-diabetes and hypertension;[2] and

Whereas, obesity rates continue to skyrocket, and obesity currently affects 42% of Americans, and overweight/pre-obesity (BMI 25 - 29.9) affects 32% of Americans[3], with a prevalence of over 50% projected by 2030[4]; and

Whereas, pediatric obesity is estimated to affect approximately 20% of US youth[5]; and

Whereas, obesity is currently estimated to kill 320,000 Americans and cost 1.72 trillion dollars (9.3% of GDP) per year[6]; and

Whereas, obesity is estimated to decrease lifespan in those aged 20-39 with a BMI of 35 or more by 6.4 to 8 years[7]; and

Whereas, obesity disproportionately affects women and minorities[8,9,10]; and

Whereas, “The prevalence of adult obesity and severe obesity will continue to increase nationwide, with large disparities across states and demographic subgroups;”[11] and

Whereas, obesity rates in children ages 2-19 continue to increase and obesity is currently estimated to affect 19% of children[12]; and

Whereas, in a nationally representative sample of US adults, the prevalence of diabetes increases with increasing weight classes. Nearly one fourth of adults with diabetes have poor glycemic control and nearly half of adults with diabetes have obesity suggesting that weight loss is an important intervention in an effort to reduce the impact of diabetes on the health care system[13]; and

Whereas, the Framingham Heart Study, a famous study for 44 years, estimated that excess body weight (including overweight and obesity), accounted for approximately 26 percent of cases of hypertension in men and 28 percent in women, and for approximately 23 percent of cases of coronary heart disease in men and 15 percent in women[14]; and

Whereas, driven by the increasing obesity rates, the prevalence of diabetes will increase by 54% to more than 54.9 million Americans between 2015 and 2030; annual deaths attributed to diabetes will climb by 38% to 385,800; and total annual medical and societal costs related to diabetes will increase 53% to more than $622 billion by 2030[15]; and

Whereas, treating pre-diabetes and diabetes but without a focus on obesity prevention and treatment will not alter this trajectory; and

Whereas, consistent with the AMA's improving health outcomes strategic plan initiative, "The best solution for turning around the diabetes epidemic is preventing prediabetes and its progression to diabetes in the first place. Achieving such an outcome calls for addressing underlying societal risk factors that can contribute to unhealthy lifestyles, and would require a "population-wide" approach that addresses health promotion, obesity prevention, and creates a physical, cultural, and psychological environment that supports healthy living naturally. This outcome could not be achieved by individual health providers and patients alone, but requires integrated systems of care incentivized for desired health outcomes. It also would require a political will for effective policies and commitment of the public at all levels"[16]; and

Whereas, "Low levels of emotional rapport in primary care visits with patients with overweight and obesity may weaken the patient-physician relationship, diminish patients' adherence to recommendations, and decrease the effectiveness of behavior change counseling," leading to increases in physician burnout[17]; and

Whereas, our AMA is in a position to influence public policies around obesity ranging from public awareness and physician education to public policy around nutrition and insurance coverage of evidence-based obesity prevention and treatment services; and

Whereas, in spite of the numerous policies our AMA has adopted regarding obesity, education remains sparse[18], coverage for evidence-based services remains inconsistent, and current efforts at prevention and treatment remain largely ineffective; and

Whereas, surgical treatment of obesity has been shown to: decrease the risk of cancer death by 52%, decrease cancer risk by 68%, decrease all-cause mortality by 56%, decrease stroke risk by 59%, decrease cardiovascular events by 53%, and decrease heart failure risk by 60%[19]; and

Whereas, medical treatment of obesity has been shown to reduce the risk of recurrent major adverse cardiovascular events by 20%, improve renal function, decrease the risk of metabolic dysfunction associated steatohepatitis, and decrease knee osteoarthritis symptoms[20]; and

Whereas, medical treatment of obesity has advanced significantly in the past 4 years with the introduction of highly effective GLP-1 medications, but exorbitant pricing is creating extraordinary stress for physicians due to skyrocketing patient demand, sparse insurance coverage, arduous prior authorization, drug shortages, an explosion of unregulated compounded versions of the medications, usage of these compounds by non-prescribers at med-spas and online-only operations with virtually no patient support or monitoring resulting in significant patient harm including at least 7 deaths[21]; and

Whereas, an Obesity Caucus, formed in 2015, has been growing and attracting multiple state and specialty societies; and

Whereas, our AMA has a history of success in combating other complicated threats to the health of Americans, including nicotine and opioids; and

Whereas, our AMA Board of Trustees is responsible for setting the strategic direction of the AMA; therefore be it

RESOLVED, that our American Medical Association adopt addressing the public health issue of obesity including prevention and treatment as a strategic objective. (New HOD Policy)

Fiscal Note: $293,127

Received: 3/14/25

REFERENCES

1 AMA policy H-440.842
2 https://www.ama-assn.org/delivering-care/public-health/about-improving-health-outcomes
3 Cheryl D. Fryar; et al. (September 2018). "Prevalence of Overweight, Obesity, and Severe Obesity Among Adults Aged 20 and Over: United States, 1960–1962 Through 2015–2016" (PDF). Health E-Stats. National Center for Health Statistics, Division of Health Interview Statistics. Retrieved December 26, 2018.
4 Ward ZJ, et al. N Engl J Med. 2019;381:2440-2450.
5 Bomberg EM, Kyle T, Stanford FC. Considering Pediatric Obesity as a US Public Health Emergency. Pediatrics. 2023 Oct 1;152(4):e2023061501. doi: 10.1542/peds.2023-061501. PMID: 37701953; PMCID: PMC10522927.
6 https://milkeninstitute.org/sites/default/files/reports-pdf/Mi-Americas-Obesity-Crisis-WEB.pdf accessed 11/14/2019
7 Garvey et al. Lancet. 2009;373(9669):1083-1096.
8 CDC, http://www.cdc.gov/nchs/data/hestat/obesity_adult_11_12/obesity_adult_11_12.htm accessed 11/14/2016
9 Intl Journal of Obesity Volume 2022, Article ID 7652408, https://doi.org/10.1155/2022/7652408
10 Flegal KM, Kruszon-Moran D, Carroll MD, Fryar CD, Ogden CL. Trends in Obesity Among Adults in the United States, 2005 to 2014. JAMA. 2016;315(21):2284-2291. doi:10.1001/jama.2016.6458
11 N Engl J Med 2019; 381:2440-2450. DOI: 10.1056/NEJMsa1909301
12 https://www.cdc.gov/obesity/data/childhood.html accessed 11/18/2019
13 https://www.ncbi.nlm.nih.gov/pubmed/21128002 accessed 11/18/2019
14 https://www.obesityaction.org/community/article-library/hypertension-and-obesity-how-weight-loss-affects-hypertension/ accessed 11/18/2019
15 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5278808/
16 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5278808/
17 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3694993/ Accessed 11/19/2019
18 Mastrocola MR, et al. Int J Obes (Lond). 2019.
(https://www.ncbi.nlm.nih.gov/m/pubmed/31551484/?i=4&from=stanford%20fc#) Accessed 11/21/2019
19 JAMA Netw Open. 2023;6(4):e237188. doi:10.1001/jamanetworkopen.2023.7188 and JAMA. 2022;327(24):2423-2433. doi:10.1001/jama.2022.9009
20 https://www.nejm.org/doi/10.1056/NEJMoa2403664
21 https://www.novonordisk-us.com/media/news-archive/news-details.html?id=168519

Relevant AMA Policy:

H-440.842: Recognition of Obesity as a Disease: Our American Medical Association recognizes obesity as a disease state with multiple pathophysiological aspects requiring a range of interventions to advance obesity treatment and prevention.

AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES

Resolution: 428
(A-25)

Introduced by: Resident and Fellow Section, American College of Physicians, American Academy of Family Physicians, American Association of Public Health Physicians, LGBTQ+ Section, Minority Affairs Section

Subject: Public Health Implications of US Food Subsidies

Referred to: Reference Committee D

Whereas, our American Medical Association is committed to promoting the betterment of public health and has long supported policies that aim to improve dietary and nutritional standards in the United States; and

Whereas, the United States government, through various subsidies, supports the production of certain agricultural commodities, which plays a role in shaping agricultural policy and food systems[1-3]; and

Whereas, US agricultural subsidies have historically favored the production of crops, including corn, soybeans, wheat, and rice, which are often processed into ingredients like high-fructose corn syrup, refined grains, and vegetable oils, commonly used in the production of processed food;[1-3] and

Whereas, overconsumption of processed foods, which are high in added sugar, unhealthy fats and refined carbohydrates, is associated with an increased risk for diabetes, obesity, and other chronic diseases;[1-5] and

Whereas, US agricultural subsidies can affect the relative prices of different foods, making some food less expensive and more accessible, while potentially making others relatively more expensive, which can influence consumer choices, potentially contributing to the consumption of less healthy foods and beverages;[2-5] and

Whereas, the availability and affordability of subsidized foods may influence dietary choices and nutritional intake, particularly among low-income populations, which may contribute to poor dietary quality and negative health outcomes;[2,4,5] and

Whereas, intensive monoculture farming is an agricultural practice supported by subsidies, which has negative environmental consequences including soil degradation, water pollution, and greenhouse gas emissions;[6] and

Whereas, environmental degradation can indirectly impact public health by compromising food and water security, contributing to climate change-related health risks[6]; and

Whereas, while agricultural subsidies are intended to support agricultural production and stabilize food prices, there are unintended consequences on public health, especially when they disproportionately benefit certain crops or food groups, and disproportionately harm low-income populations[6]; and

Whereas, there is a need for a comprehensive review of food subsidies to evaluate their impact on dietary patterns, health disparities, and overall public health, aiming for alignment with nutritional guidelines that promote wellness and disease prevention[6]; therefore be it

RESOLVED, that our American Medical Association study the public health implications of United States Food Subsidies, focusing on: (1) how these subsidies influence the affordability, availability, and consumption of various food types across different demographics; (2) potential for restructuring food subsidies to support the production and consumption of more healthful foods, thereby contributing to better health outcomes and reduced healthcare costs related to diet-related diseases; and (3) avenues to advocate for policies that align food subsidies with the nutritional needs and health of the American public, ensuring that all segments of the population benefit from equitable access to healthful, affordable food. (Directive to Take Action)

Fiscal Note: Modest – between $1,000 - $5,000

Received: 4/21/25

REFERENCES:

1. Franck, C., Grandi, S., Eisenberg, M. (2013). Agricultural Subsidies and the American Obesity Epidemic. *American Journal of Preventive Medicine,* 45 (3), 327-333.
2. Brownell, K.D., & Horgen, K.B. (2004). Food Fight: The Inside Story of the Food Industry, America's Obesity Crisis, and What We Can Do About It. Chicago: Contemporary Books.
3. Nestle, M. (2013). Food Politics: How the Food Industry Influences Nutrition and Health. University of California Press.
4. Wallinga, D. (2010). "Agricultural policy and childhood obesity: a food systems and public health commentary." Health Affairs, 29(3), 405–410.
5. Wilde, P., Morgan, E. H., Roberts, S., & Schpok, A. (2012). "Relationships between food assistance programs and healthy eating vary with local food prices." Journal of Nutrition Education and Behavior, 44(6), 618-624.
6. United Nations. (2021). Most agricultural funding distorts prices, harms environment: UN report. https://news.un.org/en/story/2021/09/1099792

RELEVANT AMA POLICY:

The Health Effects of High Fructose Syrup H-150.919
Our AMA: (1) recognizes that at the present time, insufficient evidence exists to specifically restrict use of high fructose corn syrup (HFCS) or other fructose-containing sweeteners in the food supply or to require the use of warning labels on products containing HFCS; (2) encourages independent research (including epidemiological studies) on the health effects of HFCS and other added sugars, and evaluation of the mechanism of action and relationship between fructose dose and response; and (3) in concert with the Dietary Guidelines for Americans, recommends that consumers limit the amount of added sugars in their diet. [CSAPH Rep. 8, A-23]

Strategies to Reduce the Consumption of Food and Beverages with Added Sweeteners H-150.927
Our AMA: (1) acknowledges the adverse health impacts of sugar- sweetened beverage (SSB) consumption and food products with added sugars, and support evidence-based strategies to reduce the consumption of SSBs and food products with added sugars, including but not limited to, excise taxes on SSBs and food products with added sugars, removing options to purchase SSBs and food products with added sugars in primary and secondary schools, the use of warning labels to inform consumers about the health consequences of SSB consumption and food products with added sugars, and the use of plain packaging; (2) encourages continued research into strategies that may be effective in limiting SSB consumption and food products with added sugars, such as controlling portion sizes; limiting options to purchase or access SSBs and food products with added sugars in early childcare settings, workplaces, and public venues; restrictions on marketing SSBs and food products with added sugars to children; and changes to the agricultural subsidies system; (3) encourages hospitals and medical facilities to offer healthier beverages, such as water, unflavored milk, coffee, and unsweetened tea, for purchase in place of SSBs and apply calorie counts for beverages in vending machines to be visible next to the price; (4) encourages physicians to (a) counsel their patients about the health consequences of SSB consumption and food products with added sugars and replacing SSBs and food products with added sugars with

healthier beverage and food choices, as recommended by professional society clinical guidelines; and (b) work with local school districts to promote healthy beverage and food choices for students; (5) recommends that taxes on food and beverage products with added sugars be enacted in such a way that the economic burden is borne by companies and not by individuals and families with limited access to food alternatives; (6) supports that any excise taxes are reinvested in community programs promoting health and (7) will advocate for the end of tax subsidies for advertisements that promote among children the consumption of food and drink of poor nutritional quality, as defined by appropriate nutritional guiding principles. [CSAPH Rep. 03, A-17; Modified: Res. 429, A-22]

Reform the US Farm Bill to Improve US Public Health and Food Sustainability H-150.932
Our AMA supports the creation of a new advisory board to review and recommend US Farm Bill budget allocations to ensure any government subsidies are only used to help produce healthy food choices and sustainable foods, and that advisory committee members include physicians, public health officials and other public health stakeholders. [Res. 215, A-13; Reaffirmed: BOT Rep. 09, A-23]

Combating Obesity and Health Disparities H-150.944
Our AMA supports efforts to: (1) reduce health disparities by basing food assistance programs on the health needs of their constituents; (2) provide vegetables, fruits, legumes, grains, vegetarian foods, and healthful dairy and nondairy beverages in school lunches and food assistance programs; and (3) ensure that federal subsidies encourage the consumption of foods and beverages low in fat, added sugars, and cholesterol. [Res. 413, A-07; Reaffirmation A-12; Reaffirmation A-13; Modified: CSAPH Rep. 03, A-17]

AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES

Resolution: 429
(A-25)

Introduced by: Senior Physicians Section

Subject: Addressing the Health Consequences of Microplastics in Humans

Referred to: Reference Committee D

Whereas, microplastics are small plastic particles (less than 5 mm in size) that result from the breakdown of larger plastics and are ubiquitous in the environment, including in water, air, soil, and our food systems[1]; and

Whereas, microplastics have been found in numerous human tissues indicating widespread exposure through ingestion, inhalation, and dermal absorption; and

Whereas, preliminary studies suggest microplastics may have adverse effects on human health, including inflammation, oxidative stress, endocrine disruption, reproductive toxicity and potential carcinogenicity; and

Whereas, vulnerable populations, including children, pregnant individuals, older adults and those with preexisting health conditions, may be disproportionately impacted by microplastic exposure; and

Whereas, current scientific research on the long-term health consequences of microplastics remains limited[2,3]; therefore be it

RESOLVED, that our American Medical Association recognize the potential health risks associated with microplastics exposure and encourage increased research to better understand the human health effects of microplastics (Directive to Take Action); and be it further

RESOLVED, that our AMA support the respective specialty medical societies with subject matter expertise and federal and state public health agencies, including the Centers for Disease Control and Prevention (CDC) and the Environmental Protection Agency (EPA), to develop evidence-based guidelines for monitoring and mitigating microplastic exposure in water, food, air, and other consumer products (Directive to Take Action); and be it further

RESOLVED, that our AMA collaborate with relevant stakeholders to promote public education about microplastics, their sources, potential health risks, and possible strategies for reducing exposure. (Directive to Take Action)

Fiscal Note: Modest – between $1,000 - $5,000

Received: 4/20/25

REFERENCES

1. Wright, S. L., & Kelly, F. J. (2017). Plastic and human health: a micro issue? *Environmental science & technology, 51*(12), 6634-6647.
2. Prata, J. C., Da Costa, J. P., Lopes, I., Duarte, A. C., & Rocha-Santos, T. (2020). Environmental exposure to microplastics: An overview on possible human health effects. *Science of the total environment*, *702*, 134455.
3. Nihart, A. J., Garcia, M. A., El Hayek, E., Liu, R., Olewine, M., Kingston, J. D., ... & Campen, M. J. (2025). Bioaccumulation of microplastics in decedent human brains. *Nature Medicine*, 1-6.

RELEVANT AMA POLICY

H-135.929 Banning Plastic Microbeads in Personal Care Products

Our AMA supports local, state, and federal laws banning the sale and manufacture of personal care products containing plastic microbeads.
[Res. 916, I-15]

AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES

Resolution: 430
(A-25)

Introduced by: Senior Physicians Section

Subject: Addressing the Health Impacts of Ultraprocessed Foods

Referred to: Reference Committee D

Whereas, ultraprocessed foods (UPFs) are industrial formulations of chemically modified substances, typically high in added sugars, unhealthy fats, salt, and artificial additives; and

Whereas, a growing body of evidence links UPF consumption to an increased risk of obesity, cardiovascular disease, diabetes, cancer and mental health disorders[1,2,3]; and

Whereas, UPFs often disproportionately affect vulnerable populations, including low-income communities and people experiencing food insecurity; and

Whereas, public awareness of the health risks associated with UPFs remains limited, and there is a lack of clear labeling and regulatory standards to inform consumer choices; and

Whereas, physicians play a critical role in educating patients about nutrition and advocating for health policies that reduce dietary risks; therefore be it

RESOLVED, that our American Medical Association support and promote public awareness and education about the health risks of ultraprocessed foods and the benefits of minimally processed and unprocessed foods (Directive to Take Action); and be it further

RESOLVED, that our AMA support federal, state, and local policies that promote and incentivize the production and distribution of healthier, affordable, minimally-processed and unprocessed foods (New HOD Policy); and be it further

RESOLVED, that our AMA encourage the integration of nutrition education into all levels of medical education to empower clinicians to best counsel patients efficiently and effectively on reducing UPF consumption (New HOD Policy); and be it further

RESOLVED, that our AMA support increased funding to the FDA for research into the health impacts of ultraprocessed foods and strategies to mitigate their risks. (New HOD Policy)

Fiscal Note: Modest – between $1,000 - $5,000

Received: 4/20/25

REFERENCES

1. Lane, M. M., Gamage, E., Du, S., Ashtree, D. N., McGuinness, A. J., Gauci, S., ... & Marx, W. (2024). Ultra-processed food exposure and adverse health outcomes: umbrella review of epidemiological meta-analyses. *bmj*, 384.
2. Cossez, E., Baker, P., & Mialon, M. (2022). 'The second mother': How the baby food industry captures science, health professions and civil society in France. *Maternal & Child Nutrition, 18*(2), e13301.
3. Callahan, A. (2025, January 29). *Kennedy says ultraprocessed foods are driving chronic disease*. *The New York Times*. Retrieved March 21, 2025, from https://www.nytimes.com/2025/01/29/us/politics/rfk-jr-processed-foods-chronic-disease.html#:~:text=5%2C%202025-,Robert%20F.,including%20autoimmune%20diseases%20and%20obesity

RELEVANT AMA POLICY

H-150.927 Strategies to Reduce the Consumption of Food and Beverages with Added Sweeteners
1. Our American Medical Association acknowledges the adverse health impacts of sugar- sweetened beverage (SSB) consumption and food products with added sugars, and support evidence based strategies to reduce the consumption of SSBs and food products with added sugars, including but not limited to, excise taxes on SSBs and food products with added sugars, removing options to purchase SSBs and food products with added sugars in primary and secondary schools, the use of warning labels to inform consumers about the health consequences of SSB consumption and food products with added sugars, and the use of
plain packaging.
2. Our AMA encourages continued research into strategies that may be effective in limiting SSB consumption and food products with added sugars, such as controlling portion sizes; limiting options to purchase or access SSBs and food products with added sugars in early childcare settings, workplaces, and public venues; restrictions on marketing SSBs and food products with added sugars to children; and changes to the agricultural subsidies system.
3. Our AMA encourages hospitals and medical facilities to offer healthier beverages, such as water, unflavored milk, coffee, and unsweetened tea, for purchase in place of SSBs and apply calorie counts for beverages in vending machines to be visible next to the price.
4. Our AMA encourages physicians to
    a. counsel their patients about the health consequences of SSB consumption and food products with added sugars and replacing SSBs and food products with added sugars with healthier beverage and food choices, as recommended by professional society clinical guidelines.
    b. work with local school districts to promote healthy beverage and food choices for students.
5. Our AMA recommends that taxes on food and beverage products with added sugars be enacted in such a way that the economic burden is borne by companies and not by individuals and families with limited access to food alternatives.
6. Our AMA supports that any excise taxes are reinvested in community programs promoting health.
7. Our AMA will advocate for the end of tax subsidies for advertisements that promote among children the consumption of food and drink of poor nutritional quality, as defined by appropriate nutritional guiding principles.
[CSAPH Rep. 03, A-17; Modified: Res. 429, A-22]

H-150.929 Promotion of Healthy Lifestyles I: Reducing the Population Burden of Cardiovascular Disease by Reducing Sodium Intake
1. Our American Medical Association calls for a step-wise, minimum 50% reduction in sodium in processed foods, fast food products, and restaurant meals to be achieved over the next decade.
2. Our AMA urges the FDA to publish future editions of their voluntary targets expeditiously to make further progress on sodium reduction.
3. Our AMA supports federal, state, and local efforts to set robust targets for reducing sodium levels in school meals, meals in health care facilities, and other meals provided by daily meal providers.
4. Our AMA will advocate for federal, state, and local efforts to reduce sodium levels in products from food manufacturers and restaurants to the greatest extent possible, without increasing levels of other unhealthy ingredients, such as added sugars or artificial ingredients.
5. Our AMA supports federal, state, and local efforts to require front-of-package warning labels for foods that are high in sodium based on the established recommended daily value.
6. Our AMA will assist in achieving the Healthy People 2030 goal for sodium consumption, by will working with the FDA, the National Heart Lung Blood Institute, the Centers for Disease Control and Prevention, the American Heart Association, Academy of Nutrition and Dietetics, and other interested partners to educate consumers about the benefits of reductions in sodium intake and other dietary approaches to

reduce hypertension.
7. Our AMA supports the continuing education of physicians and other members of the health care team on counseling patients on lifestyle modification strategies to manage blood pressure, advocating for culturally relevant dietary models that reduce sodium intake.
8. Our AMA recommends that the FDA consider all options to promote reductions in the sodium content of processed foods.
9. Our AMA supports further study and evaluation of national salt reduction programs to determine the viability, industry engagement, and health and economic benefits of such programs.
10. Our AMA supports federal, state, and local efforts to regulate advertising of foods and products high in sodium, especially advertising targeted to children.
[CSAPH Rep. 01, A-16; Modified: CSAPH Rep. 04, I-24]

H-150.939 Accurate Reporting of Fats on Nutritional Labels
Our AMA urges the Food and Drug Administration to require the use of more precise processes to measure the fat content in foods, particularly trans fats and saturated fats, and to require that the most accurate fat content information based on these processes be included on food labels.
[Res. 412, A-10; Reaffirmed: CSAPH Rep. 01, A-20]

D-150.974 Support for Nutrition Label Revision and FDA Review of Added Sugars
1. Our AMA will issue a statement of support for the newly proposed nutrition labeling by the Food and Drug Administration (FDA) during the public comment period.
2. Our AMA will recommend that the FDA further establish a recommended daily value (%DV) for the new added sugars listing on the revised nutrition labels based on previous recommendations from the WHO and AHA).
3. Our AMA will encourage further research into studies of sugars as addictive through epidemiological, observational, and clinical studies in humans.
4. Our AMA encourages the FDA to: (a) develop front-of-package warning labels for foods that are high in added sugars based on the established recommended daily value; and (b) limit the amount of added sugars permitted in a food product containing front-of-package health or nutrient content claims.
[Res. 422, A-14; Res. 903, I-18]

AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES

Resolution: 431
(A-25)

Introduced by: Women Physicians Section

Subject: Alcohol & Breast Cancer Risk

Referred to: Reference Committee D

Whereas, the largest burden of alcohol-related cancer as well as cancer-related deaths in the U.S. is breast cancer[1]; and

Whereas, for cancers like breast, mouth, and throat, the risk increases with one or less drinks per day[1]; and

Whereas, women who drink three alcoholic drinks per week are 15% more likely to develop breast cancer than those that do not[2]; and

Whereas, analysis of a CDC survey from 2020 demonstrated that only one in four women were aware that alcohol is a risk factor for breast cancer[2]; and

Whereas, organizations including the American Society of Clinical Oncology released statements detailing the importance of alcohol control strategies to comprehensive cancer treatment plans[3]; and

Whereas, “pinkwashing”, a marketing strategy used by companies to display superficial promotion of a cause despite the organization often contributing to the issue, has been a marketing technique for alcoholic beverages[4]; therefore be it

RESOLVED, that our American Medical Association work with relevant parties to (1) promote public education about the risks between alcohol use and cancer, especially breast cancer; and (2) educate clinicians regarding the influence of alcohol use and breast cancer as well as other cancer risks and treatment complications (Directive to Take Action); and be it further

RESOLVED, that our AMA supports evidence-based efforts to prevent excessive alcohol use, including eliminating the use of “pinkwashing” to market alcohol products and supporting warning labels on the ingredients and products. (New HOD Policy)

Fiscal Note: $70,454

Date Received: 04/21/2025

REFERENCES
1. Alcohol and Cancer Risk 2024.pdf. https://www.hhs.gov/sites/default/files/oash-alcohol-cancer-risk.pdf
2. Alcohol is the breast cancer risk no one wants to talk about. Epidemiology & Biostatistics. https://epibiostat.ucsf.edu/news/alcohol-breast-cancer-risk-no-one-wants-talk-about
3. World Cancer Research Fund International- Alcohol and cancer risk policy position. https://www.wcrf.org/wp-content/uploads/2024/11/Policy-position-alcohol-cancer-risk-0924.pdf
4. Hall MG, Lee CJY, Jernigan DH, et al. The impact of "pinkwashed" alcohol advertisements on attitudes and beliefs: A randomized experiment with US adults. *Addict Behav*. 2024;152:107960. doi:10.1016/j.addbeh.2024.107960

RELEVANT AMA POLICY

Alcohol Consumption and Health H-30.934
Our AMA recognizes that alcohol consumption at any level, not just heavy alcohol use or addictive alcohol use, is a modifiable risk factor for cancer.
[Res. 516, A-19]

Setting Domestic and International Public Health Prevention Targets for Per Capita Alcohol Consumption as a Means of Reducing the Burden on Non-Communicable Diseases on Health Status H-30.937
Our AMA will: (1) continue to address the role of alcohol use on health status and the impact of behaviorally-associated chronic illnesses (including obesity, diabetes, heart disease, chronic respiratory diseases, and many cancers) on the overall burden of disease and the costs of health care services in America; (2) encourage federal health services planning agencies and public health authorities to address the role of alcohol and tobacco consumption on health and to promote environmental interventions including evidence based tobacco control and alcohol control policies to improve the health status of Americans; and (3) encourage the World Health Organization to continue its work on the impact of Non Communicable Diseases (NCDs) on health status and to include targets for reduced per capita alcohol consumption among its major proposed interventions in developed and developing nations to reduce the incidence of, prevalence of, and rates of disability and premature deaths attributable to chronic non-communicable diseases.
[Res. 413, A-12 Reaffirmation: A-18]

AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES

Resolution: 432
(A-25)

Introduced by: Women Physicians Section

Subject: Support for Long-Term Sequelae of Pregnancy

Referred to: Reference Committee D

Whereas, ACOG defines the postpartum period as the 6 weeks immediately following childbirth when the body is recovering from pregnancy and delivery[1]; and

Whereas, the American Rescue Plan Act of 2021 introduced the option for states to expand coverage of postpartum care reimbursable by Medicaid and Children's Health Insurance Program (CHIP) up to 12 months[2]; and

Whereas, previous society recommendations for a postpartum visit within 6-weeks has been updated to reflect the need for postpartum care to be an ongoing process[1]; and

Whereas, definitions of the postpartum period neglect that more than one-third of women experience long-term sequelae from pregnancy[3]; and

Whereas, many complications of pregnancy are associated with an increased risk of cardiovascular disease long after delivery[4]; and

Whereas, gestational diabetes, which affects 5-9% of U.S. pregnancies, is associated with a 50% increased risk of diabetes mellitus type 2 later in life[4]; and

Whereas, pregnancy-related pelvic girdle pain can persist long after pregnancy and delivery, causing severe disability[5]; and

Whereas, vaginal delivery is a known risk factor for pelvic floor dysfunction and persistent urinary incontinence[6], with the prevalence of symptomatic pelvic floor dysfunction projected to be 43.8 million by 2025[7,8]; and

Whereas, women suffering from urinary incontinence suffer a high cost-burden for management and treatment, spending upwards of $10,000 in the 2-year post-index period with higher costs associated for women on Medicaid[9,10]; and

Whereas, experiencing a stillbirth is associated with clear long-term psychological impacts including depression, post-traumatic stress disorder, anxiety[11]; and

Whereas, despite the high prevalence of stillbirths, the financial impact of these significant events to individuals and the healthcare system is not well-understood[11]; and

Whereas, supportive bereavement services are a helpful option for families navigating loss from stillbirths[12]; and

Whereas, post-traumatic stress disorder is well-documented in women after childbirth, however it is understudied and lacks adequate longitudinal mental health support[13,14]; and

Whereas, there are gaps in provider knowledge of long-term sequelae of pregnancy including gestational weight gain guidelines[15] and of increased cardiovascular risk following a hypertensive disorder of pregnancy[16]; and

Whereas, there are gaps in patient knowledge of risk and/or management long-term sequelae of pregnancy including cardiovascular risk[16], pelvic floor disorders[17], and type 2 diabetes mellitus[18]; and

Whereas, there is a lack of research on the effectiveness of postpartum education[19]; therefore be it

RESOLVED, that our American Medical Association will work with relevant parties to support research on the long-term sequelae of pregnancy, their development, and possible treatments, including reducing disparities in maternal health outcomes (Directive to Take Action); and be it further

RESOLVED, that our AMA will support further insurance coverage of treatments for conditions related to long-term sequelae of pregnancy (New HOD Policy); and be it further

RESOLVED, that our AMA will support appropriate organizations working to improve awareness and education among patients, families, and clinicians of the risks of long-term sequelae of pregnancy. (Directive to Take Action)

Fiscal Note: Moderate – between $5,000 - $10,000

Received: 04/21/2025

REFERENCES

1. Optimizing Postpartum Care. Accessed January 31, 2025. https://www.acog.org/clinical/clinical-guidance/committee-opinion/articles/2018/05/optimizing-postpartum-care
2. Tsai D. RE: Improving Maternal Health and Extending Postpartum Coverage in Medicaid and the Children's Health Insurance Program (CHIP). Published online December 7, 2021. Accessed January 31, 2025. https://www.medicaid.gov/federal-policy-guidance/downloads/sho21007.pdf
3. More than a third of women experience lasting health problems after childbirth, new research shows. Accessed January 31, 2025. https://www.who.int/news/item/07-12-2023-more-than-a-third-of-women-experience-lasting-health-problems-after-childbirth
4. McAuliffe FM. Impact of pregnancy on long-term health: Advances in postpregnancy care—An opportunity to improve long-term maternal health. *Int J Gynecol Obstet*. 2023;160(S1):4-6. doi:10.1002/ijgo.14536
5. Wu WH, Meijer OG, Uegaki K, et al. Pregnancy-related pelvic girdle pain (PPP), I: Terminology, clinical presentation, and prevalence. *Eur Spine J*. 2004;13(7):575-589. doi:10.1007/s00586-003-0615-y
6. Seshan V, AlKhasawneh E, Al Hashmi IH. Risk factors of urinary incontinence in women: a literature review. *Int J Urol Nurs*. 2016;10(3):118-126. doi:10.1111/ijun.12107
7. Blomquist JL, Muñoz A, Carroll M, Handa VL. Association of Delivery Mode With Pelvic Floor Disorders After Childbirth. *JAMA*. 2018;320(23):2438-2447. doi:10.1001/jama.2018.18315
8. Peinado-Molina RA, Hernández-Martínez A, Martínez-Vázquez S, Rodríguez-Almagro J, Martínez-Galiano JM. Pelvic floor dysfunction: prevalence and associated factors. *BMC Public Health*. 2023;23(1):2005. doi:10.1186/s12889-023-16901-3
9. Datar M, Pan LC, McKinney JL, Goss TF, Pulliam SJ. Healthcare resource use and cost burden of urinary incontinence to United States payers. *Neurourol Urodyn*. 2022;41(7):1553-1562. doi:10.1002/nau.24989
10. Chisholm LP, Sebesta EM, Gleicher S, Kaufman M, Dmochowski RR, Reynolds WS. The burdens of incontinence: Quantifying incontinence product usage and costs in women. *Neurourol Urodyn*. 2022;41(7):1601-1611. doi:10.1002/nau.25007
11. Heazell AEP, Siassakos D, Blencowe H, et al. Stillbirths: economic and psychosocial consequences. *The Lancet*. 2016;387(10018):604-616. doi:10.1016/S0140-6736(15)00836-3
12. Homer CSE, Malata A, ten Hoope-Bender P. Supporting women, families, and care providers after stillbirths. *The Lancet*. 2016;387(10018):516-517. doi:10.1016/S0140-6736(15)01278-7
13. Ayers S, Bond R, Bertullies S, Wijma K. The aetiology of post-traumatic stress following childbirth: a meta-analysis and theoretical framework. *Psychol Med*. 2016;46(6):1121-1134. doi:10.1017/S0033291715002706
14. Horsch A, Garthus-Niegel S, Ayers S, et al. Childbirth-related posttraumatic stress disorder: definition, risk factors, pathophysiology, diagnosis, prevention, and treatment. *Am J Obstet Gynecol*. 2024;230(3):S1116-S1127.

doi:10.1016/j.ajog.2023.09.089
15. Callaghan S, O'Brien E, Coughlan B, McAuliffe FM. Midwives' and obstetricians' level of knowledge of appropriate gestational weight gain recommendations for pregnancy: A systematic review. *Birth Berkeley Calif*. 2020;47(4):322-331. doi:10.1111/birt.12485
16. Roth H, LeMarquand G, Henry A, Homer C. Assessing Knowledge Gaps of Women and Healthcare Providers Concerning Cardiovascular Risk After Hypertensive Disorders of Pregnancy-A Scoping Review. *Front Cardiovasc Med*. 2019;6:178. doi:10.3389/fcvm.2019.00178
17. Mckay ER, Lundsberg LS, Miller DT, et al. Knowledge of Pelvic Floor Disorders in Obstetrics. *Female Pelvic Med Reconstr Surg*. 2019;25(6):419-425. doi:10.1097/SPV.0000000000000604
18. Lucas HR, Williams RC, Hollar LN, et al. Understanding Gestational Diabetes, Future Diabetes Risk, and Diabetes Prevention: A Qualitative Study of Patient, Provider, and Staff Perspectives. *Clin Diabetes*. 2022;40(1):39-50. doi:10.2337/cd21-0016
19. McCarter D, Law AA, Cabullo H, Pinto K. Scoping Review of Postpartum Discharge Education Provided by Nurses. *J Obstet Gynecol Neonatal Nurs JOGNN*. 2022;51(4):377-387. doi:10.1016/j.jogn.2022.03.002

RELEVANT AMA POLICY

Improving Mental Health Services During Pregnancy and Postpartum H-420.953

1. Our American Medical Association will support improvements in current mental health services during pregnancy and postpartum periods.
2. Our AMA will support advocacy for inclusive insurance coverage of and sufficient payment for mental health services during gestation, and extension of postpartum mental health services coverage to one year postpartum.
3. Our AMA will support appropriate organizations working to improve awareness and education among patients, families, and providers of the risks of mental illness during gestation and postpartum.
4. Our AMA will continue to advocate for funding programs that address perinatal and postpartum depression, anxiety and psychosis, and substance use disorder through research, public awareness, and support programs.
5. Our AMA will advocate for evidence-based postpartum depression screening and prevention services to be recognized as the standard of care for all federally-funded health care programs for persons who are pregnant or in a postpartum state.

[Res. 102, A-12 Modified: Res. 503, A-17 Modified: 227, A-23 Modified: Speakers Rep. 02, I-24]

Reducing Inequities and Improving Access to Insurance for Maternal Health Care H-185.917

3. Our AMA encourages physicians to pursue educational opportunities focused on embedding equitable, patient-centered care for patients who are pregnant and/or within 12 months postpartum into their clinical practices and encourages physician leaders of health care teams to support similar appropriate professional education for all members of their teams.

8. Our AMA encourages the development and funding of resources and outreach initiatives to help pregnant individuals, their families, their communities, and their workplaces to recognize the value of comprehensive prepregnancy, prenatal, peripartum, and postpartum care. These resources and initiatives should encourage patients to pursue both physical and behavioral health care, strive to reduce barriers to pursuing care, and highlight care that is available at little or no cost to the patient.

9. Our AMA supports adequate payment from all payers for the full spectrum of evidence-based prepregnancy, prenatal, peripartum, and postpartum physical and behavioral health care.

[Joint CMS/CSAPH Rep. 1, I-21]

AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES

Resolution: 433
(A-25)

Introduced by: Women Physicians Section

Subject: Clinical Lactation Care

Referred to: Reference Committee D

Whereas, research shows breastfeeding is associated with significant risk reduction of short-term and long-term illnesses and diseases compared to infant formula feeding[1]; and

Whereas, the American Academy of Pediatrics (AAP) recommends exclusive breastfeeding for approximately 6 months after birth with continued breastfeeding, along with appropriate complementary foods introduced at about 6 months, as long as mutually desired by mother and child for 2 years or beyond[2]; and

Whereas, nationally 83% of mothers/infant dyads leave the hospital breastfeeding, but only 25% meet the AAP six-month recommendation[3], and the racial disparities are stark[4]; and

Whereas, within the first several weeks after hospital discharge many mother/baby dyads experience breastfeeding difficulty[5]; and

Whereas, mother's own milk is particularly important for premature and other critically ill NICU infants, yet physiologically it can be very difficult for those separated mothers to produce and pump an adequate milk supply[6]; and

Whereas, clinical assessment and determination of lactation and breastfeeding issues can take more than an hour of a clinician's time and encounters often require specialized knowledge for the provision of risk-appropriate and safe clinical care[7]; and

Whereas, currently there is a confusing array of lactation personnel with more than 20 "credentials" that often represent only 2-5 days of abbreviated general breastfeeding education[8]; and

Whereas, without a state license, anyone can call themselves a "lactation consultant" –with or without the requisite education, training, and verified competency; and

Whereas, physicians risk liability for referrals for clinical patient care to anyone who does not have a state license to perform this clinical work[9]; and

Whereas, without licensure of clinical lactation care personnel, there is no state oversight of their work and nationally there have been reports of patient harm[10]; and

Whereas, the Federation of State Medical Boards states:
All discussions about changes in scope of practice should begin with a basic understanding of the definition of the practice of medicine and recognition that the education received by physicians differs in scope and duration from other health care professionals. Non-physician

practitioners may seek authorization to provide services that are included in the definition of the practice of medicine under existing state law[11]; and

Whereas, the American College of Obstetricians and Gynecologists, in their 2021 Committee Opinion, states: "Lactation consultants should be accessible to parents in the hospital and after the parent goes home. Although the Patient Protection and Affordable Care Act (ACA) covers breastfeeding support without cost sharing, this practice has yet to be fully implemented in most communities because of state licensure or insurance issues, or both"[12]; therefore be it

RESOLVED, that our American Medical Association recognizes the importance of clinical lactation care provided by qualified clinicians and clinical professionals. (New HOD Policy)

Fiscal Note: Minimal – less than $1,000

Received: 04/21/2025

REFERENCES

1. Pérez-Escamilla, R., et al. (2023). Lancet Breastfeeding Series Group. Breastfeeding: crucially important, but increasingly challenged in a market-driven world. *Lancet, 401*(10375), 472-485. https://pubmed.ncbi.nlm.nih.gov/36764313/
2. Meek, J.Y., Noble, L., & Section on Breastfeeding. (2022). Policy statement: Breastfeeding and the use of human milk. *Pediatrics, 150*(1), e2022057988. https://pubmed.ncbi.nlm.nih.gov/35921640/
3. Centers for Disease Control and Prevention. (2022). *Breastfeeding report card*. https://www.cdc.gov/breastfeeding/pdf/2022-Breastfeeding-Report-Card-H.pdf
4. Latest data available from CDC is from 2011-2015 showing 22.5% white, but only 14% Black, dyads were exclusively breastfeeding at 6 months. Anstey E. et al. MMWR, Vol 66 No 27 (July 14, 2017). https://www.cdc.gov/mmwr/volumes/66/wr/pdfs/mm6627a3.pdf To address breastfeeding disparities, the national non-profit, The Center for Black Health & Equity, supports adding IBCLCs to the clinical healthcare team through state licensing. Their letter of support can be obtained by e-mailing info@nlca.us.
5. Wagner EA, Chantry CJ, Dewey KG, Nommsen-Rivers LA. Breastfeeding concerns at 3 and 7 days postpartum and feeding status at 2 months. Pediatrics. 2013 Oct;132(4):e865-75. doi: 10.1542/peds.2013-0724. Epub 2013 Sep 23. PMID: 24062375; PMCID: PMC3784292 https://pubmed.ncbi.nlm.nih.gov/24062375/ ; and Odom EC, Li R, Scanlon KS, Perrine CG, Grummer-Strawn L. Reasons for earlier than desired cessation of breastfeeding. Pediatrics. 2013 Mar;131(3):e726-32. doi: 10.1542/peds.2012-1295. Epub 2013 Feb 18. PMID: 23420922; PMCID: PMC4861949 https://pubmed.ncbi.nlm.nih.gov/23420922/ .
6. Parker MG, Stellwagen LM, Noble L, Kim JH, Poindexter BB, Puopolo KM; SECTION ON BREASTFEEDING, COMMITTEE ON NUTRITION, COMMITTEE ON FETUS AND NEWBORN. Promoting Human Milk and Breastfeeding for the Very Low Birth Weight Infant. Pediatrics. 2021 Nov;148(5):e2021054272. https://pubmed.ncbi.nlm.nih.gov/34635582/
7. Witt, A.M., Smith, S., Mason, M.J., & Flocke, S.A. (2012). Integrating routine lactation consultant support into a pediatric practice. *Breastfeeding Medicine, 7*(1), 38-42. https://pmc.ncbi.nlm.nih.gov/articles/PMC3579324/ See also, National Lactation Consultant Alliance (2023) Impact of the International Board Certified Lactation Consultant. https://nlca.us/wp-content/uploads/2024/07/Impact-of-the-International-Board-Certified-Lactation-Consultant.pdf
8. Strong G, Gober M, Walker M. Speaking the Same Language: A Call for Standardized Lactation Terminology in the United States. J Hum Lact. 2023 Feb;39(1):121-131. doi: 10.1177/08903344221131041. Epub 2022 Dec 13. PMID: 36511175. https://journals.sagepub.com/doi/full/10.1177/08903344221131041 . See also, National Lactation Consultant Alliance (2024) Knowledge Brief Orientation to Lactation Personnel. https://nlca.us/wp-content/uploads/2024/07/NLCA-Knowledge-Brief.pdf
9. National Lactation Consultant Alliance. (2024). Position paper: Licensure of the International Board Certified Lactation Consultant. https://nlca.us/wp-content/uploads/2024/07/NLCA-Position-Paper.pdf
10. Thomas, K., Kliff, S., & Silver-Greenberg, J. (2023). Inside the booming business of cutting babies' tongues. (Alleging that rouge Lactation Consultants are facilitating infant harm) https://www.nytimes.com/2023/12/18/health/tongue-tie-release-breastfeeding.html; and Lourgos, A.L. (2024). Breastfeeding moms sent naked photos, videos to purported lactation consultant on Facebook. Now they fear it was a scam. https://www.chicagotribune.com/2024/05/05/breastfeeding-moms-sent-naked-photos-videos-to-purported-lactation-consultant-on-facebook-now-they-fear-it-was-a-scam/?share=aoioicanhdocfatnnawm See also, S.U. v. New York University Langone Medical Center, 144 N.Y.S. 3d 837 (N.Y. Sup. Ct. 2021) (allegation of infant injury—significant dehydration and brain damage--resulting from inadequate lactation/breastfeeding assessment and instructions).
11. Federation of State Medical Boards (2005) Assessing Scope of Practice in Health Care Delivery: Critical Questions in Assuring Public Access and Safety. https://www.fsmb.org/siteassets/advocacy/policies/assessing-scope-of-practice-in-health-care-delivery.pdf
12. Barriers to Breastfeeding: Supporting Initiation and Continuation of Breastfeeding. ACOG Committee Opinion No. 821, February 2021. https://www.acog.org/clinical/clinical-guidance/committee-opinion/articles/2021/02/barriers-to-breastfeeding-supporting-initiation-and-continuation-of-breastfeeding

RELEVANT AMA POLICY

AMA Support for Breastfeeding H-245.982
1. Our AMA: (a) recognizes that breastfeeding is the optimal form of nutrition for most infants; (b) endorses the 2012 policy statement of American Academy of Pediatrics on Breastfeeding and the use of Human Milk, which delineates various ways in which physicians and hospitals can promote, protect, and support breastfeeding practices; (c) supports working with other interested organizations in actively seeking to promote increased breastfeeding by Supplemental Nutrition Program for Women, Infants, and Children (WIC Program) recipients, without reduction in other benefits; (d) supports the availability and appropriate use of breast pumps as a cost-effective tool to promote breast feeding; and (e) encourages public facilities to provide designated areas for breastfeeding and breast pumping; mothers nursing babies should not be singled out and discouraged from nursing their infants in public places.
2. Our AMA: (a) promotes education on breastfeeding in undergraduate, graduate, and continuing medical education curricula; (b) encourages all medical schools and graduate medical education programs to support all residents, medical students and faculty who provide breast milk for their infants, including appropriate time and facilities to express and store breast milk during the working day; (c) encourages the education of patients during prenatal care on the benefits of breastfeeding; (d) supports breastfeeding in the health care system by encouraging hospitals to provide written breastfeeding policy that is communicated to health care staff; (e) encourages hospitals to train staff in the skills needed to implement written breastfeeding policy, to educate pregnant women about the benefits and management of breastfeeding, to attempt early initiation of breastfeeding, to practice "rooming-in," to educate mothers on how to breastfeed and maintain lactation, and to foster breastfeeding support groups and services; (f) supports curtailing formula promotional practices by encouraging perinatal care providers and hospitals to ensure that physicians or other appropriately trained medical personnel authorize distribution of infant formula as a medical sample only after appropriate infant feeding education, to specifically include education of parents about the medical benefits of breastfeeding and encouragement of its practice, and education of parents about formula and bottle-feeding options; and (g) supports the concept that the parent's decision to use infant formula, as well as the choice of which formula, should be preceded by consultation with a physician.
3. Our AMA: (a) supports the implementation of the WHO/UNICEF Ten Steps to Successful Breastfeeding at all birthing facilities; (b) endorses implementation of the Joint Commission Perinatal Care Core Measures Set for Exclusive Breast Milk Feeding for all maternity care facilities in the US as measures of breastfeeding initiation, exclusivity and continuation which should be continuously tracked by the nation, and social and demographic disparities should be addressed and eliminated; (c) recommends exclusive breastfeeding for about six months, followed by continued breastfeeding as complementary food are introduced, with continuation of breastfeeding for 1 year or longer as mutually desired by mother and infant; (d) recommends the adoption of employer programs which support breastfeeding mothers so that they may safely and privately express breast milk at work or take time to feed their infants; and (e) encourages employers in all fields of healthcare to serve as role models to improve the public health by supporting mothers providing breast milk to their infants beyond the postpartum period.
4. Our AMA supports the evaluation and grading of primary care interventions to support breastfeeding, as developed by the United States Preventive Services Task Force (USPSTF).
5. Our AMA's Opioid Task Force promotes educational resources for mothers who are breastfeeding on the benefits and risks of using opioids or medication-assisted therapy for opioid use disorder, based on the most recent guidelines.
[CSA Rep. 2, A05 Res. 325, A-05 Reaffirmation A-07 Reaffirmation A-12 Modified in lieu of Res. 409, A-12 and Res. 410, A-12 Appended: Res. 410, A-16 Appended: Res. 906, I-17 Reaffirmation: I-18]

AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES

Resolution: 434
(A-25)

Introduced by: Medical Society of the District of Columbia

Subject: Breast Cancer Risk Reduction

Referred to: Reference Committee D

Whereas, the National Cancer Institute reports that one in eight women born in the U.S. today will develop breast cancer, and, according to the Centers for Disease Control and Prevention, Black women have a disproportionately high breast cancer death rate; and

Whereas, the National Cancer Institute, Centers for Disease Control and Prevention, American Institute for Cancer Research, and other authorities have determined that individuals may reduce their risk of breast cancer incidence and/or mortality by maintenance of a healthy body weight, limiting alcohol intake, and having regular physical activity, among other steps; and

Whereas, the Dietary Guidelines Advisory Committee reported on December 20, 2024, that dietary patterns characterized by higher intakes of vegetables, fruits, legumes and nuts, and whole grains and lower intakes of red and processed meats, refined grains, and sugar-sweetened foods and beverages are associated with lower risk of postmenopausal breast cancer; and

Whereas, a robust body of evidence has shown that consumption of vegetables, fruits, and soy products is associated with reduced risk of post-menopausal breast cancer; and

Whereas, meta-analyses of prospective studies show that increases in dietary fiber intake are associated with a significant reductions in breast cancer risk, and, confirming the results of observational studies, an intervention diet emphasizing plant-based foods, such as vegetables, fruits, legumes, and whole grains, along with olive oil or nuts, was shown in the randomized, controlled PREDIMED study, including 4,282 women, to lead to a 51% reduction in breast cancer incidence (95% CI, 0.24-0.98), compared with an unmodified diet; and

Whereas, cancer organizations have expressed concern about a persistent lack of knowledge among the general public about preventive measures; and

Whereas, a poll of 2,017 US women conducted by Morning Consult between July 25 and 28, 2024, showed that only 28% of respondents were aware of any dietary factors associated with reduced risk of developing breast cancer; and

Whereas, when asked in the Morning Consult poll about soy products specifically, nearly as many women mistakenly believed that soy products were associated with increased breast cancer risk as women who knew that soy products were associated with reduced risk; and

Whereas, our American Medical Association currently has policy statements regarding breast cancer detection and treatment, but not regarding steps that individuals can take to reduce their risk of developing breast cancer; and

Whereas, regarding lung cancer prevention, our AMA currently has highly specific policy statements encouraging doctors to address with patients the risks of smoking (H490.917) and encouraging measures to decrease radon exposures if appropriate, but placing them in proper perspective, because smoking is a substantially more significant cause of lung cancer (H455.984), yet AMA policy provides no guidance regarding breast cancer risk reduction; and

Whereas, nutrition is a key aspect of cancer care, as noted by the American Cancer Society Nutrition and Physical Activity Guideline for Cancer Survivors and guidelines from the National Comprehensive Cancer Network and the American Society for Clinical Oncology, which highlight plant-based dietary patterns; and

Whereas, individuals at risk for breast cancer have a right to decide for themselves which preventive steps they wish to implement, and can do so only if they are aware of possible options; and

Whereas, physicians can play a key role in educating patients and their families about means for cancer risk reduction; therefore be it

RESOLVED, that our American Medical Association supports efforts to educate the public about the benefits of lifestyle changes that may reduce breast cancer risk, including regular physical activity, maintenance of a healthy body weight, a healthy plant-based diet, and limiting alcohol intake (New HOD Policy); and be it further

RESOLVED, that our AMA encourages physicians to regularly discuss with their individual patients the benefits of lifestyle changes that may reduce cancer risk; and be it further. (New HOD Policy)

Fiscal Note: Minimal – less than $1,000

Received: 3/7/25

REFERENCES

National Cancer Institute. Breast cancer risk in American women. 2020. Available at: https://www.cancer.gov/types/breast/risk-fact-sheet#:~:text=in%20recent%20years%3F-,What%20is%20the%20average%20American%20woman's%20risk%20of%20developing%20breast,during%20their%20lives%20(1).

Ellington TD, Henley SJ, Wilson RJ, Miller JW, Wu M, Richardson LC. Trends in breast cancer mortality by race/ethnicity, age, and US census region, United States—1999-2020. Cancer. 2023 Jan 1;129(1):32-38. doi: 10.1002/cncr.34503. Epub 2022 Oct 30. PMID: 36309838; PMCID: PMC10128100.

PDQ® Screening and Prevention Editorial Board. PDQ Breast Cancer Prevention. Bethesda, MD: National Cancer Institute. Updated 01/19/2024. Available at: https://www.cancer.gov/types/breast/hp/breast-prevention-pdq. Accessed February 5, 2024.

Rock CL, Thomson CA, Sullivan KR, et al. American Cancer Society nutrition and physical activity guideline for cancer survivors. CA Cancer J Clin. 2022 May;72(3):230-262. doi: 10.3322/caac.21719.

National Comprehensive Cancer Network (NCCN). NCCN Guidelines for Patients. Survivorship Care for Healthy Living. NCCN;2020. Available at: https://www.nccn.org/patients/guidelines/content/PDF/survivorship-hl-patient.pdf Accessed February 6, 2024.

American Society of Clinical Oncology (ASCO). Nutrition Recommendations During and After Treatment. Cancer.Net: Doctor approved patient information from ASCO. Available at: https://www.cancer.net/survivorship/healthy-living/nutrition-recommendations-during-and-after-treatment. Accessed February 6, 2024.

Dong JY, He K, Wang P, Qin LQ. Dietary fiber intake and risk of breast cancer: a meta-analysis of prospective cohort studies. *Am J Clin Nutr*. 2011;94:900-5. doi: 10.3945/ajcn.111.015578.

Aune D, Chan DS, Greenwood DC, et al. Dietary fiber and breast cancer risk: a systematic review and meta-analysis of prospective studies. *Ann Oncol.* 2012;23:1394-402. doi: 10.1093/annonc/mdr589.

Toledo E, Salas-Salvadó J, Donat-Vargas C, et al. Mediterranean diet and invasive breast cancer risk among women at high cardiovascular risk in the PREDIMED Trial: A randomized clinical trial. *JAMA Intern Med.* 2015;175:1752-1760. doi: 10.1001/jamainternmed.2015.4838.

Boutas I, Kontogeorgi A, Dimitrakakis C, Kalantaridou SN. Soy isoflavones and breast cancer risk: a meta-analysis. *In Vivo.* 2022;36:556-562. doi: 10.21873/invivo.12737.

DeClercq V, Nearing JT, Sweeney E. Plant-Based Diets and Cancer Risk: What is the Evidence? Curr Nutr Rep. 2022 Jun;11(2):354-369. doi: 10.1007/s13668-022-00409-0.

Emaus MJ, Peeters PH, Bakker MF, et al. Vegetable and fruit consumption and the risk of hormone receptor-defined breast cancer in the EPIC cohort. *Am J Clin Nutr.* 2016;103:168-77. doi: 10.3945/ajcn.114.101436.

American Institute for Cancer Research. Soy and Cancer: Myths and Misconceptions. 2019. https://www.aicr.org/resources/blog/soy-and-cancer-myths-and-misconceptions/

RELEVANT AMA POLICY

Screening and Treatment for Breast and Cervical Cancer Risk Reduction H-55.971
1. Our AMA supports programs to screen all at-risk individuals for breast and cervical cancer and that government funded programs be available for low income indivduals; the development of public information and educational programs with the goal of informing all at-risk individuals about routine cancer screening in order to reduce their risk of dying from cancer; and increased funding for comprehensive programs to screen low income individuals for breast and cervical cancer and to assure access to definitive treatment.
2. Our AMA encourages state and local medical societies to monitor local public health screening programs to ensure that they are linked to treatment resources in the public or private sector.
3. Our AMA encourages the Centers for Medicare and Medicaid Services to evaluate and review their current cervical cancer screening policies to ensure coverage is consistent with current evidence-based guidelines.
4. That our AMA support further research by relevant parties of HPV self-sampling in the United States to determine whether it can decrease health care disparities in cervical cancer screening.

Breast Density Notification H-525.977
1. Our AMA supports the inclusion of breast tissue density information in the mammography report when appropriate and education of patients about the clinical relevance of such information, but opposes state requirements for mandatory notification of breast tissue density to patients.
2. Our AMA encourages research on the benefits and harms of adjunctive screening for breast cancer for women identified to have dense breasts on an otherwise negative screening mammogram, in order to guide appropriate and evidence-based care and insurance coverage of the service.
3. Our AMA supports insurance coverage for and adequate access to supplemental screening recommended for patients with “dense breast” tissue following a discussion between the patient and their physician which integrates secondary risk characteristics.

Mammography Screening for Breast Cancer D-525.998
In order to assure timely access to breast cancer screening for all women, our AMA shall advocate for legislation that ensures adequate funding for mammography services.

Screening Mammography H-525.993
Our AMA:
a. recognizes the mortality reduction benefit of screening mammography and supports its use as a tool to detect breast cancer.
b. recognizes that as with all medical screening procedures there are small, but not inconsequential associated risks including false positive and false negative results and overdiagnosis.
c. favors participation in and support of the efforts of professional, voluntary, and government organizations to educate physicians and the public regarding the value of screening mammography in

reducing breast cancer mortality, as well as its limitations.
d. advocates remaining alert to new epidemiological findings regarding screening mammography and encourages the periodic reconsideration of these recommendations as more epidemiological data become available.
e. believes that beginning at the age of 40 years, all women should be eligible for screening mammography.
f. encourages physicians to regularly discuss with their individual patients the benefits and risks of screening mammography, and whether screening is appropriate for each clinical situation given that the balance of benefits and risks will be viewed differently by each patient.
g. encourages physicians to inquire about and update each patient's family history to detect red flags for hereditary cancer and to consider other risk factors for breast cancer, so that recommendations for screening will be appropriate.
h. supports insurance coverage for screening mammography.
i. supports seeking common recommendations with other organizations, informed and respectful dialogue as guideline-making groups address the similarities and differences among their respective recommendations, and adherence to standards that ensure guidelines are unbiased, valid and trustworthy.
j. reiterates its longstanding position that all medical care decisions should occur only after thoughtful deliberation between patients and physicians.

Male Breast Cancer H-55.977
Our AMA:
1. recognizes that breast cancer is a condition that affects males as well as females;
2. recognizes that men who carry a known BRCA mutation, have a strong family history of cancer (especially male breast cancer), have a personal history of breast cancer, or have an altered estrogen-testosterone ratio are at increased risk of developing male breast cancer;
3. supports the utilization of heightened surveillance methods when indicated, and consideration of genetic testing when appropriate, in men who are at increased risk of developing breast cancer;
4. supports physician and patient education about the risks, signs, and symptoms of male breast cancer, and genetic consultation for males at increased risk and for their family members; and
5. supports Medicare and insurance coverage for male breast cancer surveillance and diagnostic methods, including clinical breast examination, mammography, genetic consultation, and genetic testing, when indicated.

Setting Domestic and International Public Health Prevention Targets for Per Capita Alcohol Consumption as a Means of Reducing the Burden on Non-Communicable Diseases on Health Status H-30.937
Our AMA will: (1) continue to address the role of alcohol use on health status and the impact of behaviorally-associated chronic illnesses (including obesity, diabetes, heart disease, chronic respiratory diseases, and many cancers) on the overall burden of disease and the costs of health care services in America; (2) encourage federal health services planning agencies and public health authorities to address the role of alcohol and tobacco consumption on health and to promote environmental interventions including evidence based tobacco control and alcohol control policies to improve the health status of Americans; and (3) encourage the World Health Organization to continue its work on the impact of Non Communicable Diseases (NCDs) on health status and to include targets for reduced per capita alcohol consumption among its major proposed interventions in developed and developing nations to reduce the incidence of, prevalence of, and rates of disability and premature deaths attributable to chronic non-communicable diseases.

Physician Responsibilities for Tobacco Cessation H-490.917
Cigarette smoking is a major health hazard and a preventable factor in physicians' actions to maintain the health of the public and reduce the high cost of health care. Our AMA takes a strong stand against smoking and favors aggressively pursuing all avenues of educating the general public on the hazards of using tobacco products and the continuing high costs of this serious but preventable problem. Additionally, our AMA supports and advocates for appropriate surveillance approaches to measure changes in tobacco consumption, changes in tobacco-related morbidity and mortality, youth uptake of tobacco use, and use of alternative nicotine delivery systems. In view of the continuing and urgent need to assist individuals in smoking cessation, physicians, through their professional associations, should assume a leadership role in establishing national policy on this topic and assume the primary task of educating the public and their patients about the danger of tobacco use (especially cigarette smoking). Accordingly, our AMA:
(1) encourages physicians to refrain from engaging directly in the commercial production or sale of tobacco products;

(2) supports (a) development of an anti-smoking package program for medical societies; (b) making patient educational and motivational materials and programs on smoking cessation available to physicians; and (c) development and promotion of a consumer health-awareness smoking cessation kit for all segments of society, but especially for youth;

(3) encourages physicians to use practice guidelines for the treatment of patients with nicotine dependence and will cooperate with the Agency for Health Research and Quality (AHRQ) in disseminating and implementing evidence-based clinical practice guidelines on smoking cessation, and on other matters related to tobacco and health;

(4) (a) encourages physicians to use smoking cessation activities in their practices including (i) quitting smoking and urging their colleagues to quit; (ii) inquiring of all patients at every visit about their smoking habits (and their use of smokeless tobacco as well); (iii) at every visit, counseling those who smoke to quit smoking and eliminate the use of tobacco in all forms; (iv) prohibiting all smoking in the office by patients, physicians, and office staff; and discouraging smoking in hospitals where they work (v) providing smoking cessation pamphlets in the waiting room; (vi) becoming aware of smoking cessation programs in the community and of their success rates and, where possible, referring patients to those programs; (b) supports the concept of smoking cessation programs for hospital inpatients conducted by appropriately trained personnel under the supervision of a physician;

(5) (a) supports efforts to identify gaps, if any, in existing materials and programs designed to train physicians and medical students in the behavior modification skills necessary to successfully counsel patients to stop smoking; (b) supports the production of materials and programs which would fill gaps, if any, in materials and programs to train physicians and medical students in the behavior modification skills necessary to successfully counsel patients to stop smoking; (c) supports national, state, and local efforts to help physicians and medical students develop skills necessary to counsel patients to quit smoking; (d) encourages state and county medical societies to sponsor, support, and promote efforts that will help physicians and medical students more effectively counsel patients to stop smoking; (e) encourages physicians to participate in education programs to enhance their ability to help patients quit smoking; (f) encourages physicians to speak to community groups about tobacco use and its consequences; and (g) supports providing assistance in the promulgation of information on the effectiveness of smoking cessation programs;

(6) (a) supports the concept that physician offices, clinics, hospitals, health departments, health plans, and voluntary health associations should become primary sites for education of the public about the harmful effects of tobacco and encourages physicians and other health care workers to introduce and support healthy lifestyle practices as the core of preventive programs in these sites; and (b) encourages the development of smoking cessation programs implemented jointly by the local medical society, health department, and pharmacists; and
(7) (a) believes that collaborative approaches to tobacco treatment across all points of contact within the medical system will maximize opportunities to address tobacco use among all of our patients, and the likelihood for successful intervention; and (b) supports efforts by any appropriately licensed health care professional to identify and treat tobacco dependence in any individual, in the various clinical contexts in

which they are encountered, recognizing that care provided in one context needs to take into account other potential sources of treatment for tobacco use and dependence.

Health Effects of Radon Exposure H-455.984
It is the policy of the AMA: (1) to continue its surveillance of the growing understanding of the health risks of exposure to radon and contribute to this understanding wherever possible;

(2) that physicians continue to increase their knowledge about radon and its health effects and advise patients and the public in their communities on how to make intelligent decisions and take responsible actions on this issue;

(3) that physicians, when discussing the prevention of lung cancer, place greatest emphasis on the need to stop smoking; measures to decrease radon exposures should be encouraged if appropriate, but be placed in proper perspective, because smoking is a substantially more significant cause of lung cancer;

(4) to emphasize the need for more definitive data concerning the magnitude of the lung cancer risk from radon exposure and encourage the generation of these data as a needed public health measure; and

(5) to continue its efforts to help physicians understand the health risks associated with radon exposure and communicate this understanding to patients and the public.