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REPORT OF THE COUNCIL ON SCIENCE AND PUBLIC HEALTH

CSAPH Report 3-A-24

Subject:	Support Removal of BMI as a Standard Measure in Medicine and Recognizing Culturally-Diverse and Varied Presentations of Eating Disorders
Presented by:	David J. Welsh, MD, MBA, Chair
Referred to:	Reference Committee D

INTRODUCTION

At the 2023 Annual Meeting of the American Medical Association (AMA) House of Delegates, Council on Science and Medicine (CSAPH) Report 7-A-23, "Support Removal of BMI as a Standard Measure in Medicine and Recognizing Culturally-Diverse and Varied Presentations of Eating Disorders," was adopted as amended, though the following recommendations were referred for study:

> That our AMA recognizes:
> (6) that in some clinical circumstances Body Mass Index (BMI) may have utility and that BMI > 35 should continue to be used for risk stratification.
> (7) that BMI is a useful tool for population level surveillance of obesity trends due to its ease of use and low risk for application inconsistencies.
> (8) that BMI is useful as an initial screener for metabolic health risks. (New HOD Policy)

BACKGROUND

CSAPH Report 7-A-232, which evaluated the problematic history of BMI and explored other alternatives to BMI, outlined the harms and benefits to using BMI and concluded that BMI is inaccurate in measuring body fat in multiple groups because it does not account for the heterogeneity across race/ethnic groups, sexes, and age-span. The report's recommendations recognized the issues with the use of BMI clinically and highlighted the need to use other methods. This report is a follow-up to that report which will focus on studying the recommendations noted above to assess if the evidence supports the inclusion of these recommendations into AMA policy.

METHODS

English language articles will be selected from searches of PubMed and Google Scholar using the search terms "Body Mass Index (BMI)", "BMI over 35 AND clinical utility", "BMI AND obesity trends", and "BMI AND metabolic health risks". Additional articles will be identified by manual review of the reference lists of pertinent publications. Web sites managed by government agencies and applicable organizations will also be reviewed for relevant information.

DISCUSSION

Ideally, an obesity classification system would be based on a practical measurement widely available to clinicians regardless of their setting, would accurately predict health risk (prognosis),

and could be used to assign treatment strategies and goals.[1] The most accurate measures of body fat adiposity such as underwater weighing, dual-energy x-ray absorptiometry (DEXA) scanning, computed tomography (CT), and magnetic resonance imaging (MRI) are impractical for use in everyday clinical encounters.[1] Estimates of body fat, including body mass index (BMI, calculated by dividing the body weight in kilograms by height in meters squared) and waist circumference, have limitations compared to these imaging methods, but still provide relevant information and are easily obtained in a variety of practice settings.[1] Although BMI does not directly measure body fat, its utility as a risk estimate has been demonstrated in multiple population studies.[2–5] However, in some instances, the use of BMI as a surrogate measure of body fat may lead to an incorrect estimation of risk.[3,6] The inherent problems with using BMI alone to estimate risk is exemplified by the obesity paradox, the observed inverse correlation between BMI and mortality in patients with existing chronic heart failure, coronary heart disease, and chronic kidney disease.[3,7,8] However, it should be noted that the obesity paradox is not observed among people with very low BMI (<18.5) and very high (BMI >40.0). Although reasons for the obesity paradox remain uncertain, proposed confounding factors include the poor sensitivity of BMI to detect excess adiposity versus lean muscle mass, body fat distribution, and the independent contribution of fitness.[3,9–11]

Further, the current BMI classification system is misleading regarding the effects of body fat mass on mortality rates.[1,12] Numerous comorbidities, lifestyle issues, gender, ethnicities, medically significant familial-determined mortality effectors, duration of time one spends in certain BMI categories, and the expected accumulation of fat with aging are likely to significantly affect interpretation of BMI data, particularly in regard to morbidity and mortality rates.[12] Such confounders as well as the known clustering of obesity in families, the strong role of genetic factors in the development of obesity, the location in which excessive fat accumulates, its role in the development of type 2 diabetes and hypertension, and so on, need to be considered when being applied to the general population.[12,13]

Should BMI >35.0 be used for risk stratification?

Currently, a BMI of 25.0 – 29.9 in the United States represents individuals who have "overweight" and a BMI of 30.0 and above represents people who have "obesity."[14] Simply put, obesity is a chronic, progressive, relapsing, and treatable multi-factorial, neurobehavioral disease, wherein an increase in body fat promotes adipose tissue dysfunction and abnormal fat mass physical forces, resulting in adverse metabolic, biomechanical, and psychosocial health consequences.[15] However, obesity is influenced by multiple factors. The environment influences the relationship between genetics and obesity risk.[13,14,16] Further, adverse workplace, school, social, and home environments, known as "obesogenic environments," affect physical and social structures and play a role in an individual's obesity risk.[14] For example, greater availability of fast-food restaurants, poor neighborhood walkability, and perceived safety risks can limit access to physical activity and healthy food options.[14,17] Additional risks for developing obesity include insufficient sleep and low socioeconomic status, in part mediated by chronic stress and food insecurity, which are commonly experienced by racial and ethnic minority populations.[14,18]

The literature about the use of BMI for risk stratification is mixed. For example, in many studies there is a clear empirical link between BMI and various health outcomes – especially in the case of high BMIs (BMI>40.0).[19] There is an observed relationship between obesity (BMI>35.0) and elevated mortality risk. In examining excess deaths in the U.S. associated with individuals with a BMI>35.0, some studies found that the highest number of deaths is associated with obesity, while other studies noted a 22 percent reduction in longevity among men who have obesity.[19–21] These

results were consistent across diverse data sets, with multiple meta-analyses observing a 20–30 percent increased risk of mortality for obese individuals.[19,22,23]

However, in contrast to the above findings, studies have found that the association between BMI and all-cause mortality is a controversial topic. Multiple studies, including several systematic reviews and meta-analyses, have attempted to explain this association, and found different results.[22,24–27] The general association of BMI and all-cause mortality follows a U or J curve, with very high mortality among people with very low BMI (<18.5) and very high BMI (BMI >40.0).[24] The most common unexpected finding is that people defined as having a normal or ideal weight with BMI of 18.5 to 25.9 do not necessarily have the best survival.[24] In many cases, overweight people (BMI 25.0 to 30.0), and those who have mild to moderate obesity, (BMI of 30.0 to 35.0 and 35.0 to 40.0), show the best survival.[24] This phenomenon has been described as the "obesity paradox" and it is the subject of intense review due to the potential and very significant impact on many aspects of routine clinical practice and healthcare in general.[24,28–31] The obesity paradox has been described not only in the general population but also in multiple cohorts of people with highly prevalent medical conditions including diabetes, heart disease, kidney disease, cancer, stoke, and rheumatoid and osteo arthritis, among others.[22,24,32–37]

Further, it is worth pointing out two important caveats regarding current thresholds used to diagnose overweight and obesity and risk. The first is that although there is favor for the assignment of specific BMI cut-offs and increasing risk, relationships between body weight or fat distribution and conditions that impair health represent a continuum.[1] For example, studies have shown that increased risk for type 2 diabetes and premature mortality occurs well below a BMI of 30.0.[1,38] The second is there is a complex association between BMI and all-cause mortality when evaluated in the context of comorbidities and baseline mortality risk.[1] In general, comorbidities are better predictors of mortality risk except at extreme BMIs (BMI <15.0, 15.0 to 18.5, and ≥45.0). In patients with no or few comorbidities, BMI seems to better define mortality risk.[1] Aggressive management of comorbidities may provide better survival outcomes for patients with BMI between normal and moderate obesity (BMI of 18.5 to 25.0 and 35.0 to 40.0).[1,38]

Should BMI be used for population level surveillance of obesity trends?

BMI is by far the simplest and most cost-effective option for tracking obesity at the population level.[19,40] Its continued use by medical professionals, health researchers, and governmental agencies forms the basis of collective knowledge about the epidemiology of obesity in the U.S. and abroad.[19] The authority afforded by its use in science and medicine is further compounded by the public's ability to quickly interpret research using BMI.[19,41] Even at the individual level, the widespread availability of BMI equations and charts across numerous forms of media and communications – such as personal health-tracking applications/devices – encourages the self-evaluation of one's health relative to their weight, as the general population is empowered to freely calculate their own BMI. BMI, therefore, serves as a surveillance mechanism setting a standard by which changes in population health can be tracked.[19,41–44] However, as mentioned in the previous BMI report (CSAPH Report 7 A-23), the ease of calculating BMI only applies to the adult population and is inaccurate in children and adolescents because of growth. In the United States, obesity in children and adolescents are defined using threshold values from the 2000 CDC sex-specific body mass index-for-age growth charts.

In general, most existing obesity surveillance systems in the U.S. rely on BMI. Surveillance science has been slow to take advantage of research that identifies alternative anthropometric measures of obesity.[45] Combining two or more different anthropometric measures, such as waist-to-hip ratio and waist-circumference-to-height ratio, has been shown to work well and may be more

sensitive to the accumulation of abdominal fat.[45–47] However, these measurements are more invasive and require additional considerations such as how to track trends using other measures and how to interpret those new measures on a population level. The biggest issue with current surveillance systems of obesity is that most surveillance does not include the measurement of policy or environmental factors that may influence obesity.[45,48] For example, there are still gaps in the availability of surveillance systems for areas such as community-level estimates of obesity-related environments, policies, programs, partnerships, and social norms; community-based physical activity programs; surveillance of local policies on nutrition standards for foods and beverages; community-level data on exposure to food marketing; national- and community-level data on worksite programs; and obesity-related policies on college campuses.[45,48] Further, high-risk populations, i.e., demographic or health status subgroups, are often not adequately represented in national or state-level surveys and longitudinal BMI measure analyses are uncommon, particularly among low-resource populations, which are at greater risk of having obesity.[45,48]

Should BMI be used as an initial screener for metabolic health risks?

The current use of BMI as an evaluative and predictive tool is controversial.[49] Originally conceived as a practical index of relative body weight, BMI is now wielded in medicine as a measure for disease and health risk, despite studies showing that BMI can be an inaccurate proxy for cardiometabolic markers of health (i.e., blood pressure, cholesterol levels) and imprecise in its prediction of health risks when applied to the diversity of human bodies.[49–52] The use of BMI as an initial screener for metabolic health risks is controversial. An example of why it is controversial can be examined in a subgroup of individuals that has been identified within the obese population, who do not display the typical metabolic disorders associated with higher BMI's and are hypothesized to have lower risk of obesity-related complications. Metabolically healthy obesity (MHO) has been previously defined as a subgroup of obese (which is measured by having a BMI ≥30) individuals who do not have insulin resistance, lipid disorders, or hypertension.[53,54] Multiple studies indicate 10-25 percent of individuals who have obesity, according to their BMI, can be categorized as MHO.[53–55] A study which used the National Health and Nutrition Examination Survey, a nationally representative sample of adults living in the U.S., to examine the MHO phenotype, found a prevalence of 32 percent among obese adults over the age of 20.[53,56] Further, studies examining cardiovascular disease (CVD) outcomes or all-cause mortality, were not able to demonstrate a significant association between MHO and increased risk of CVD and morbidity and mortality.[53]

Further, when thinking about screening tools, specificity should be factored in. Research has shown that BMI does not appropriately represent racial and ethnic minorities. For example, a longitudinal study of healthy women found that at the same BMI, Asians had more than double the risk of developing type 2 diabetes than Whites; Hispanics and Blacks also had higher risks of diabetes than Whites, but to a lesser degree.[57] Studies have found that Blacks have lower body fat and higher lean muscle mass than Whites at the same BMI, and therefore, at the same BMI, may be at lower risk of obesity-related diseases.[57,58] Finally, as mentioned in the previous BMI report (CSAPH Report 7 A-23) BMI has the following limitations: older adults tend to have more body fat than younger adults at an equivalent BMI; women have greater amounts of total body fat than men with an equivalent BMI; muscular individuals, or highly-trained athletes, may have a high BMI because of increased muscle mass; and BMI also does not account for the life cycle and location of accumulated fat caused by hormones.[59–61] Given these limitations, certain groups of people are [?] more likely to be misclassified if BMI alone is used, and therefore these individuals may be subject to more unnecessary diagnostic testing/evaluation, unnecessary anxiety, and higher health care spending leading to inequities.

EXISTING AMA POLICY

Under existing AMA Policy H-440.866, "The Clinical Utility of Measuring Body Mass Index and Waist Circumference in the Diagnosis and Management of Adult Overweight and Obesity," the AMA supports: (1) greater emphasis in physician educational programs on the risk differences among ethnic and age groups at varying levels of BMI and the importance of monitoring waist circumference in individuals with BMIs below 35 kg/m2; (2) additional research on the efficacy of screening for overweight and obesity, using different indicators, in improving various clinical outcomes across populations, including morbidity, mortality, mental health, and prevention of further weight gain; and (3) more research on the efficacy of screening and interventions by physicians to promote healthy lifestyle behaviors, including healthy diets and regular physical activity, in all of their patients to improve health and minimize disease risks.

Further, under AMA Policy H-440.797, "Support Removal of BMI as a Standard Measure in Medicine and Recognizing Culturally-Diverse and Varied Presentations of Eating Disorders," the AMA recognizes: (1) the issues with using BMI as a measurement because: (a) of the historical harm of BMI, (b) of the use of BMI for racist exclusion, and (c) BMI cutoffs are based primarily on data collected from previous generations of non-Hispanic White populations and does not consider a person's gender or ethnicity; (2) the significant limitations associated with the widespread use of BMI in clinical settings and suggests its use be in a conjunction with other valid measures of risk such as, but not limited to, measurements of: (a) visceral fat, (b) body adiposity index, (c) body composition, (d) relative fat mass, (e) waist circumference and (f) genetic/metabolic factors; (3) that BMI is significantly correlated with the amount of fat mass in the general population but loses predictability when applied on the individual level; and (4) that relative body shape and composition heterogeneity across race/ethnic groups, sexes, genders, and age-span is essential to consider when applying BMI as a measure of adiposity.

CONCLUSION

BMI is an imperfect measure of body fat and may be influenced by many factors, including body composition of muscle mass, fat distribution, visceral vs. subcutaneous fat, and ectopic fat.[24] Physical fitness and nutritional status may play a more important role than BMI in predicting overall health and risk of mortality.[24,53] Current use of BMI as an evaluative and predictive tool is troubling. Originally conceived as a practical index of relative body weight, BMI is now wielded in medicine as a measure for disease and health risk, despite studies showing that BMI can be an inaccurate proxy for cardiometabolic markers of health (i.e., blood pressure, cholesterol levels) or lifestyle factors (i.e., physical activity, eating habits) and imprecise in its prediction of health risks when applied to the diversity of human bodies.[49–52] There is a complex association between BMI and all-cause mortality when evaluated in the context of comorbidities and baseline mortality risk.[24] Obesity is an important risk factor for many chronic and common clinical conditions. However, comorbidities are better predictors of mortality risk except at extreme BMIs.[24] In patients with no or few comorbidities, BMI seems to better define mortality risk.[24]

The U.S. currently conducts population level surveillance of obesity and individual obesity-related behaviors. However, to fully understand the etiology of obesity and the effects of prevention efforts, current surveillance systems must be expanded in terms of settings, measures, periodicity, and populations.[45] Increases in funding and infrastructure for local surveillance would assist in obtaining data on underserved populations to better understand health disparities in obesity and prevention efforts.[45] Also critical is the addition of environmental and policy measures to surveillance systems to allow for a better understanding of the global obesity epidemic and the effects of obesity prevention initiatives on the population.[45]

An accurate diagnosis of obesity prevents patients at risk due to excess adiposity from being erroneously labeled as "normal" and avoids labeling patients with no excess fat as overweight or obese.[14] As a result, this report supports the need to screen for secondary causes of obesity such as environmental factors, hormonal abnormalities (i.e., hypothyroidism, hypercortisolism), psychiatric diagnoses (i.e., binge eating disorder), iatrogenic obesity (i.e., medications), and genetic syndromes (i.e., proopiomelanocortin deficiency).[14,62] Further, assessment for weight-related comorbidities such as nonalcoholic fatty liver disease or obstructive sleep apnea is important to understand the complexity of obesity in patients and guide treatment.[14,62]

RECOMMENDATION

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

1. That AMA Policy H-440.797, "Support Removal of BMI as a Standard Measure in Medicine and Recognizing Culturally-Diverse and Varied Presentations of Eating Disorders," be amended by addition to read as follows:

1. Our AMA recognizes:
    1. the issues with using body mass index (BMI) as a measurement because: (a) the eugenics behind the history of BMI, (b) the use of BMI for racist exclusion, and (c) BMI cutoffs are based on the imagined ideal Caucasian and does not consider a person's gender or ethnicity.
    2. the significant limitations associated with the widespread use of BMI in clinical settings and suggests its use be in a conjunction with other valid measures of risk such as, but not limited to, measurements of: (a) visceral fat, (b) body adiposity index, (c) body composition, (d) relative fat mass, (e) waist circumference and (f) genetic/metabolic factors.
    3. that BMI is significantly correlated with the amount of fat mass in the general population but loses predictability when applied on the individual level.
    4. that relative body shape and composition heterogeneity across race/ethnic groups, sexes, and age-span is essential to consider when applying BMI as a measure of adiposity.
    5. that in some diagnostic circumstances, the use of BMI should not be used as a sole criterion for appropriate insurance reimbursement.
    6. <u>the use of BMI within the context of comorbidities, baseline mortality risk, and environmental factors such as chronic stressors, poor nutrition, and low physical activity may be used for risk stratification.</u>
    7. <u>BMI is a widely used tool for population level surveillance of obesity trends due to its ease of use and low risk for application inconstancies, but BMI does not fully capture the complexity of the obesity epidemic.</u>
    8. <u>that BMI, in combination with other anthropometric measures and environmental factors, may be useful as an initial screener to identify individuals for further investigation of metabolic health risks.</u>

2. Our AMA supports further research on the application of the extended BMI percentiles and z-scores and its association with other anthropometric measurements, risk factors, and health outcomes.
3. Our AMA supports efforts to educate physicians on the issues with BMI and alternative measures for diagnosing obesity. (Amend HOD Policy)

Fiscal Note: less than $1,000

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REPORT 6 OF THE COUNCIL ON SCIENCE AND PUBLIC HEALTH (A-24)
Greenhouse Gas Emissions from Metered Dose Inhalers and Anesthetic Gases
(Reference Committee D)

EXECUTIVE SUMMARY

INTRODUCTION. American Medical Association (AMA) Policy H-135.913, "Metered Dose Inhalers and Greenhouse Gas Emissions," as adopted by the House of Delegates (HOD) at the 2023 Annual Meeting asked that our AMA study options for reducing hydrofluorocarbon use in the medical sector.

METHODS. English language articles were selected from searches of PubMed and Google Scholar using the search terms "metered dose inhalers" AND "dry powder inhalers" AND "sustainability" as well as "anesthetics" AND "sustainability." Supplementary searches were performed on both effectiveness and cost differences between metered dose inhalers and dry powder inhalers. Additional articles were identified by manual review of the reference lists of relevant publications.

BACKGROUND. Metered-dose inhalers (MDIs) are medical devices used to deliver inhaled medication for individuals with asthma and chronic obstructive pulmonary disease. MDIs rely on a liquified-gas propellant to atomize medication for inhalation delivery. These propellants were first chlorofluorocarbons (CFCs) but then later transitioned to hydrofluorocarbons (HFCs) after it was found that CFCs were depleting the stratospheric ozone layer.[1] HFCs, while not causing ozone depletion, are potent greenhouse gases (GHG) and represent substantial proportions of the health care sector's carbon footprint.[2–4] Besides MDIs, alternative types of inhalers include dry powder inhalers (DPIs) and soft mist inhalers (SMIs), which both have significantly lower GHG emission profiles compared to MDIs.[4,6] Currently, there is no DPI or SMI combined preventer and reliever regimen for asthma that is easy to use and affordable in the U.S., despite being more widely available in Europe.[7]

RESULTS. Except in circumstances where the patient cannot generate sufficient inspiratory airflow, such as with very young children (under the age of 5) or frail, older adults,[8] research has demonstrated that DPIs are as effective and safe as MDIs for most patients.[9,10] There is also evidence demonstrating that DPIs are easier to use and result in lower error rates compared to MDIs.[11–13] One potential reason for the lack of competitive, low-cost alternatives to MDIs has been pharmaceutical companies' ability to maintain patent protections on their brand name products through secondary patents after the primary patent has expired.[14,15] In addition to the use of HFCs in MDIs, the other major source of HFC/CFC use in health care comes from anesthetic gases, which includes the HFCs sevoflurane and desflurane and the CFC isoflurane.[16,17] Clinical care recommendations by the American Society of Anesthesiologists Committee on Environmental Sustainability to reduce the negative environmental impact of anesthetic gases focus on delivery performance improvements, removing or avoiding the "worst" GHG offenders from hospital drug formularies, and substituting non-inhaled anesthetic gases when clinically appropriate.[18]

CONCLUSION. Switching to low carbon footprint inhalers is an opportunity to not only reduce GHG emissions from the health care sector, but also to improve chronic asthma management and health outcomes through the broader usage of DPI preventer inhalers containing an inhaled corticosteroid. With inhaled anesthetics, there are several relatively easy and well documented strategies to improve environmental sustainability which could be more widely adopted through expanded educational efforts and result in cost savings for health systems.

REPORT OF THE COUNCIL ON SCIENCE AND PUBLIC HEALTH

CSAPH Report 6-A-24

Subject: Greenhouse Gas Emissions from Metered Dose Inhalers and Anesthetic Gases

Presented by: David J. Welsh, MD, MBA, Chair

Referred to: Reference Committee D

INTRODUCTION

American Medical Association (AMA) Policy H-135.913, "Metered Dose Inhalers and Greenhouse Gas Emissions," as adopted by the House of Delegates (HOD) at the 2023 Annual Meeting asked that our AMA study options for reducing hydrofluorocarbon use in the medical sector.

BACKGROUND

Asthma is a chronic respiratory disease that reversibly impacts the ability of air to move in and out of the lungs due, usually to inflammation of the airways, and requires ongoing medical mangement.[19,20] The potential factors that cause asthma are both environmental and genetic, including family history, allergies, viral respiratory infections, occupational exposures, smoking, air pollution, and/or obesity.[21] According to data from the National Health Interview Survey, during 2016 to 2018 approximately 8 percent of the U.S. population reported having asthma, with a higher prevalence among Black persons (10.7 percent) compared to White persons (8 percent).[20] Chronic obstructive pulmonary disease (COPD) refers to a group of respiratory diseases that cause airflow blockage and make breathing more difficult, including emphysema and chronic bronchitis.[22] About 16 million Americans have COPD and in 2018 it was the fourth leading cause of death in the U.S.[22,23] Exposure to tobacco smoke is a key contributor to the development and progression of COPD, but environmental exposures to air pollutants, genetic factors, and respiratory infections also play an important role.[23]

Metered-dose inhalers (MDIs) are medical devices used to deliver inhaled medication, typically for individuals with asthma and COPD. MDIs are pressurized and rely on liquefied-gas propellants to atomize medication for inhalation delivery. The pharmaceutical industry historically used chlorofluorocarbons (CFCs), specifically CFC-11, CFC-12, and CFC-114, as propellants. CFCs are synthetic, nontoxic, and nonflammable chemicals that contain atoms of carbon, chlorine, and fluorine. They were first developed in the late 1920s to replace toxic refrigerants that were being used at the time.[1] Following their initial development, CFCs were widely adopted and used in foam insulation, refrigeration, and aerosols (including MDIs).

While CFCs were found to be safe in their applications, they undergo significant chemical changes in the upper atmosphere and by the early 1970s, chemists from the University of California demonstrated that CFCs could be destroying the stratospheric ozone layer that helps shield the Earth from the sun's ultraviolet radiation.[1] By the 1980s, it was clear that stratospheric ozone loss was getting worse every year and CFCs were a major contributor. The global environmental response came in the late 1980s and resulted in the signing of the Montreal Protocol in 1987, which phased out the use of CFCs. MDIs and other medical uses of CFCs were exempted under the

Montreal Protocol until safer alternatives could be identified. The pharmaceutical industry introduced hydrofluorocarbon (HFC) (also known as hydrofluoroalkanes - HFA) propellants for MDIs as replacements for CFCs in the mid-1990s, specifically HFC-134a in 1996 followed by HFC-227ea in 2006. However, it took over 20 years, until 2016, for all CFCs to be phased out of MDI applications.[2]

In addition to the use of HFCs in MDIs, modern anesthetic gases include the HFCs sevoflurane and desflurane, the CFC isoflurane, and nitrous oxide.[24] Anesthetic gases have been excluded from international protocols due to their medical necessity but measured concentrations of desflurane, the most damaging in terms of GHG warming potential, in the atmosphere have increased over the last few decades.[24] Therefore, exploring alternatives to the usage of these anesthetic gases is another way health care systems can reduce their carbon footprint and improve sustainability.

This report outlines the greenhouse gas (GHG) emissions and climate impacts of the use of CFCs and HFCs in the medical sector, with a focus primarily on MDIs and secondarily on anesthetic gases, followed by a discussion of potential alternatives and how they compare in terms of their carbon footprint, effectiveness, and cost.

METHODS

English language articles were selected from searches of PubMed and Google Scholar using the search terms “metered dose inhalers” AND “dry powder inhalers” AND “sustainability” as well as “anesthetics” AND “sustainability.” Supplementary searches were performed on both effectiveness and cost differences between metered dose inhalers and dry powder inhalers. Additional articles were identified by manual review of the reference lists of relevant publications. Data regarding available asthma/COPD medications presented in Table 2 were extracted from FDA’s approved drug website and individual medication prescribing sheets.[25]

DISCUSSION

Climate Impact of CFCs and HFCs

Despite improvements to the ozone layer after the Montreal Protocol, HFCs are powerful GHG that contribute to climate change. HFCs can be up to 3800 times more powerful of a GHG than carbon dioxide (see Table 1) and there is now increasing attention on the environmental impacts of HFCs.[26] Atmospheric concentrations of common HFCs used in medical sector have been found to be increasing since the early 1990s while CFCs previously used in MDIs have plateaued and decreased (see Figure 1).[27] Reducing the use of MDIs is consistently noted among the top high-priority and effective measures for reducing GHGs within the health care sector, as GHG emissions from the use of MDIs are substantial. MDIs are the most used inhalers in the world.[2,26] “In 2020, MDIs made up 75 percent of inhalers in use in the United States, with the equivalent emissions impact of driving half a million cars for a year.”[3] Due to their wide usage, MDI prescriptions can account for about three percent of a health system’s carbon footprint.[4]

As such, there is an unfortunate feedback loop between ongoing climate change impacts and treating asthma/COPD with MDI inhalers, as increased global warming will likely exacerbate existing asthma and respiratory issues, potentially requiring more acute treatment options which MDIs currently provide.[28] Recognizing the climate change impacts of HFCs, the Kigali Amendment to the Montreal Protocol calls for the phasing out of HFCs due to their climate warming potential, but medical uses for HFCs are currently exempted. Additionally, the American Innovation and Manufacturing Act of 2020, enacted by the U.S. Congress, directs the

Environmental Protection Agency (EPA) to phase down the production and use of HFCs in consumer products, such as aerosols, refrigerants, etc., by 2036 but the rule also does not apply to MDIs.[29]

Additionally, direct emissions of anesthetic gases have been estimated to represent about three percent of the health care-related GHGs in high-income nations.[30] As noted in Table 1, desflurane has a GHG warming potential around 5-20 times higher than sevoflurane and isoflurane over a 100-year period and it is also generally more expensive.[31] While nitrous oxide is not a HFC, it also has deleterious climate impacts. Even though it has a lower global warming potential, it is also less potent than other inhalable anesthetics so is typically used in higher concentrations and has a long atmospheric lifetime, thus making it problematic from a sustainability perspective.

Metered Dose Inhalers - What are the alternatives?

Inhaled therapy is the primary pharmacological therapy for obstructive lung diseases such as COPD and asthma.[32] Obstructive lung disease management and control has two components, symptom control and risk reduction.[5] Inhalers are generally categorized as either reliever or preventer inhalers, with recent formulations combining these different types into one inhaler that is recommended for daily usage. Preventer inhalers contain an inhaled corticosteroid (ICS), and the Global Initiative for Asthma (GINA) and the Expert Panel Working Group of the National Asthma Education and Prevention Program Coordinating Committee (NAEPPCC) recommend most patients with asthma receive an ICS treatment.[5,33] Reliever inhalers include a short-acting β-agonist (SABA) which is intended to be utilized during asthma exacerbation events. GINA does not recommend treatment of asthma with SABA inhalers alone. Recent developments in asthma treatment recommend combined therapy, including anti-inflammatory reliever (AIR), which consists of ICS with a short-acting β-agonist reliever and maintenance and reliever therapy (MART) (ICS-formoterol), also called SMART in some places (single inhaler maintenance and reliever therapy), which combines ICS and long-acting beta-agonist (LABA) therapy together.[5]

In addition to different therapeutic approaches, there are different types of inhalers available: pressurized metered dose inhalers (pMDI), dry powder inhalers (DPI), and soft mist inhalers (SMIs). DPIs rely on delivering medication in the form of a fine powder that is activated by a person's breathing and SMIs use a spring action mechanism to deliver the medication in a fine mist. pMDIs and DPIs are the two most commonly prescribed and manufactured inhalers globally.[6] Table 2 provides a list of U.S. Food and Drug Administration (FDA) approved asthma/COPD medications, their therapy approach, and the type of inhalation device.

As shown in Table 2, SABA inhalers available in the U.S. are predominantly pMDIs while the ICS and combination therapy treatments are available as both DPI and pMDI inhalers. There is only one DPI reliever inhaler, the ProAir Respiclick/Digihaler, and only four inhalers are available as an SMI; these are only approved for the treatment of COPD. Currently, there is no DPI anti-inflammatory reliever (AIR) regimen, which combines ICS-SABA that is easy to use and affordable in the U.S., despite being more widely available in Europe (more on cost considerations below).[7]

Life cycle assessments comparing pMDIs to DPIs have overwhelmingly and consistently found that DPIs have a much lower carbon footprint due to their lack of an HFC propellant.[4,6] Estimates from the U.K. have projected a 96 percent reduction in the existing carbon footprint of asthma treatment if all pMDIs were switched to DPIs.[6] Similar life cycle assessments comparing SMI versus pMDIs in terms of overall carbon footprint found comparable reductions in GHG emissions.[6] Additionally, climate model estimates have demonstrated that the phasing out of HFCs, as proposed by the Kigali

Amendment to the Montreal Protocol, could deliver 0.3 to 0.5°C degrees of climate benefit by 2100.[34] As the Kigali Amendment exempts HFCs for medical uses, it is possible that the elimination of HFCs in both medical uses and other commercial applications could deliver even greater climate benefit.

Safety and Effectiveness of MDIs

A barrier to switching from MDIs to DPIs has been the concern that DPIs are not as effective or are more difficult to use than MDIs. Except in circumstances where the patient cannot generate sufficient inspiratory airflow, such as with very young children (under the age of 5) or frail, older adults, research has demonstrated that DPIs are as effective and safe as MDIs for a majority of patients.[8–10] For example, a randomized controlled trial (RCT) of patients with COPD comparing the efficacy of a DPI versus a pMDI pharmaceutical formulation, found that the different inhaler types demonstrated similar efficacy and a similar proportion of patients in the different inhaler groups experienced any adverse effects from treatment.[9] In another study, researchers did a post-hoc analysis of patients from the Salford Lung Study in Asthma (a 12 month, multi-site RCT study conducted in the UK on patients with asthma and COPD) who switched from a pMDI to DPI during the study.[35] Patients that switched to DPIs halved their inhaler carbon footprint without loss of asthma control, and in fact, asthma control was consistently superior over the 12 months in the DPI group compared to the control group.[36]

Despite the popularity and widespread usage of MDIs, studies have shown that many patients use MDIs incorrectly, despite educational trainings on usage, resulting in improper inhalation techniques and poor asthma control and management.[11,12] DPIs have been found to be easier to correctly use compared to MDIs, which requires some level of coordination between inhaler actuation and patient inspiration to ensure correct inhalation and treatment.[11,13] Additionally, in a recent survey of asthma and COPD patients' inhaler preferences done in the U.K., "environmental sustainability" was found to be one of the more important characteristics, indicating that patients may be inclined to switch inhalers from an MDI to a DPI if the environmental impacts were discussed.[37]

While MDIs are the most used inhaler in the U.S., the U.K. has recently designated DPIs as the default treatment for patients 12 and older and removed two carbon-intensive inhalers from formularies.[38] Additionally, DPIs are the primary inhaler used in several other European countries.[3] For example, Sweden has a higher prevalence of asthma to the U.S. (11.6 percent of individuals in 2022 in Sweden compared to 7.7 percent in 2021 in the U.S.) and DPIs account for 90 percent of inhalers used.[39,40] Although there is no available evidence on the role of inhaler types to account for health outcome differences, Sweden has demonstrated better asthma-related mortality outcomes compared to the U.S.; in 2012 the age-standardized asthma mortality for the 5–34-year age group in Sweden was 0.00 compared to 0.37 in the U.S.[41]

Additionally, Finland in the early 1990s launched a national ten year program intended to improve asthma care and limit the projected increases in costs.[42] As part of this national program, the importance of preventative ICS versus reliever medications was emphasized and a shift was promoted from MDIs to DPIs. As a result of this initiative, the number of patients using daily ICS went from around 33 percent in 1987 to over 85 percent in 2004 and while DPIs only accounted for 29 percent of inhalers sold in 1993, by 2003 they accounted for 84 percent.[42] These changes were concurrent with improved health outcomes, including a reduction in asthma related deaths and emergency room visits, and decreased direct annual costs associated with asthma.[42]

With the manufacturing of HFC propellent inhalers being an important component of their GHG emissions, several pharmaceutical companies have made promises to replace existing pMDIs with new HFC propellent that have a lower carbon footprint.[6] There are several new HFC inhaler formulations that have a much lower GHG warming potential (see Table 1), with at least one set to be released in 2025. This would help pharmaceutical companies meet their sustainability goals while also reducing GHG emissions from the overall healthcare sector, but these new HFC inhalers may be more costly than currently available low-GHG alternatives.

Cost considerations

Increased costs are another challenge of switching to DPIs from MDIs, which is partly driven by a lack of competitive DPIs/SMIs that have been approved and made available in the U.S. (as compared to Canada and European countries). At the start of 2019, there were no generic inhalers on the U.S. market. While there are multiple low-cost DPI inhalers available in Europe, there are few low-cost alternatives in the U.S.[7] Researchers estimate that a global inhaler transition where DPIs are the prevailing inhaler used could take a decade to implement and may lead to increased patient costs.[26,43] Currently, SABA relievers as DPIs compared to MDIs tend to be more expensive but the cost of HFC propellants is expected to rise due to global policy trends in phasing out the use of HFCs in products.[2]

One potential reason for the lack of competitive, low-cost alternatives to the prevailing MDIs on the market has been pharmaceutical companies' ability to maintain patent protections on their brand name products through secondary patents after the primary patent has expired.[14] Primary patents on pharmaceuticals cover the active ingredients within the medication while secondary patents can be claimed for peripheral aspects of the product, such as the propellants and delivery devices. Research on revenue earned on brand-name inhaler products in the U.S. found that manufacturers earned $67.2 billion while primary patents were active and $110.3 billion (62 precent) after primary patents had expired but when secondary patents were active, reflecting the importance of these secondary patents for maintaining high revenues while limiting potential competition.[14] The persistent high cost of inhalers in the U.S. has caught the attention of U.S. lawmakers. In January 2024, U.S. Senator Tammy Baldwin (D-WI) and colleagues launched an investigation into four pharmaceutical companies in regard to their high prices for inhalers.[44]

Despite the increased costs of switching to DPIs from MDIs, improved asthma management could help balance existing cost differentials. The overreliance on SABA (relief) inhalers alone in asthma treatment results in poor asthma management and health outcomes, which can lead to greater health care costs.[2] As one study notes, "[a]ny increase in low-cost salbutamol MDIs can potentially be offset by improving care to drive down their use … and by using more cost-effective controller medication. For patients with poor asthma control, escalating controller therapy is a cost-effective, but underused strategy."[2] Evidence from other countries demonstrate that a concerted effort to increase the use of ICS medication and reduce reliance on relief (SABA) medication, can improve asthma outcomes and lower costs.[42,45]

Policy recommendations to reduce the negative economic impacts of switching to lower carbon footprint inhalers are severalfold. Lawmakers could incentivize early entry of greener generic inhalers by extending the 180-day exclusivity period awarded to the first generic manufacturers to successfully challenge patents on a particular drug-device combination. The U.S Patent and Trademark Office could also pursue reforms to further examine drug-device combination patents and ensure the quality of patents issued on new inhalers. Lastly, the Centers for Medicare and Medicaid Services could determine a favorable reimbursement rate that is applicable for any

greener inhalers when they gain approval, considering their overall environmental benefits, that would make them more favorable to include on insurance formularies.[15]

Other advantages to switching from MDIs to DPIs

There are a few other advantages to switching from pMDIs to non-propellent inhalers, like DPIs. First, because pMDIs can be challenging to use and less critical errors are made while using DPIs, overall asthma care could improve.[45] Also, because not all pMDIs have a counter that shows how many doses are left, sometimes they are used when empty, also leading to poor disease control. Lastly, pMDIs are sometimes used with a spacer – which allows patients, particularly young children who may have difficulty using the inhaler, to deliver the medication in a slower, more controlled way – and these are supposed to be replaced every year.[46] However, a Dutch study found that only 60 percent of pMDI users received a new spacer annually, which may imply suboptimal quality of care. As DPIs do not require a spacer, their use eliminates these possible issues while also reducing the generation of non-reusable plastics.[45]

Equity considerations

There are important health equity considerations regarding asthma prevalence, management, and related health outcomes in the U.S. that make following current GINA and NAEPPCC care recommendations challenging.[47] Asthma disproportionality impacts Black, non-Hispanic, American Indian/Alaska Native, and Puerto Rican populations.[40,48,49] Additionally, individuals living below 100 percent of the poverty threshold have a higher asthma prevalence compared to other socio-economic groups (10.4 percent compared to 6.8 percent among individuals at 450 percent of poverty threshold or higher).[40] In terms of asthma management, racial and ethnic minority children are more likely to rely on SABA rather than ICS therapies, which, as noted above, can result in poorer asthma control and management.[49] Lastly, Black, non-Hispanics have a much higher asthma mortality rate compared to other racial and ethnic groups (24.4 per million for Black, non-Hispanics compared to 9.8 per million for white, non-Hispanic populations).[40] Financial barriers for those who lack insurance coverage for recommended combined therapies and working through authorizations and referrals for those with public health insurance also pose equity challenges.[47] Considering these existing health disparities and equity challenges, increased costs associated with new asthma medications could disproportionately impact low-income communities of color who are already burdened by asthma and has the potential to increase existing health disparities if asthma medication becomes more costly and inaccessible.

Prevention as a primary strategy and alternative

As noted above, two of the key risk factors for both asthma and COPD are tobacco smoke and air pollution.[21,23] Public health policy and educational campaigns over the last 50 years have been remarkably successful at lowering the prevalence of smoking and limiting indoor exposure to tobacco smoke, thus reducing this exposure pathway.[50–52] However, tobacco use still remains the leading cause of preventable disease and death in the U.S.[50] The introduction of e-cigarettes and vape pens in the past decade has led to an increase in e-cigarette usage, particularly among young adults, which may reverse the decades long downward trend in tobacco usage.[53] As such, there is still a critical need for continued public health efforts to reduce smoking and tobacco use, which would reduce the prevalence of asthma and COPD. Common outdoor air pollutants, including particulate matter, ozone, carbon monoxide, lead, sulfur dioxide, and nitrogen dioxide, are in part anthropogenic (human-caused) and result from the burning of fossil fuels for electricity generation, industrial uses, and motor vehicle use.[54,55] Federal and state policy to reduce air pollution has resulted in substantially better air quality over the last several decades, but high pollution levels are

still a concern in many urban areas and for those living close to major sources of pollution, with low income communities of color experiencing disproportionately high exposure to air pollution.[56,57] Efforts to reduce fossil fuel emissions would thus have multiple co-benefits, including minimizing anthropogenic climate change by reducing GHG emissions, building more resilient communities, improving health equity, and reducing outdoor air pollutants resulting in improved respiratory outcomes.[55,58,59]

Anesthetic gases – Solutions and alternatives

Life cycle assessments of anesthetic gases have found that more than 95 percent of emissions occur in their waste phase, in that they are emitted freely to the outdoor atmosphere during use through medical gas evacuation systems or through unscavenged gas exhaled into the indoor environment that then flows outdoors.[18,30] To mitigate the negative environmental impact of anesthetic gases, clinical care recommendations, including those in the *Greening the Operating Room* report by the American Society of Anesthesiologists Committee on Environmental Sustainability, focus on delivery performance improvements, removing or avoiding the "worst" GHG offenders from hospital drug formularies, and substituting non-inhaled anesthetic gases when clinically appropriate.[18]

Delivery performance improvements are aimed at lowering the volume of anesthetic gases unnecessarily wasted or lost during usage. A simple way to minimize gas waste is to lower fresh gas flows during the maintenance phase of the anesthetic, but continuous oxygen concentration monitoring is critical to prevent the possibility of hypoxemia.[16,18,31] Additional strategies to reduce gas flow and minimize environmental contamination of anesthetic gases have been outlined by the American Society of Anesthesiologists *Greening the Operating Room* report.

Another strategy to reduce wasted gas is through improved delivery infrastructure. In older hospital buildings, nitrous oxide has been delivered through central piping systems, which over time have leaked nitrous oxide into the atmosphere. It is estimated that most nitrous oxide loss happens prior to its usage with the patient and it has been recommended that these piping systems should be decommissioned in existing infrastructure and avoided in new construction.[31] As an alternative, it is recommended that portable canisters should be substituted and should be closed between uses to avert continuous leaks.[31] Lastly, in terms of performance improvement, innovative methods for collecting and reusing anesthesia, thus preventing them from being released directly into the atmosphere, are currently being researched and evaluated.[18] However, these devices have not been widely used or evaluated on their efficacy, safety, benefit, or cost.[24]

When evaluating choice of inhaled anesthesia gases, two important considerations include GHG warming potential and the gas flowrate.[16,18] Desflurane has the highest GHG warming potential compared to other inhaled anesthetic gases and while nitrous oxide has a lower GHG warming potential, it requires greater quantities to meet similar clinical effectiveness. Nitrous oxide also persists in the atmosphere for more than 100 years, making its impacts felt over a much longer period of time compared to other anesthetic gases.[16] The larger quantities needed, and longer persistence in the atmosphere, makes nitrous oxide's environmental impact substantially greater than isoflurane or sevoflurane.[30] With these considerations, eliminating desflurane and nitrous oxide to the greatest extent possible in clinical practice, is recommended for improving the climate impact of anesthetic gases.[60] However, nitrous oxide continues to be useful for elimination of pain with no real alternative and therefore the use of portable cannisters with nitrous oxide is recommended versus using older building piping systems.[24,61] With desflurane, there is limited evidence of clinically meaningful differences over other anesthetic gases, except minor differences in faster mean wake up times following surgery.[31] However, desflurane is also more expensive than

other anesthetic gases, therefore it's elimination or reduction in usage could result in cost savings for health care systems.[31]

A final practice consideration to improve sustainability and reduce GHG emissions is to use total intravenous anesthesia and/or regional anesthesia to eliminate volatile anesthetic emissions whenever possible. It is important to note that this recommendation is not a carbon-neutral strategy, as considerations must be made for minimizing single use plastics and unnecessary use of drugs and supplies, which also contribute to overall hospital waste streams that have their own carbon footprint. That being said, this alternative has been found to be associated with substantially less emissions, even considering their full life cycle.[17,31] To offset environmental impacts from intravenous anesthesia, there are several strategies to reduce anesthesia equipment waste generation overall, including: using prefilled syringes and appropriate sized vials for an individual patient, only opening equipment intended for immediate use, considering purchase of reusable or reprocessed equipment over disposable, reprocessing or recycling suitable disposable equipment, adjusting stock levels to minimize discarding expired items, reformulating prefabricated kits to eliminate unnecessary items, reformulating anesthesia supply carts to eliminate unnecessary items, and donating expired or unused open equipment.[16,62]

Challenges and barriers

Efforts to make anesthesia care more environmentally friendly have met several barriers. These include the need for more education among anesthesiologists on the environmental impacts of different anesthesia options as well as a lack of support from hospital leadership to implement sustainability efforts.[63] In a qualitative study of anesthesiologists, several participants reported a lack of knowledge and feedback as impediments to sustainable practices.[64] An educational intervention with this aim at the University of Wisconsin was found to be effective at reducing GHG emissions through changes in anesthetic practices and resulted in cost savings for the hospital.[65] Interestingly, the environmental impact of physician decisions was a greater motivational impact than monetary savings.[65] Thus, further advocacy and education is warranted to guide and encourage more sustainable anesthetic practices.[17]

Beyond increased education, efforts to bring practice changes to scale could include the integration of sustainability metrics into the Quality Payment Program established by the Medicare Access and Children's Health Insurance Program Reauthorization Act of 2015. If environmental costs, including GHG emissions associated with clinical practices, were to be incorporated into the cost component of the program, it could serve to reward waste reduction strategies and programs within healthcare systems.[66]

RELEVANT AMA POLICY

Current AMA policy recognizes that climate change is a public health crisis and supports action on reducing greenhouse gas emissions and reducing global warming.[67] AMA policy recognizes that minoritized and marginalized populations, children, pregnant people, the elderly, rural communities, and those who are economically disadvantaged will suffer disproportionate harm from climate change and the health care sector has an important role to play in reducing its greenhouse gas emissions.[67,68] Lastly, AMA policy on asthma control encourages physicians to make appropriate use of evidence-based guidelines, to provide self-management education tailored to the literacy level of the patient by teaching and reinforcing appropriate self-monitoring, the use of a written asthma action plan, taking medication correctly, and avoiding environmental factors that worsen asthma; and encourages physicians to incorporate the four components of care

(assessment and monitoring; education; control of environmental factors and comorbid conditions; and appropriate medication selection and use).[69]

CONCLUSIONS

Asthma and chronic obstructive pulmonary disease (COPD) are two respiratory diseases with a large burden of disease in the U.S. and treatment options primarily consist of inhalation therapy, particularly using metered dose inhalers (MDIs).[20,22] MDIs rely on liquefied-gas propellants to atomize medication for inhalation delivery and represent the most used inhalers in the world.[2,3] Propellants in MDIs were historically chlorofluorocarbons (CFCs) but following evidence of their deleterious impact on the Earth's ozone layer, were switched to hydrofluorocarbons (HFCs). While HFCs do not negatively affect the ozone layer, they are potent greenhouse gases (GHG) and contribute a significant portion of overall emissions in the health care sector.[2]

Switching to low carbon footprint inhalers is an opportunity to not only reduce GHG emissions from the health care sector, but also to improve chronic asthma management and health outcomes through the broader usage of dry powder inhalers (DPI) or soft mist inhalers (SMI) containing an inhaled corticosteroid. Other countries, particularly in Europe, have either made commitments to switch primarily to using DPIs for asthma treatment or made the transition years ago and now an overwhelming majority of asthma patients use DPIs.[3,38,42] However, there are several barriers to switching to low carbon footprint inhalers in the U.S,, including a common perception among physicians that DPIs are more difficult to use as well as cost and access barriers to more affordable and environmentally friendly options available. While there are perceptions among physicians that DPIs are more difficult to use for some vulnerable populations, research has demonstrated that a relatively small proportion of asthma patients have insufficient respiratory capacity to use DPIs effectively and that DPIs are just as clinically effective as MDIs.[11–13] The cost and access barriers could be addressed through policy changes that incentivize the introduction of greener, generic inhalers on the U.S. market and the inclusion of more environmentally friendly options on insurance formularies.

In addition to the use of HFCs in MDIs, the other major source of HFC/CFC use in health care comes from anesthetic gases, which includes the HFCs sevoflurane and desflurane and the CFC isoflurane. With anesthetic gases, there are several well documented strategies to improve environmental sustainability, including the removal or avoidance of the "worst" GHG offender from hospital drug formularies (desflurane), substituting non-inhaled anesthetic gases when clinically appropriate, and minimizing gas waste by lowering fresh gas flows during the maintenance phase of the anesthesia.[18] The switch to more environmentally friendly anesthesia options presents an opportunity for health care systems to lower their carbon footprint and could result in cost savings.

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-160.932, "Asthma Control" be amended by addition and deletion to read as follows:

   The AMA: (1) encourages physicians to make appropriate use of evidence-based guidelines, including those contained in ~~Expert Panel Report III: Guidelines for the Diagnosis and Management of Asthma released by the National Heart, Lung and Blood~~

~~Institute and~~ the National Asthma Education and Prevention Program Coordinating Committee Expert Panel Working Group 2020 Focused Updates to the Asthma Management Guidelines; (2) encourages physicians to provide self-management education tailored to the literacy level of the patient by teaching and reinforcing appropriate self-monitoring, the use of a written asthma action plan, taking medication correctly, and avoiding environmental factors that worsen asthma; ~~and~~ (3) encourages physicians to incorporate the four components of care (assessment and monitoring; education; control of environmental factors and comorbid conditions; and appropriate medication selection and use)~~.~~; and (4) will, in collaboration with interested parties and organizations, develop content to help physicians talk through the different asthma control options and their known economic costs and environmental impacts. (Modify Current AMA Policy)

2. That Policy H-135.913, "Metered Dose Inhalers and Greenhouse Gas Emissions" be amended by addition and deletion to read as follows:

    1. Our AMA will advocate to reduce the climate effects of hydrofluorocarbon propellants in metered-dose inhalers and encourage strategies ~~for encouraging~~ supporting the development and use of alternative inhalers and propellants with equal and or higher efficacy and less adverse effect on our climate.
    2. Our AMA ~~will advocate for~~ supports legislative and regulatory reforms~~,~~ that increase access to affordable ~~to keep~~ inhalers ~~medications affordable and accessible, will urge FDA to consider metered-dose inhaler propellant substitutions for the purposes of climate protection as drug reclassifications,~~ with lower greenhouse gas emissions that align with current recommended standards of care. Reforms should aim to ensure the quality of patents issued on new drug-device combinations, prevent new patents for minor changes made to delivery systems, and remove barriers to market entry for generic inhalers.
    3. Our AMA supports consideration of the environmental impacts of inhalers when creating prescription drug formularies and for the federal government to factor environmental impact into price negotiations with pharmaceutical manufacturers. ~~without new patent or exclusivity privileges, and not allow these substitutions to classify as new drug applications~~.

    ~~3. Our AMA will study options for reducing hydrofluorocarbon use in the medical sector.~~ (Modify Current AMA Policy)

3. That the following new policy be adopted.

    REDUCING ENVIRONMENTAL IMPACTS OF ANESTHETIC GASES

    The AMA, in collaboration with interested parties and organizations, will disseminate evidence-based content and recommended strategies to reduce the global warming impact of anesthetic gases and encourage the phasing out of desflurane as an anesthetic gas. (New HOD Policy)

Fiscal Note: $5,000

Table 1: Global warming potential of CFC/HFCs used in current and possibly future MDIs as well as common anesthetic gases[1]

	Name	Global Warming Potential
	Carbon dioxide – reference	1
MDI Propellants	HFO 1234ze (potential new propellant in future MDIs)	<1
	HFA152a (potential new propellant in future MDIs)	138
	HFA-134a (used in most current MDIs)	1300
	HFA-227ea (used in some current MDIs)	3350
	CFC-11 (previously used in MDIs)	4660
	CFC-12 (previously used in MDIs)	10200
Anesthetic Gases	Nitrous oxide[2] (N_2O)	273
	Isoflurane ($CF_3CHClOCHF_2$)	539
	Desflurane ($CF_3CHFOCHF_2$)	2590
	Sevoflurane ($(CF_3)_2CHOCH_2F$)	144
	Methoxyflurane ($CHCl_2CF_2OCH_3$)	4

Table 2: FDA Approved Asthma and COPD Medications[a]

Drug name (active ingredient)	Company[b]	Method of Inhalation	Type of Treatment[c]	Target Disease
Aerospan (flunisolide)	Meda pharmaceuticals	pMDI	ICS	Asthma
Alvesco (ciclesonide)	Covis Pharma US	pMDI	ICS	Asthma
ArmonAir (fluticasone)	Teva	DPI	ICS	Asthma
Arnuity Ellipta (fluticasone furoate)	GlaxoSmithKline	DPI	ICS	Asthma
Asmanex (mometasone)	Organon	pMDI	ICS	Asthma
Asmanex Twisthaler (mometasone)	Organon	DPI	ICS	Asthma
Flovent HFA (fluticasone)[3]	GlaxoSmithKline	pMDI	ICS	Asthma
Flovent Diskus (fluticasone)	GlaxoSmithKline	DPI	ICS	Asthma
Pulmicort (budesonide)	AstraZeneca	DPI	ICS	Asthma
Qvar RediHaler (beclomethasone dipropionate)	Teva	pMDI	ICS	Asthma
Serevent Diskus (salmeterol xinafoate)	GlaxoSmithKline	DPI	ICS	Asthma/ COPD
Advair HFA (fluticasone propionate and salmeterol)	GlaxoSmithKline	pMDI	ICS/LABA	Asthma

[1] Table adopted from Table 1 from this article: https://bpspubs.onlinelibrary.wiley.com/doi/10.1111/bcp.15135 and Table 1 from this article: https://www.thelancet.com/journals/lanplh/article/PIIS2542-5196(23)00084-0/fulltext

[2] While nitrous oxide is not a hydrofluorocarbon, it is often discussed in tandem with hydrofluorocarbons in terms of climate impacts from anesthetic gases.

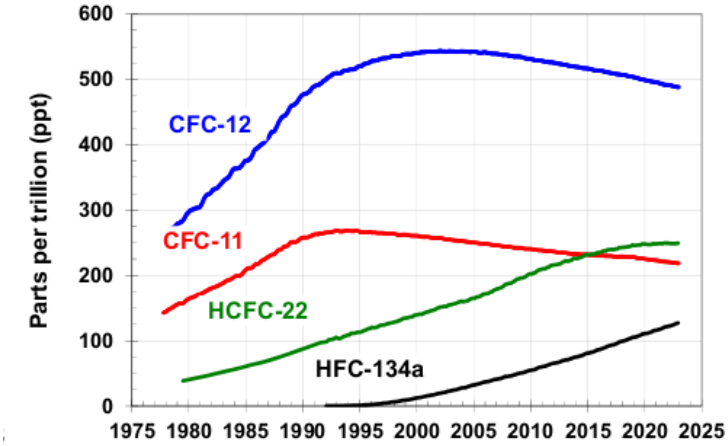
[3] GlaxoSmithKline recently pulled Flovent HFA and Flovent Diskus from the market and it will now only be made available as a generic. https://www.cnn.com/2023/12/28/health/asthma-inhaler-generic-switch/index.html

Advair Diskus (fluticasone propionate and salmeterol)	GlaxoSmithKline	DPI	ICS/LABA	Asthma
Breo Ellipta (fluticasone furoate and vilanterol)	GlaxoSmithKline	DPI	ICS/LABA	Asthma/ COPD
Dulera (mometasone furoate and formoterol fumarate dihydrate)	Organon	pMDI	ICS/LABA	Asthma
Symbicort (budesonide and formoterol)	AstraZeneca	pMDI	ICS/LABA	Asthma/COPD
Trelegy Ellipta (fluticasone furoate, umeclidinium, and vilanterol)	GlaxoSmithKline	DPI	ICS/LAMA/ LABA	Asthma/COPD
Bretzi (budesonide, glycopyrrolate, and formoterol)	AstraZeneca	pMDI	ICS/LAMA/ LABA	COPD
Airsupra (albuterol and budesonide)	AstraZeneca	pMDI	ICS/SABA	Asthma
Arcapta (indacaterol)	Sunovion	DPI	LABA	Asthma
Foradil Aerolizer (formoterol fumarate)	Novartis	DPI	LABA	Asthma/COPD
Striverdi (olodaterol)	Boehringer Ingelheim	SMI	LABA	COPD
Incruse (umeclidinium)	GlaxoSmithKline	DPI	LAMA	COPD
Seebri (glycopyrrolate and formoterol)	Novartis	DPI	LAMA	COPD
Spiriva Respimat (tiotropium)	Boehringer Ingelheim	SMI	LAMA	Asthma/COPD
Spiriva HandiHaler (tiotropium)	Boehringer Ingelheim	DPI	LAMA	Asthma/COPD
Tudorza (aclidinium)	AstraZeneca	DPI	LAMA	COPD
Bevespi (glycopyrrolate and formoterol)	AstraZeneca	pMDI	LAMA/LABA	COPD
Anoro (umeclidinium and vilanterol)	GlaxoSmithKline	DPI	LAMA/LABA	COPD
Duaklir (aclidinium and formoterol)	AstraZeneca	DPI	LAMA/LABA	COPD
Stiolto Respimat (tiotropium and olodaterol)	Boehringer Ingelheim	SMI	LAMA/LABA	COPD
Utibron (glycopyrrolate and formoterol)	Sunovion	DPI	LAMA/LABA	COPD
ProAir (albuterol)	Teva	pMDI	SABA	Asthma
ProAir Respiclick/Digihaler (albuterol sulfate)	Teva	DPI	SABA	Asthma
Proventil HFA (albuterol sulfate)	Merck	pMDI	SABA	Asthma
Ventolin HFA (albuterol sulfate)	GlaxoSmithKline	pMDI	SABA	Asthma/COPD
Xopenex (levalbuterol)	Sunovion	pMDI	SABA	Asthma
Atrovent (ipratropium)	Boehringer Ingelheim	pMDI	SAMA	COPD
Combivent Respimat (ipratropium and albuterol)	Boehringer Ingelheim	SMI	SAMA/SABA	COPD

a: This list does not represent an exhaustive list of all FDA approved drugs for asthma and COPD but is intended to provide a snapshot of currently available inhalation therapies.
b: The company listed represents the pharmaceutical company that originally manufactured the drug. Several of these brand-name medications have been discontinued as generic formulations are available, while five have independent generics.

c: ICS: Inhaled corticosteroid; LAMA: long-acting muscarinic antagonist; LABA: Long-acting β-agonist; SABA: Short-acting β-agonist; SAMA: Short-acting muscarinic antagonist

Figure 1: Global average abundances of common CFCs and HFCs, from the NOAA global air sampling network since the beginning of 1979.[27] [To note: HCFC-22 is primarily used as a refrigerant in air conditioning units and is therefore not included in Table 1 as it is not healthcare related]



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REPORT OF THE COUNCIL ON SCIENCE AND PUBLIC HEALTH (A-24)
Prescribing Guided Physical Activity for Depression and Anxiety (Reference Committee D)

EXECUTIVE SUMMARY

INTRODUCTION. Resolution 421-A-23 modified existing American Medical Association (AMA) policy and asked that our AMA study the evidence of the efficacy of physical activity interventions (i.e., group fitness, personal training, or physical therapy) on behavioral activation and outcomes on depressive and anxiety symptoms and report its findings to the AMA House of Delegates by the 2024 Annual Meeting.

METHODS. English language reports were selected from searches of the PubMed and Google Scholar databases using the search terms: "physical activity prescribing" AND "depression", "anxiety," "park prescription programs," "insurance reimbursement," "minoritized communities," "older (pregnant, minoritized, adolescent) individuals". 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, including the U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, the National Institute of Mental Health, and the American Council on Exercise were also reviewed for relevant information.

BACKGROUND. Approximately one in eight people (970 million) worldwide are affected by a mental health disorder and almost one in two (44 percent) will experience a mental health disorder in their lifetime.[1,2] Depression is the leading cause of mental health-related disease burden, while anxiety is the most prevalent mental health disorders.[1,3] Interventions for treatment of depression and anxiety often include medication and/or psychotherapy.[4] However, one promising alternative to psychotherapy or pharmacotherapy to treat depression and anxiety is the prescription of physical activity. Research trials examining the effects of physical activity on depression and anxiety suggest that physical activity may have similar effects to the combination treatment of psychotherapy and pharmacotherapy. However, physical activity prescriptions have not been widely adopted therapeutically. The limited availability of evidence on the efficacy of physical activity prescriptions for various populations, patient resistance, and the difficulty of prescribing and monitoring physical activity in clinical settings remain major barriers to wider adoption.[5–7] Further, a successful physical activity program is multi-faceted and needs to consider what an effective program will look like depending on the patient's individual circumstances (i.e., current level of activity, age, access to facilities or safe outdoor spaces, existing chronic conditions, etc.).[1]

CONCLUSION. This report outlines the biological mechanisms that contribute to the antidepressant effects of exercise, the current physical activity guidelines for specific age groups, what different levels of physical activity intensity entail, and what counts for the different types of activity (i.e., aerobic versus strength training). The report also evaluates the current clinical evidence on the efficacy of physical activity on mental health disorders in different populations, evidence on the efficacy of physical activity prescription programs, and the current challenges and barriers to implementing physical activity as a standard of care for mental health. The recommendations recognize the limitations in existing data on developing effective physical activity prescriptions, the need for education of health care professionals on the mental health benefits of physical activity, and a potential first step to incorporating physical activity into current standards of care.

REPORT OF THE COUNCIL ON SCIENCE AND PUBLIC HEALTH

CSAPH Report 9-A-24

Subject: Prescribing Guided Physical Activity for Depression and Anxiety

Presented by: David J. Welsh, MD, MBA, Chair

Referred to: Reference Committee D

Resolution 421-A-23, as adopted by the American Medical Association's (AMA) House of Delegates. That policy (H-470.997, "Exercise and Physical Fitness") directs the AMA to:

> "study evidence of the efficacy of physical activity interventions (i.e., group fitness, personal training, or physical therapy) on behavioral activation and outcomes on depressive and anxiety symptoms."

BACKGROUND

In the U.S., five percent adults aged 18 and over experience regular feelings of depression and 12.5 percent have regular feelings of worry, nervousness, or anxiety.[8] Feelings of depression, in this case, is defined as feeling depressed daily and describing the level of depression as "somewhere in between a little and a lot" or "a lot" or feeling depressed weekly and describing the level of depression as "a lot." There are several different types of depressive disorders but, in general, depression is a mood disorder that affects how a person feels, thinks, and handles daily activities. Individuals may experience symptoms of persistent sadness or hopelessness, loss of motivation, low self-attitude, deceased energy, changes in sleep, appetite and concentration, anhedonia, and sometimes suicidal ideation.[9] According to the National Institute of Mental Health, major depression is one of the most common mental health diagnoses in the U.S. and an estimated 21.0 million U.S. adults (a little over eight percent) have had at least one major depressive episode over their lifetime.[9] There are a variety of etiologies involved in depression, including genetic, environmental, psychological, and biochemical factors.[10] An individual has an increased risk of depression if they have a family history of depression, they have experienced trauma, major life changes, stress, chronic pain, certain physical illnesses (such as diabetes, cancer, or Parkinson's), or as a side effect to certain medication.[10]

Anxiety is a normal physiologic reaction and oftentimes can be positive. When anxiety is excessive, including somatic anxiety and impacts day-to-day functioning, it is considered an anxiety disorder.[11] Anxiety disorders are a spectrum of anxiety-related illnesses including but not limited to Obsessive Compulsive Disorder (OCD), Panic Disorder, Agoraphobia, and Generalized Anxiety Disorder (GAD).[11] Symptoms of generalized anxiety disorder may include feeling restless, on-edge, difficulty concentrating, increased irritability, and sleep disruption.[11] Anxiety comes from a complex interaction between biology and environment. Some factors may include genetics, brain function and chemistry, individual temperament, development, and one's perception of threats.[11] Anxiety disorders are often comorbid with other mental health conditions, including depressive disorders.

Interventions for treatment of depression and anxiety often include medication and/or psychotherapy, with the greatest evidence of effectiveness often including a combination of both medication and psychotherapy.[4] However, evidence has demonstrated a beneficial effect of exercise interventions on the prevention of depression. A recent meta-analysis found that people with high levels of exercise had lower odds of developing depression.[12] In other countries such as Australia, lifestyle management is recommended as the first-line treatment approach, though in practice, pharmacotherapy is often provided first.[13,14] While the many physical and mental health benefits of regular physical activity are well documented, as of 2019, only 23 percent of adults in the U.S. were meeting recommended levels of physical activity.[15,16,17] Many people in the U.S. could benefit from increased physical activity to help prevent, better manage, and improve mental health issues like depression and anxiety.

METHODS

English language reports were selected from searches of the PubMed and Google Scholar databases using the search terms: "physical activity prescribing" AND "depression", "physical activity prescribing", AND "anxiety", "park prescription programs", "prescribing physical activity", AND "insurance reimbursement," "minoritized communities" AND "prescribing physical activity," and "physical activity for mental health" AND "older (pregnant, minoritized, adolescent) individuals". 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, including the U.S. Department of Health and Human Services (HHS), Centers for Disease Control and Prevention (CDC), the National Institute of Mental Health, and the American Council on Exercise were also reviewed for relevant information.

DISCUSSION

Physical activity is defined as bodily movement produced by movement of skeletal muscles that results in energy expenditure.[18,19] Exercise is a type of physical activity that involves planned, structured, and repetitive bodily movement, performed to maintain or improve one's physical fitness.[18] Numerous guidelines exist to promote recommended amounts of physical activity. HHS has developed general guidelines for physical activity for different age groups and populations with specific health concerns.[20] Specific recommendations for each group are summarized in Table 1, but for adults, the general recommendation is at least 150 minutes to 300 minutes of moderate-intensity physical activity each week (e.g., walking or biking at a leisurely to moderate-pace, and slow swimming) or 75 to 150 minutes of vigorous-intensity aerobic physical activity per week (e.g., fast-pace walking or biking, jogging, or sports play).

Physical activity intensity is based on the energy expenditure incurred during the activity, as expressed by multiples of 1 MET, which is the ratio of the metabolic rate for an activity divided by a standardized expression of the resting metabolic rate (RMR).[20] It has been noted that different populations, based on gender, age, etc., have different RMRs and correction factors have been applied to adjust for these individual differences.[20] However, in general, physical activity is categorized into three intensity levels, based on expended energy: light-intensity (1.6-2.9 METs), moderate-intensity (3-5.9 METs), and vigorous-intensity (≥6 METs).[20] It is important to note that energy expenditure is also determined by an individual's physical fitness. In other words, an individual who regularly exercises may find fast-paced walking to be a moderate intensity exercise versus someone who has historically been physically inactive may find it to be of vigorous intensity. Lastly, different types of physical activity are based on the type of movement and the way in which different components of the body are engaged. Table 2 defines several common types of movement. To note, many physical activities combine more than one type of movement.

Biological Mechanisms Underlying the Role of Physical Activity on Depression and Anxiety

It has been demonstrated that exercise has beneficial effects in reducing symptoms of depression such as low mood, anhedonia, and loss of interest and on body functions such as cardiorespiratory system and cognitive function..[21] However, more research is needed into the mechanisms underlying the antidepressant effects of exercise. Most studies on the mechanisms of the antidepressant effect of exercise are mouse/rodent model studies, with some clinical studies in humans when feasible.[21,22] The biological pathways whereby regular physical activity might confer resilience include promoting an anti-inflammatory state, reducing the negative effects of oxidative stress, serving as a buffer against stress and stress-related disorders/chronic diseases, and enhancing neuroplasticity and neurogenesis.[21–25] In addition, exercise causes an increase in neurotransmitters associated with increased activity of dopamine, 5-hydroxytryptamine, and noradrenaline in the central nervous system.

Anti-inflammatory and Antioxidant Factors

A mechanism in which regular exercise and/or physical fitness may confer resilience is through minimizing inflammation. Psychological stress and physical inactivity/low aerobic fitness have all been associated with persistent, systemic, low-grade inflammation, and are associated with adverse effects on mental and physical health.[21,26,27] Systemic markers of inflammation include tumor necrosis factor alpha (TNFα), interleukin (IL)-1, IL-6, IL-8 and C-reactive protein (CRP), with elevated basal IL-6 and CRP levels being closely associated with persistent depressive symptomatology and cognitive dysfunction.[28] A randomized control trial (RCT) designed to assess the relative efficacy of aerobic exercise to augment selective serotonin reuptake inhibitor (SSRI) treatment of major depressive disorder (MDD) in treatment-resistant patients, found those who had high basal levels of serum TNFα were found to have a greater decrease in depressive symptoms over the 12-week aerobic exercise intervention.[28,29] These results suggest that high serum TNFα levels may differentially predict better outcomes with exercise and antidepressant medication as treatment as opposed to antidepressant medications alone, wherein high serum TNFα levels are linked to a poor treatment response.[28,29]

Oxidative Stress (OS)

Oxidative and nitrosative stress occurs when excess reactive oxygen species and reactive nitrogen species are produced as a byproduct of metabolic processing and have harmful effects on the body.[21] Organs such as the brain are particularly vulnerable to this damage because it has a high metabolic rate and lower antioxidant levels.[21,30] As a result, oxidative stress pathways may contribute towards the pathophysiology of psychiatric disorders, such as depression. Over time, the resulting damage may counteract neuroplasticity and contribute some of the structural abnormalities in people with depression.[21] Moderate aerobic exercise has been shown to reduce OS and inflammation.[21] It also reduces the concentration of several inflammatory biomarkers, such as IL-6, homocysteine, and TNF-α, and restrains the activity of nicotinamide adenine dinucleotide (NADH) oxidase, which results in metabolic oxidative stress.[21] One study illustrated that voluntary wheel running alleviated depression-like symptoms in male rats with prenatal ethanol exposure and that the positive effects of exercise were linked to increased levels of antioxidants.[21,31] In clinical studies, a 12-week aquatic exercise program in older adults with depression (n = 92) was shown to reduce depression and anxiety and decrease OS.[21,32]

Neurogenesis and Neuroplasticity

The beneficial effects of physical activity and increased cardiorespiratory fitness on brain health are well recognized. Chronic stress, exemplified by high level glucocorticoid exposure, decreases neurotrophic factor expression/signaling, neurogenesis and gliogenesis in the brain; this appears to be associated with reduced volumes of stress-sensitive brain regions as well as depression and cognitive dysfunction.[28,33,34] By contrast, regular exercise has been shown to enhance positive mood, decrease depression and anxiety, and increase cognitive function such as learning and memory in both animal and human studies.[28,29,35] Possible biological mechanisms mediating these effects include structural (i.e., increased neurogenesis, synaptogenesis, gliogenesis and angiogenesis) and cellular/molecular changes in the brain.[28,35,36] Together, they can promote enhanced neuroplasticity and may be capable of blocking and/or reversing the detrimental effects of chronic stress on the brain.

One important growth factor that has received much attention is brain-derived neurotrophic factor (BDNF).[28,37] BDNF plays a critical role in integrating behavioral and metabolic responses to various challenging environments, including exercise.[28,37] Studies of outpatients with MDD and persistent depressive disorder demonstrated that both acute and regular exercise caused an increase in BDNF.[21] A study of elderly women with major depression showed that a single exercise session significantly increased serum BDNF levels; however, it showed a significant secondary decrease in BDNF serum levels after 30 min of rest. This suggests that acute exercise might be beneficial for MDD treatment, but further studies are needed.[21,38]

EFFICACY OF PHYSICAL ACTIVITY ON DEPRESSION AND ANXIETY IN DIFFERENT POPULATIONS

The sections below examine current evidence in the literature about the efficacy of physical activity on anxiety and depression in children and adolescents, older adults, adults with chronic health conditions and/or disability, pregnancy, and minoritized communities. There are many limitations in current literature surrounding the benefits of physical activity on anxiety and depression which includes, but are not limited to, the nature of the patient sample; the methods used to document anxiety and depression in the patient sample; the lack of inclusion of symptomology to describe anxiety disorders and depressive disorders in the patient sample; heterogeneity within the group of individuals who have similar depressive disorders or anxiety disorders; and the lack of objective measures of either functional or quality of life impairment. Further, it should be acknowledged that depression and anxiety are complex disorders that are influenced by many factors and are often comorbid with other mental health conditions.

Children and Adolescents

A systematic review and meta-analysis which included studies involving 2441 participants aged less than 19 years old, aimed to understand if physical activity interventions were associated with significant reductions in depressive symptoms compared with the control condition in children and adolescents.[39–44] This meta-analysis showed that physical activity interventions produced greater reductions in depressive symptoms compared with the control conditions.[39–44] However, these differences were not detected after a mean follow-up of 21 weeks, possibly due to the limited number of studies with follow-up outcomes.[39–44] Previous studies have shown that physical activity had greater benefits in participants aged 13 years or older than in younger participants.[45] It also has been demonstrated that three physical activity sessions per week and interventions that were shorter than 12 weeks induced greater benefits on depressive symptoms compared with other frequencies and durations.[45] These findings were reflected in the results of previous meta-analyses on the association between physical activity and depression, suggesting that increasing amounts of physical activity may not translate into greater reductions in depressive symptoms.[39,46,47] A recent

cross-sectional study found a U-shaped association between physical activity frequency and mental health, such that 10 to 15 sessions per month induced the greatest mental health improvements.[39,48] In contrast, there is other evidence that greater than 10 to 15 sessions per month of physical activity have increasingly beneficial effects on mental health.[39,49] These discrepancies in the literature highlight the need for more comprehensive studies in this population to better understand the benefits of physical activity on depressive symptoms.

Older Adults

Regular physical activity can help older adults, aged 50 years and older, maintain and improve their mental health and cognitive ability, and reduce symptoms of depression and anxiety.[50–52] It can also improve other functional abilities, including physical function and balance, thereby preventing falls and fall-related injuries.[50,51,53] In addition to serving as an important pathway for improved mental health, physical activity brings social benefits, as being active offers the chance to build relationships and strengthen social networks around an older person.[50]

One study examined the minimal dose of moderate to vigorous physical activity (MVPA) associated with a reduced risk of depression and depressive symptoms in 4016 older adults, over a 10-year period.[50] Depression and depressive symptoms were measured using the short form of the Centre for Epidemiological Studies Depression scale along with the Composite International Diagnostic Interview for diagnosis of a major depressive episode during the past 12 months. Older adults performing between 400 to 600 MET minutes per week had a 16 percent lower rate of depressive symptoms and 43 percent lower odds of major depression.[50] These findings were consistent with meta-analytic data suggesting that mental health benefits among adults can be achieved with physical activity below public health recommendations (600 MET-min/wk). Specifically, an activity volume equivalent to 2.5 hours per week of brisk walking was associated with a 25 percent lower risk of depression, and half that activity volume was associated with an 18 percent lower risk compared with no activity.[46,50] Minimally sufficient activity doses for depressive symptoms and major depressive disorder vary based on chronic disease status.[50] For depressive symptoms, older adults with chronic disease showed a significantly reduced risk (seven percent) at the WHO guideline threshold of 600 MET-min/wk, although the greatest decreases occurred with increasing physical activity dose, with a similar outcome observed for major depression.[50,54] Further, previous meta-analytic evidence that suggested significantly larger antidepressant effects of exercise training among adults with chronic illness who were meeting WHO guidelines for physical activity.[50,54–56]

Adults With Chronic Health Conditions and/or Disability

Regular physical activity is recommended for adults with chronic health conditions and/or a disability and can provide both physical and cognitive benefits.[20,54] For many chronic conditions, physical activity provides therapeutic benefits and is part of recommended treatment for the condition.[57] The benefits of physical activity for people with disabilities have been studied in diverse groups with disabilities related to traumatic events or to chronic health conditions. These groups include people with previous stroke, spinal cord injury, multiple sclerosis, Parkinson disease, muscular dystrophy, cerebral palsy, traumatic brain injury, limb amputations, mental illness, intellectual disability, and dementias including Alzheimer.[20,57] Studies have shown there was moderate-certainty to high-certainty evidence that physical activity decreased symptoms of anxiety and depression in people with chronic conditions.[20,57,58]
It should be noted that data assessing the benefits of physical activity in individuals with a disability is very limited. In individuals who are disabled and with schizophrenia or major depressive disorder, there is moderate-certainty evidence for the beneficial effects of physical

activity on quality of life.[20,54,59] There is also moderate-certainty evidence that physical activity can have beneficial effects on cognition in people who are disabled with multiple sclerosis, Parkinson's disease, a history of stroke, ADHD and major clinical depression.[20,54,59]

Pregnancy

There is limited evidence on the efficacy of physical activity in reducing symptoms of anxiety and depression in people who are pregnant. Most studies focus on pregnant women, and this highlights a gap in current literature. Depression in pregnancy is a significant public health problem; both pregnancy and childbirth are some of the factors that contribute to the development of depression.[60,61] The incidence of depression in pregnancy ranges from 6–25 percent.[60,62–64] The incidence of depression during pregnancy, also varies depending on trimester.[60] It is estimated that the onset of depression occurs in 7.4 percent (2.2–12.6 percent) of pregnant women in the first trimester, in 12.8 percent (10.7–14.8 percent) of pregnant women in the second trimester, and in 12.0 percent (7.4–16.7 percent) of pregnant women in the third trimester.[60,65] In addition, according to WHO data, depression during pregnancy is a strong risk factor for the development of postpartum depression, which may affect 10–15 percent of pregnant women in the period of up to 12 months after delivery.[54,60] Moreover, prior studies have shown that a lack of proper treatment of depression in people who are pregnant and may have a negative impact on the fetus (i.e., premature delivery, reduced birth weight, as well as an increase in the concentration of stress hormones in the child).[60,66] Early and correct diagnosis can minimize the negative effects of depression on the birth parent's, fetus's, and child's health.[60,67]

Even a small amount of physical activity during pregnancy may reduce the severity of depressive symptoms, as well as the occurrence of depression.[60] The best forms of activity during pregnancy include walking, yoga, swimming and general exercises (i.e., breathing, posture, and Kegel exercises).[68] However, it should be noted that the physical capacity of pregnant women varies in terms of their baseline physical activity levels and individual trimesters.[68] Research on the influence of supervised training on depressive disorders shows that aerobic exercises performed three times a week for about 60 minutes can significantly reduce the symptoms of depression in pregnant women.[60,69–71] However, there are also reports indicating that physical activity already at the level of 1–2 sessions a week may also be beneficial in reducing the frequency and severity of depressive symptoms in pregnant women.[72] Being physically active in pregnancy not only has benefits of lowering the risk of developing depression in pregnancy, but also has the benefits of lowering the risk of developing depression in early and late postpartum.[60,70] In addition, evidence suggests that women who do not exercise are more at risk of developing depressive disorders, both during pregnancy and postpartum compared to women who exercise.[60,70]

Minoritized Communities

Data on the benefits of physical activity on mental health in minoritized communities is limited, and many barriers exist for these communities. However, it has been noted that minority populations are more likely to seek care for mental health concerns from their primary care providers versus behavioral health professionals, underscoring an important opportunity for primary care physicians to engage with their patients on this issue.[73] Strategies to reduce depressive symptoms and improve emotional well-being in older Hispanic/Latinx adults are largely absent from the scientific literature. One study suggests that older Hispanic/Latinx adults displayed improvements in depressive symptoms at the 24-month follow up period following an exercise

intervention that included four weekly one-hour group-based exercise classes targeting strength training, endurance, balance and flexibility.[74] The results of this study were consistent with previous research documenting the therapeutic health effects of structured exercise in older adults using Latin dance.[74,75] Culturally appropriate and cost-effective intervention modalities to reduce depression in Hispanics/Latinxs are both needed and critical given the stigma associated with mental health disorders in this population and reluctance in taking antidepressant medication.[74,76]

Multiple studies have found a significant inverse relationship between physical activity and depressive symptoms in Black adults.[77–80] In a mixed-methods study on aspects of depression among low-income black youth, life challenges faced by participants diminished the potential anti-depressant effects of exercise – highlighting the importance of the social determinants of health role as a moderator in the effectiveness of exercise as a therapy.[81] The available research has limitations and further studies are needed in this population to assess the benefits of physical activity on mental health.

Anxiety Studies

Studies assessing the impact of physical activity on anxiety disorders are limited. One study investigated cross-sectional and longitudinal associations between different amounts of moderate-to-vigorous physical activity and anxiety symptoms in older adults (50 years of age and older) in Ireland.[82] Compared with the inactive group, the minimally- and very-active groups were associated with an 8.4 percent and 18.8 percent lower odds of anxiety, respectively.[82] However, following adjustment, only high volumes of physical activity were significantly associated with lower prevalence of anxiety.[82]

Another study aimed to document the effect of add-on treatment with structured physical exercise in a clinical population of adolescents hospitalized for depression and anxiety in a psychiatric hospital in Belgium.[83] A group of 52 adolescent inpatients were randomly assigned to a physical exercise or control social relaxation program three to four times per week over a six-week period (20 hours in total).[83] The results showed a reduction in anxiety symptoms over time in both groups. Therefore, it was concluded that there was no benefit of sufficient effect size to attain significance.[83] To date, there is a significant lack of evidence for a reduction in symptoms of anxiety with exercise in young ambulatory patients.

Finally, a study in Sweden investigated the effects of an exercise intervention on symptoms of anxiety and to evaluate the benefit of moderate/high intensity exercise vs low intensity exercise, in primary care patients diagnosed with anxiety disorder.[84] Included in the study were patients aged 18 to 65 years of age and were diagnosed with anxiety disorders using Diagnostic and Statistical manual of Mental disorders (DSM-IV and V), including panic disorder (PD; DSM 300.01), generalized anxiety disorder (GAD; DSM 300.02) and anxiety not otherwise specified (NOS; DSM 300.00).[84] This study shows that both low- and moderate/high intensity exercise interventions improved anxiety symptoms at follow-up.[84] This was done using self-assessed severity of perceived anxiety symptoms using the clinically well-established psychiatric assessment scale Beck Anxiety Inventory.[84] These effects were independent of depressive symptoms, which is important to assess given the well-known benefits of exercise for patients with MDD.[84–86] Severity of ongoing symptoms of depression was self-assessed using the Montgomery Åsberg Depression Rating Scale (MADRS-S).[84] Although no clear dose-response effect of exercise intensity was observed, there was a significant trend in the proportion of patients with improved anxiety symptoms with increased exercise intensity.[84]

PHYSICAL ACTIVITY PRESCRIPTIONS

What is a Physical Activity Prescription?

Physicians may recognize the therapeutic benefit of physical activity and may have even counseled their patients to "exercise more," as part of their treatment. In fact, in a cross-sectional survey among faculty and staff from a large academic tertiary care medical center in the southeastern U.S. with nearly 200 respondents, more than half (58 percent) said they recommended exercise as part of treatment but roughly only a quarter offered specific exercise instructions (24 percent) or followed national guidelines (30 percent).[87] This type of general clinical advice to exercise is not what is referred to as a physical activity prescription.

A physical activity prescription is one that dictates a specific regimen of physical activity and, like any other medical prescription, includes details on the type, dose, frequency, duration, and therapeutic goal.[88] Another key component of the physical activity prescription is connecting patients with appropriate, supportive physical activity resources.[89] A critical component of counseling or prescribing physical activity to patients is understanding what different levels of physical activity intensity entail and what counts for the different types of activity (i.e., aerobic activities versus muscle strengthening).

It is also important to distinguish between physical therapy and a physical activity prescription. Physical therapy's universal aim is "to identify and maximize human movement potential within the spheres of promotion, prevention, treatment and rehabilitation," and has the potential to be an effective promotion of physical activity.[90] However, physical therapy has generally been employed as a means for restoration and maintenance of physical functioning in individuals who have experienced a disabling condition, loss of movement, or injury, as opposed to a method to improve physical activity in general.[90] Part of this is due to the insurance industry's payment system, which does not generally pay for physical activity programming.

Effectiveness of Physical Activity Prescriptions for Depression and Anxiety

While there have been numerous studies assessing the relationship (causal or otherwise) between physical activity and mental health disorders, there are fewer available studies evaluating the effectiveness of physical activity prescription-type interventions designed specifically for the treatment of depression and/or anxiety. A 2014 meta-analysis evaluating exercise as a treatment for depression identified five RCTs where exercise was found to be beneficial in the treatment of depression.[91] Specifically, treatment programs with exercise done at least three times a week, for a minimum of nine weeks, at moderate intensity were shown to be an effective for treatment of depression.[91]

A 2018 meta-analysis of RCTs evaluating the effects of Baduanjin (a traditional Chinese mind-body exercise) in adults diagnosed with any mental (depression, anxiety or mood) or physical illness (e.g., fatigue, diabetic mellitus, cancer, drug addiction, heart disease, stroke, and musculoskeletal disorder) found that despite wide heterogeneity among treatment interventions, in terms of frequency, length, intensity, etc., the Baduanjin intervention was effective in reducing both anxiety and depression among the patients.[92] A more recent RCT assessed the impact of Baduanjin on patients diagnosed with lung cancer who were experiencing depression and anxiety. After an eight-week intervention, the treatment group had statistically significant lower self-reported depression and anxiety scores compared to baseline.[93] Despite the positive and consistent findings on the impact of Baduanjin on depression and anxiety, the cultural context of these studies and focus on Baduanjin specifically may reduce the generalizability to the U.S. population.

There is also qualitative evidence from general practitioners in New Zealand on a physical activity prescription program, the Green Prescription, for treating depression. The Green Prescription program involved a prescription for physical activity provided by a general practitioner or nurse and lasted for a three-month period. Within those three months, individuals received monthly phone calls from patient support counselors to help set realistic physical activity goals and identify solutions for barriers encountered. All general practitioners interviewed in the study emphasized the importance of physical activity to improve mood and treat depression and noted its usefulness in helping lessen the need for pharmacotherapy.[94]

Making Physical Activity Assessment and Prescription a Medical Standard of Care

In April 2015, the American College of Sports Medicine and Kaiser Permanente convened a joint consensus meeting to discuss the development and implementation of a physical activity vital sign (PAVS) to be obtained and recorded regularly.[95,96] PAVS was documented based on the answers from two questions: 1. On average, how many days per week do you engage in moderate to vigorous physical activity (like a brisk walk) and 2. On average, how many minutes do you engage in physical activity at this level? It resulted in a "call to action" for current and future clinicians and the health care community to implement a PAVS in daily practice with every patient.[95,96] The health care team is uniquely positioned to address the importance of a healthy lifestyle, including physical activity, in the prevention and treatment of disease and disability.

As a result, Kaiser Permanente, Greenville Health System in South Carolina, and Intermountain Healthcare System in Utah successfully integrated the use of PAVS.[95,97] These organizations have been able to manage workflows and include the measure in their electronic health record alongside other vital signs. They have accomplished this goal working alongside different health record vendors, including Epic, HELP2, and iCentra.[95,97] Further, a study of 2.1 million adult patients from Kaiser Permanente in Southern California demonstrated that within the first year of implementation, they were able to capture a PAVS on 85 percent of eligible patients.[95,97] Importantly, the PAVS showed similar results to the reported number of minutes of exercise compared with other self-reported physical activity questionnaires, such as Behavioral Risk Factor Surveillance System (BRFSS) (50 percent) and the National Health and Nutrition Examination Survey (NHANES) (59.6 percent).[95,97]

Best practices to implement a uniform PAVS and physical activity prescription include increased education on benefits of physical activity on health, collaboration with large medical associations, alignment with current initiatives (i.e. Physical Activity Guidelines for Americans), and collaboration with local community groups, organizations, or facilities for counseling and assistance with culturally appropriate, basic physical activity information.[95] Due to its successful implementation, there are readily accessible resources (professionals, patient materials, and access to adequate facilities/equipment) to implement the recommendations for integrating PAVS and avenues to re-educate practicing clinicians and health care team members.[95] Further, at the level of the individual physician, medical practice, and health care system, there are a variety of incentives tied to quality measures or metrics. .[95,98]

When prescribing physical activity, what has been demonstrated to work well?

Treatment programs that incorporate aerobic activities at a moderate level of intensity either in a group or individual setting have been shown to be effective.[91] Programs that included some level of supervision by an individual trained in physical activity were recommended to achieve beneficial treatment.[91] Physicians should consider the following when developing a physical activity prescription for their patients. First and foremost, the prescription must be tailored to the individual

and incorporate the following four steps: (1) take an exercise history, (2) identify any contraindications and refer those who require medical clearance to a sports/exercise specialist, (3) develop an effective but realistic program, and (4) provide advice on how to reduce sedentary behavior.[6] These considerations are critical, as developing an effective and specific physical activity program will depend on the patient's current level of activity and must be considerate of age and existing chronic conditions.[99] Another component of an effective physical activity prescription is considering exercise that integrates physical activity into an individual's daily life or habits, rather than making it an extra chore.[6,100]

A critical component of implementing physical activity prescriptions is the integration of PAVS in electronic health records.[97,100] Additionally, it has been recommended that a successful physical activity prescription intervention must engage the larger health care team, not just the clinician.[89,100] For the Green Prescription program in New Zealand, the health care team responsible for providing the physical activity prescription included patient support counsellors and nurses, who helped carry out more of the time-consuming tasks and administration of the program.[89] For additional guidance and resources on prescribing physical activity, the American College of Sports Medicine's Exercise site has a step-by-step guide for clinicians to utilize in their practice.[101]

CHALLENGES AND BARRIERS

A challenge for physicians in prescribing physical activity is the heterogenous nature of exercise activities and programs (as outlined above, there are many ways to exercise and at different levels of intensity, frequency, etc.) and knowing what is most appropriate for the patient. Another major barrier for physicians is the amount of need time to spend with patients to talk through a physical activity prescription, including, but not limited to, doing a baseline assessment, creating an individually tailored plan, and connecting the patient with appropriate resources.[94,100] Additionally, there is no standard of practice in the U.S. (like nutritional counseling) for physical activity counseling and prescription within a clinical setting.[89] However, the global health initiative, Exercise is Medicine®, is working to make physical activity assessment and promotion a standard within clinical care.[102]

Barriers that will be further discussed below also include inadequate provider reimbursement, training, and self-efficacy, insufficient health care system support, and scarcity of certified community resources to refer for evidence-based physical activity programming.[103–105] Poor care coordination and the inability to follow the progress of a referred patient are also important barriers to consider when establishing sustainable clinical-community linkages for physical activity-related care.[103,106]

Billing and Reimbursement for Prescribing Physical Activity

Billing rules set by the Centers for Medicare and Medicaid Services (CMS) and private insurers prohibit most allied health professionals from receiving reimbursement for providing exercise programming in mental health settings.[107–109] It should also be noted that some private insurance companies offer their members a variety of incentives to engage in exercise, such as reimbursement for gym memberships, cash rebates for selecting healthy food at the grocery store, and reduced premiums for people who engage in regular exercise.[107,113,114] A number of health insurance companies offer their members incentives for engagement in exercise.[107] Large corporations also offer incentives for engagement in exercise, such as on-site fitness equipment.[107,115] However, this creates an inequitable barrier for individuals who do not have access to private insurance companies or work for large corporations.

Logistical and Workflow Barriers for Physical Activity Assessment and Referrals

Despite the availability of evidence-based programs to improve physical health and wellness behaviors among people with mental health conditions, there are multiple policies and funding barriers that make it difficult for community mental health programs to offer these programs to consumers.[107,116] Health care policies typically "carve out" mental health funds from physical health funds, denying community mental health programs the financial ability to offer exercise programming.[107,116] Few funds are set aside for community mental health programs to train staff to deliver preventive health services like exercise programs.[107,108,116]

These barriers are perpetuated by fragmentation of preventive care in the U.S. and may explain the lack of standardized physical activity community-referral programs.[103] The national health promotion objectives have included a specific target to increase the proportion of primary care clinicians who routinely assess and counsel their patients on physical activity.[103] Occasional surveys of primary care practitioners and patients suggest that there has been little improvement over the last decade in physical activity assessment and promotion in clinical visits. The rates of clinician-initiated physical activity counseling continue to be low (<35 percent), particularly among women and racial minorities.[103,117] Rates for physical activity counseling among patients with CVD (41.2 percent), hypertension, (44.2 percent), obesity (46.9 percent), and diabetes mellitus (56.3 percent) are also suboptimal.[103,117]

Further, even though patients can be referred to either self-managed or community-based physical activity professionals/programs, health care systems are often unwilling to refer patients outside their system unless the professional/program referred to is part of a network where quality can be ensured and controlled.[95,103] The development of a database of local physical activity programming and other health resources (e.g., medical fitness centers, gyms with certified programming and personnel, parks, trails, community centers) classified by age, clinical conditions, insurance benefits, and other factors (such as cost, activities offered) can enable the provision of a robust, personalized list of potential places and programs when integrating into the clinical workflow, electronic health record (EHR), and patient portals.[103,118]

Education of the Health Care Workforce

To provide beneficial patient education, our nation's health care professionals must be educated in the vital role physical activity and/or structured exercise plays in preventing, treating, and managing disease and the need to screen, motivate, and educate patients about physical activity.[95,119] At the medical school level, there are innovative curricula, including those at the University of South Carolina School of Medicine Greenville and the University of Wisconsin, where exercise and lifestyle medicine are integrated into all four years of the students' undergraduate medical education.[95,120,121] The Accreditation Council for Graduate Medical Education sets the program requirements for residency and fellowship programs.[95,122] However, despite specific curricula to which a resident must be exposed during graduate medical training, in most specialties there are no current requirements that residents receive education and training in physical activity.

Electronic Health Record

A recommendation by the National Academies highlights the value of EHR to provide information to the health care team related to health and treatment.[103,123] Providing information pertaining to physical activity in the EHR creates an opportunity for the HCP to discuss patients' or clients'

physical activity habits.[103,123] Discussion about physical activity will be easier if these measures are collected in a similar method across time and can be used between health record systems.

Two suggested methods for capturing physical activity for the EHR are self-reports and wearable devices such as pedometers or accelerometers.[103,124] An example of a self-report questionnaire that can ascertain compliance with the physical activity guidelines is called the Exercise Vital Sign (EVS), modified from the Behavioral Risk Factor Surveillance System.[97,103] The EVS consists of 2 questions that take approximately ≤1 minute to administer. Wearable activity monitoring (WAM) devices provide information on activity such as accelerometers counts, steps, and estimated minutes of physical activity at various intensity levels.[97,103] These devices can be worn on clothing or the waist, wrist, or ankle to measure physical activity. Comparisons of findings based on behavior questionnaires versus wearable devices find a remarkably similar relationship between physical activity and health outcomes, buttressing older data from questionnaire studies that underpin current physical activity guidelines.[125]

There are numerous devices available, with many wrist-based devices or smartwatches now also tracking heart rate to enhance physical activity intensity estimation. However, to date, there is no widespread integration of patient-generated data from wearable devices into the EHR.[103,126] No matter which method is used, self-report or wearable devices, linking physical activity data to the EHR provides a forum for health care professionals to initiate discussion and counseling on increasing physical activity. However, uniform access to wearable devices presents logistical and equity issues. There are also data privacy, integrity, provenance, and quality considerations that should be addressed. Integrating information into an EHR from external third-party sources can be a challenge and requires planning and preparation.

Environmental Equity Considerations

Another potential barrier for successful implementation of physical activity prescription programs is the community setting in which patients are expected to return and fulfill their physical activity regimen. For example, in a study assessing the level of physical activity among adolescent girls in relation to their proximity to parks, researchers found that girls who live near more parks, particularly near those with amenities conducive to walking and with active features (i.e., playgrounds, multipurpose fields, etc.), engaged in more physical activity compared to those who with access to fewer parks.[127] CDC's Active People, Healthy Nation campaign aims to get more Americans physically active using a number of evidence-based strategies to increase physical activity. As part of this campaign, CDC has noted "providing equitable and inclusive access to safe places for physical activity is foundational to each strategy."[128] However, inclusive and safe places to exercise are not equitably distributed among U.S. communities, with notable disparities in low income, minority communities.[128,129] Low income, minority communities face a number of societal, institutional, and environmental barriers to meeting physical activity recommendations, including lack of access to appropriate facilities (i.e., parks, recreation or fitness centers), perceived unattractiveness or cleanliness of one's neighborhood, and perceived safety and concerns of violence.[129] As such, the patient's neighborhood and socio-environmental conditions should be considered when developing a patient's physical activity prescription.

Evidence from other types of prescriptions for 'healthy behaviors'

The topic of physical activity prescriptions raises a larger question on whether physician prescriptions, which have historically been focused on pharmacological treatment, can be an effective intervention to motivate behavior changes that improve health. Similar prescription interventions include park prescription and healthy food prescription programs. Park Prescriptions

are programs or interventions that include a health or social service provider, encourages patients/clients to spend time in nature, and have a goal of improving their health and well-being.[130] There are a few studies that have been conducted or are ongoing that aim to evaluate the effectiveness of park prescription interventions on physical activity and mental health outcomes.[131,132] In one RCT study evaluating a park prescription program intended to increase physical activity in parks, the intervention group demonstrated improved park use, physical activity in parks, recreational physical activity, and psychological quality of life.[132] However, one challenge in evaluating these types of programs is the ability to discern the independent effect of the 'physical activity' and 'park/nature' components of the program. Parks prescription interventions often have overlapping goals of improving access to nature and increasing physical activity. Thus, if one is trying to discern which component is helping with improved mental health outcomes, it is unclear which aspect of the program is "doing the work." This is a useful distinction to understand as there may be different biological mechanisms involved that connect access to nature/green space and mental health.

Similar to a lack of physical activity, a poor-quality diet is a leading risk factor for non-communicable diseases and has been implicated in the growing prevalence of chronic diseases, such as obesity and diabetes.[133] As a result, there has been a growing interest in incorporating "food as medicine" interventions within health care systems, one of which is the "produce prescription" program.[134] With this type of intervention, a physician or health care worker identifies patients who may be eligible to receive free or discounted healthy produce and patients are provided subsidized or free healthy foods, with options to redeem prescribed coupons at local food stores, farmers markets, or the direct provision of fresh produce at a community based organization, healthcare center, or delivered directly to their home.[134] A 2021 systematic review of literature evaluating the effectiveness of these types of interventions found there were statistically significant increases in fruit and vegetable consumption and decreases in body mass index and glycated hemoglobin (HbA1c) levels among program participants.[134] Whether either of these prescription-type programs demonstrate long-term improvements in health outcomes has yet to be studied, but the current evidence suggests they are effective at improving the adoption of healthy behaviors in the short term. Generally positive evidence from these other types of prescription programs provides credence to explore physician prescription programs as a worthwhile intervention to promote healthy behavior change in individual patients.

RELEVANT AMA POLICY

Under existing AMA Policy H-440.859 "American's Health" the AMA supports improving health through increased activity and proper diet a priority and calling on the federal government and state governments to develop new and innovative programs in partnership with the private sector that encourage personal responsibility for proper dietary habits and physical activity of individual Americans.

Policy H-150.965, "Awareness, Diagnosis and Treatment of Depression and other Mental Illnesses H-345.984" encourages medical schools, primary care residencies, and other training programs as appropriate to include the appropriate knowledge and skills to enable graduates to recognize, diagnose, and treat depression and other mental illnesses, either as the chief complaint or with another general medical condition, and supports additional research into the course and outcomes of patients with depression and other mental illnesses who are seen in general medical settings and into the development of clinical and systems approaches designed to improve patient outcomes. The policy also recognizes the impact of violence and social determinants on women's mental health. Further, the policy states that the AMA will work with the National Institute on Mental Health and appropriate medical specialty and mental health advocacy groups to increase public

awareness about depression and other mental illnesses, to reduce the stigma associated with depression and other mental illnesses, and to increase patient access to quality care for depression and other mental illnesses.

CONCLUSIONS

Mental health disorders are among the leading causes of global health-related burden, with substantial individual and societal costs.[1,2] Depression is the leading cause of mental health-related disease burden, while anxiety is the most prevalent mental health disorder.[1] The role of lifestyle management approaches, such as exercise, sleep hygiene and a healthy diet, varies between clinical practice guidelines in different countries. In U.S. clinical guidelines, psychotherapy or pharmacotherapy is recommended as the initial treatment approaches, with lifestyle approaches considered as 'complementary alternative treatments' where psychotherapy and pharmacotherapy are 'ineffective or unacceptable.'[1,13]

One potential alternative to psychotherapy or pharmacotherapy to treat depression and anxiety is the prescription of physical activity. There have been hundreds of research trials examining the effects of physical activity on depression, with more limited studies examining the effects of physical activity on anxiety. Many of these studies suggest that physical activity may have similar effects to psychotherapy and pharmacotherapy (and with numerous advantages over psychotherapy and pharmacotherapy, in terms of cost, side-effects and ancillary health benefits).[1,135,136] Despite the evidence for the benefits of physical activity, it has not been widely adopted therapeutically as a prescribed alternate to psychotherapy or pharmacotherapy. The limited availability of evidence on the efficacy of physical activity prescriptions for various populations, patient resistance, the difficulty of prescribing and monitoring physical activity in clinical settings, as well as the huge volume of largely incommensurable studies, have impeded wider adoption.[5–7]

Further, a critical component of counseling or prescribing physical activity to patients is understanding what different levels of physical activity intensity entail and what counts for the different types of activity (i.e., aerobic activities versus muscle strengthening).[1] Physicians have expressed that insufficient knowledge or training is the most common potential barrier to prescribing exercise for patients with mental health conditions.[137] There are also many environmental equity considerations that need to be addressed before a physical activity prescription program can be applied broadly.

Despite these barriers, there are promising practices that can be implemented to begin incorporating physical activity prescriptions as a standard of care. One of these practices include the introduction of physical activity vital sign (PAVS).[95,96] PAVS is reliable and feasible and has been validated against established survey tools to quantify physical activity engagement. It has also been successfully implemented in large-scale demonstration projects.[97,103] Other practices include integrating the benefits of prescribing physical activity into undergraduate, graduate, and continuing medical education, establishing partnerships and community links to sustain and support equitable physical activity programs, and continued research into the efficacy of prescribing physical activity to treat depression and anxiety.

RECOMMENDATIONS

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

1. That our AMA amend policy H-470.997, "Exercise and Physical Fitness" by addition and deletion to read as follows:

Exercise and Physical Fitness H-470.997

1. Our AMA encourages all physicians to utilize the health potentialities of exercise for their patients as a most important part of health promotion and rehabilitation and urges state and local medical societies to emphasize through all available channels the need for physical activity for all age groups and both sexes. The AMA encourages other organizations and agencies to join with the Association in promoting physical fitness through all appropriate means.

~~Our AMA will study evidence of the efficacy of physical activity interventions (i.e., group fitness, personal training, or physical therapy) on behavioral activation and outcomes on depressive and anxiety symptoms.~~

2. Our AMA advocates for continued research towards development of structured physical activity treatment plans for the specific diagnoses of anxiety and depression, as well as longitudinal studies to examine the effects of physical activity on health outcomes, particularly later in life.

3. Our AMA encourages:

1. education of health care professionals on the role of physical activity and/or structured exercise in treating and managing anxiety and depression and the need to screen, motivate, and educate patients of all ages about the benefits of physical activity, including positive mental health benefits.
2. health care payers and employers to provide coverage for gym memberships and access to other physical activity programs.
3. the implementation, trending, and utilization of physical activity measures, such as physical activity vital signs (PAVS), in the medical record for treatment prescription, counseling, coaching, and follow up of physical activity for therapeutic use. (Modify HOD Policy)

Fiscal note: less than $1,000

Table 1 – Key Guidelines for Physical Activity, adopted from the U.S. Department of Health and Human Services Physical Activity Guidelines for Americans, 2nd edition.[20]

Age group/Population	Guidelines
Preschool-Aged Children (ages 3 through 5 years)	• Should be physically active throughout the day to enhance growth and development. • Active play that includes a variety of activity types is encourages.
Children and Adolescents (ages 6 through 17 years)	• Should do 60 minutes (1 hour) or more of moderate-to-vigorous physical activity daily. Most of the 60 minutes or more per day should be either moderate- or vigorous intensity aerobic physical activity and should include vigorous-intensity physical activity on at least 3 days a week. • Should include muscle-strengthening physical activity on at least 3 days a week. • Should include bone-strengthening physical activity on at least 3 days a week.
Adults (ages 18 through 64 years)	• Should do at least 150 minutes (2 hours and 30 minutes) to 300 minutes (5 hours) a week of moderate-intensity, or 75 minutes (1 hour and 15 minutes) to 150 minutes (2 hours and 30 minutes) a week of vigorous-intensity aerobic physical activity, or an equivalent combination of moderate- and vigorous-intensity aerobic activity. • Should also do muscle-strengthening activities of moderate or greater intensity and that involve all major muscle groups on 2 or more days a week, as these activities provide additional health benefits.
Older Adults (aged 65+ years)	• For those who are able, recommended physical activity is the same as healthy adults. • As part of their weekly physical activity, should do multicomponent physical activity that includes balance training as well as aerobic and muscle-strengthening activities. • If unable to meet the above guidelines, they should be as physically active as their abilities and conditions allow.
Women During Pregnancy and the Postpartum Period	• Should do at least 150 minutes (2 hours and 30 minutes) of moderate-intensity aerobic activity a week during pregnancy and the postpartum period. • Should consult with their health care provider to monitor progress of pregnancy and whether or how to adjust their physical activity during pregnancy and after the baby is born.
Adults With Chronic Health Conditions and Adults with Disabilities	• For those who are able, recommended physical activity is the same as healthy adults. • If unable to meet the above guidelines, should engage in regular physical activity according to their abilities and should avoid inactivity. • Should be under the care of a health care provider and can consult with a health care professional or physical activity

	specialist about the types and amounts of activity appropriate for their abilities and chronic conditions.

Table 2 – Different forms of physical activity and bodily movements [20]

Activity Type	Definition and examples
Endurance (or aerobic) activities	Increases breathing and heart rate. Examples include brisk walking or jogging, biking, dancing, swimming.
Strength training or resistance training	Causes your muscles to contract against outside resistance. Examples include lifting weights or using resistance bands.
Bone-strengthening activity	Also referred to as weight-bearing or weight-loading activity, produces force on your bones that promotes bone growth and strength. Examples include jumping jacks, running, brisk walking, and weightlifting.
Balance activities	Activities aimed at improving postural control. They are particularly helpful for older adults as they help prevent falls. Examples include yoga, lower body strength training, and targeted exercises to improve balance.
Flexibility activities	Stretches muscles and helps individuals stay limber, improving range of motion and circulation. Examples include yoga and everyday stretching.

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REPORT OF THE COUNCIL ON SCIENCE AND PUBLIC HEATLH (A-24)
Teens and Social Media (Resolution 430-A-23)
(Reference Committee D)

EXECUTIVE SUMMARY

OBJECTIVE: This report examines the available evidence regarding the impacts of social media on the health of youth as well as the potential actions and interventions for government, policy makers, technology companies, researchers, parents, and children.

METHODS: English language reports were selected from searches of the PubMed and Google Scholar databases using the search terms: “teens” AND “social media” as well as “adolescents” AND “social media.” 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.

RESULTS: There is a pervasive presence of digital media, smartphones, and social media in nearly all aspects of youth and adolescent life. Despite substantial research efforts, the evidence is too weak to promote a uniform interpretation of the impact of social media on adolescent health at the population level. There are several factors contributing to the weak evidence including: (1) the reciprocal associations between social media use and health; (2) the lack of consistent and comparable methodologies; (3) entanglement of impact and exposure as a byproduct of social media’s ubiquity; (4) different dynamics and trends depending on level of analysis; (5) the wide variety of interactions, behaviors, and health impacts engendered by social media; and (6) reliance on cross-sectional studies with high heterogeneity. Although the evidence is too weak to provide a uniform interpretation, there are clear positive and negative trends. There is some evidence of potential benefit in the form of improved social support, identity development, civic engagement, and self-directed learning. There is also some evidence of potential harm including negative impacts on sleep, physical activity, and mental health, as well as exposure to inappropriate content, and data privacy issues. Furthermore, it is apparent that the relative risks and benefits of social media likely depend on individual differences in: (1) engagement with social media (e.g., what kids see and do online, who they talk to, when they use social media, and how they use social media); (2) pre-exiting strengths and weaknesses; and (3) the cultural, social, and physical environment.

CONCLUSION: Even though the evidence of harm is limited there is an urgent need for action for two reasons. First, the lack of algorithmic transparency, privacy protections, and accountability and redress for online harassment on most platforms is concerning given the power, reach, and ubiquity of social media. Second, the potential harms are serious particularly during sensitive developmental periods, therefore, proactively creating digital environments that protect and enrich children’s and adolescents’ health and well-being is beneficial regardless of the evidence of harm. There are two key approaches that would likely facilitate the creation of safer, developmentally appropriate environments: (1) federal and state legislative action (e.g., expansion of the Children’s Online Privacy Protection Act (COPPA), implementation of age-appropriate design, and mechanisms to address online harassment, and (2) development and widespread adoption of industry standards to benchmark platform operations, transparency, and data use. In addition to improving the digital environment, it is imperative that there are simultaneous efforts to address harms that still arise including: (1) education and training on digital media literacy and the potential harms posed by social media; (2) improved screening and support for those who experience harms (e.g., problematic internet use and online harassment); and (3) continued research of the health impacts of social media.

REPORT OF THE COUNCIL ON SCIENCE AND PUBLIC HEALTH

CSAPH Report 10-A-24

Subject: Teens and Social Media

Presented by: David J. Welsh MD, MBA, Chair

Referred to: Reference Committee D

INTRODUCTION

At the 2023 Annual Meeting of the American Medical Association (AMA) House of Delegates (HOD), Resolution 430, "Teens and Social Media" was adopted. The policy (H-478.976, "Teens and Social Media,") as adopted, asked that our AMA "study and make recommendations for teenage use of social media, including proposing model state and federal legislation as needed, with a report back at the 2024 Annual Meeting."

At the 2023 Interim Meeting of the AMA HOD, Resolution 915, "Social Media Impact on Youth Mental Health," was referred. The resolution asked that our AMA:

(1) work with relevant parties to develop guidelines for age-appropriate content and access and to develop age-appropriate digital literacy training to precede social media engagement among children and adolescents;

(2) amend policy D-478.965 by insertion as follows: (4) advocates for and support media and social networking services addressing and developing safeguards for users, <u>including protections for youth online privacy, effective controls allowing youth and caregivers to manage screentime content and access, and to develop age-appropriate digital literacy training</u>; and

(3) advocate that the federal government requires social media companies to share relevant data for further independent research on social media's effect on youth mental health and fund future federal research on the potential benefits and harms of social media use on youth mental health.

METHODS

English language reports were selected from searches of the PubMed and Google Scholar databases using the search terms: "teens" AND "social media" as well as "adolescents" AND "social media." 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.

BACKROUND

The co-occurrence of the growing ubiquity of social media use by adolescents and teens and the increase in poor mental health, among these same age groups, is alarming. These trends have

prompted calls for action and research around adolescents and teens and their use of social media. A common theme in the research is that social media is not inherently beneficial or harmful. Instead, the effects of social media likely depend on what kids see, their pre-existing strengths and weaknesses, and their environment.[1–4] In particular, child-social media interactions may be bidirectional as users shape their experience which in turn shapes them and vice versa.[5,6] Further, many argue that it is important to move away from the false dichotomy of whether social media is hurting or helping adolescents -- instead researchers, parents, and policy makers should consider who is using social media, what are they using it for, when are they using it, and how are they using it.[7–9] The focus of this report will be on adolescents and teens aged 10-17.

Social Media Privacy, Transparency and Accountability

The American Psychological Association (APA) defines social media as, "interactive technologies that facilitate the creation and sharing of information, ideas, interests, and other forms of expression through virtual communities and networks."[10] This can include social networking, gaming, virtual worlds, video sharing sites, and blogs.[3] Social media, internet use, and screentime all fall under the umbrella of digital media - the parent category of all interactive media consumed through screens.[1] These terms are used interchangeably throughout the rest of the report, unless noted otherwise.

The different forms of social media have different possibilities for action and engagement, known as affordances. Affordances, include things like visibility, editability, persistence, replicability, searchability, scalability, and reachability and they manifest as the capacity for public posting, sharing functions, auto-scroll, gamified interaction, push notifications, private messaging, affiliations, and running counts of feedback on posts.[11–13]

Affordances can have meaningful influence on the actions of the user; therefore, many researchers advocate for an affordances approach to understanding and evaluating social media.[14] This is important because affordances are powered by and interact with computational algorithms. These algorithms moderate content by generating recommendations, ranking and removing content, and targeting ads.[3] A challenge with content moderation is that it is intrinsically subjective. The value and appropriateness of content depends on the context – the who, what, why, how, and when of the information being shared may determine if it is elevated, downplayed, or removed.

Most platforms use a mix of artificial intelligence and human editing to enforce content moderation.[3] This can create intentional manipulation of information on the part of individuals. For instance, Facebook allowed advertisers to choose to exclude whole racial, ethnic, and age groups from seeing their ads.[3,15,16] Similarly, TikTok issues separate content moderation approaches for different countries depending on the degree of social conservatism.[3,17] Many platforms can and do selectively reduce or increase the prominence of content from certain users without violating the terms of use.[3,18] There is also unintentional, or at a minimum unexplained, manipulation of information, caused by using machine learning algorithms for content modification. Machine learning algorithms are black box mechanisms that learn without explicitly being programmed. Companies know the inputs, outputs, and training data that go into their algorithms, but the internal processes by which most machine learning algorithms work are less clear. Additionally, algorithms are proprietary, so companies are reluctant to share the details they do have.[3,19,20] Consequently, the intrinsic subjectivity of content moderation is made more opaque by machine learning algorithms as well as the platforms' lack of transparency about them.[3,21]

Relying on machine learning for content modification is not inherently harmful, but it can create recursive feedback loops that exacerbate problems with harmful content and misinformation. The

algorithms send users more of the content that they engage with, thereby creating the impression that theories and behaviors they are seeing are potentially more prominent than they are. Moreover, many users do not realize that social media platforms are designed to show them content that is most likely to keep them engaged and on the platform rather than providing a comprehensive view of the content of friends and family.[3,22] There is some evidence that recursive feedback loops and echo chambers exacerbate vaccine hesitancy.[3,23–25] Similarly, content modification, and the echo chambers it creates had a significant impact on behavior during the 2016 Election.[3,26–28]

Ultimately, the current processes for content moderation introduce bias on both the front end (e.g., the training data that informs the algorithms and intentional modification of information) and on the back end (e.g., recursive feedback loops and echo chambers). Content moderation also leverages user data, often in ways the user is unaware of, which raises ethical and privacy concerns.

Furthermore, there is concern among users that companies like Facebook (now Meta) both overlook the risks posed by their product and misrepresent their internal findings when necessary to benefit the company.[3,29,30] It is for these reasons that many criticize platforms and call for evaluation of algorithm bias, transparency, justice, and accountability.[3,20]

Adolescence as a sensitive period

One of the reasons parents, clinicians, researchers, and policy makers have raised alarm about social media use among adolescents is that adolescence is a developmentally sensitive period. There are three key features of adolescent brain development that may impact how youth engage with social media: (1) heightened sensitivity to rewards and dynamic changes in the dopaminergic system;[3,31–33] (2) protracted maturation of brain networks that support cognitive function;[34] and (3) neural sensitivity to specific types of social information.[3,35] As a result, adolescence is a time of tremendous cognitive, social, emotional, and physical change that involves both opportunity for maturation and vulnerability to environmental stressors.[3,36] Evidence from developmental neuroscience illustrates that adolescence is a time of heightened risk taking, impulsivity, and sensitivity to social stimuli.[4,37] Consequently, adolescents are particularly susceptible to environmental influences like drugs, social stress, cognitive training, and likely social media.[3,4,38–41] There is some concern that constant engagement in social media in early adolescence may alter neural sensitivity to rewards and punishment.[3,42] Furthermore, changes in the reward circuit may be a factor in excessive and problematic internet and social media use.[3,43]

At the same time, self-presentation and identity exploration is an important part of adolescence that social media can support.[3,14,44,45] It is a critical time for building relationships and developing a social support system.[3] Adolescents demonstrate an increased ability to consider other perspectives, which drives empathetic and prosocial behaviors on the one hand, as well as increased social comparison on the other.[3,46] The strong desire for social connectedness demonstrated by adolescents suggests that they may be relaxed regarding privacy settings and connecting with strangers.[35,47] Online environments and social media interactions may also lower inhibitions and accelerate intimacy.[48] In this way, online environments create both benefits and risks to development of identity and social connectedness.[48] Adolescence is also a time of increased flexibility and plasticity so researchers and public health practitioners advocate leveraging the plasticity of adolescent brain for health promotion.[37]

Ultimately, the power of social media to influence well-being likely depends on developmental stage.[49] There is some evidence that the concept of adolescence should be expanded to include individuals aged 10 to 24.[40] An expanded definition of adolescence is essential for developmentally

appropriate framing of laws, social policies, and service systems. There are ethical reasons to limit marketing to children and teens as they may struggle to resist advertising.[50]

YOUTH PREVALENCE, MOTIVATIONS, AND EXPERIENCES ON SOCIAL MEDIA

According to a 2022 Pew survey, 95 percent of teens in the U.S. have a smartphone and 97 percent use the internet daily, which represents a 22 percent increase over the last eight years.[51] The omnipresence of both internet and mobile devices in how youth engage in relationships, learn, and experience milestones reflects a massive cultural shift since the early 2000s.[52] Smartphone use starts in early adolescence, with 40 percent of children ages 8 to 12 owning a smartphone and 18 percent reporting social media use every day.[53]

The 2022 Pew survey also found that 35 percent of teens report using YouTube, Instagram, TikTok, Snapchat, and Facebook almost constantly.[51] Fifty-five percent of teens thought they used social media the right amount, 36 percent thought they use social media too much, and eight percent thought they used it too little.[51] Additionally, 54 percent thought it would be somewhat hard to give up social media.[51] Findings from the Pew study mirror older studies reporting that 50 percent of teens describe themselves as constantly connected and feel that they are addicted.[1,2] There are slight demographic differences as well. Black and Hispanic teens may use online media more than their White peers.[51] Girls use social media more than boys and also report that they would have a harder time giving up social media.[51] Finally, teens over 15 use social media more than teens under 15.[51]

The most popular platform is YouTube, used every day by 95 percent of teens.[51] YouTube is followed by TikTok at 67 percent, Instagram and Snapchat at 60 percent, Facebook at 32 percent, and then Twitter, Twitch, WhatsApp, Reddit, and Tumbler.[51]

Despite widespread use among children and adolescents, robust independent safety analyses on the impact of social media on youth have not yet been conducted.[4] Currently, we do not yet have enough evidence to determine if social media is sufficiently safe for children and adolescents. Yet, the body of research about potential harm evidences the importance of understanding the possible risks and proactively creating digital environments that safeguard children's and adolescents' mental health and well-being during critical stages of development.[4]

MOTIVATIONS FOR USE

Motivations for social media use among teens include social interaction, connection, curiosity-driven learning, information sharing, entertainment, relaxation, stress relief, escapism, novelty seeking, social capital, and appearance feedback.[3,54–56] Moreover, there is evidence that the ways in which youth engage with social media can improve and enrich their lives through social support, connection, community building, identity development, civic engagement, and exposure to new ideas.[57]

Friendship, social support, and connection

Social media plays a vital role in the development and maintenance of friendships and social connectedness.[54,57,58] Communication with friends and family is often reported as the most important function of social media,[59,60] particularly when family and friends are far away.[61] Fifty-seven percent of teens have met a new friend online.[60,62] There appear to be some gender differences in how boys and girls interact with friends on social media. Sixty-one percent of boys and 52 percent of girls made friends online, and video games play a critical role in boys' friendship

development.[62] In contrast, one study found that on average, teen girls spend over two hours a day on TikTok, Snapchat, and YouTube and over 90 minutes a day on Instagram and messaging apps.[63] Roughly, 69 percent of teens feel better connected to their friends' feelings, 83 percent better connected to their friends' lives, and 68 percent receive social support during tough times from friends through social media.[62] In this way, social media may be helpful in combating social isolation and building social capital.[3,64]

There is some evidence that social media can both reduce stigma and be a venue for sharing coping strategies.[3] Social media provides a way for youth to connect with people in the same position, which can be particularly valuable to adolescents who feel excluded or otherwise lack offline support, including patients with rare diseases, individuals with disabilities, those who struggle with mental illness and/or obesity, and marginalized groups (e.g., LGTBQ+ youth).[1,4] For instance, through social media, teens who are neurodivergent can connect socially with others in a way that is manageable for them, thereby reducing loneliness.[3,65] Social media may also help teens and youth coping with grief,[66] navigating foster care,[67] dealing with cancer, diabetes, rare diseases,[68,69] and mental illness.[3,70] Sharing on social media about losses and stressors can provide a sense of connection, support, and understanding.[71] Similarly, social media can provide support and connection for young people who live in communities where sexual and gender diversity are not accepted, which may buffer them from stigma and loneliness.[3,72–74] This is particularly true for LGTBQ teens in rural areas that are able to find support they do not have offline by connecting with other queer youth.[3,72,75–77]

It is not clear if online and in-person relationships are equivalent; however, friendship and social connection facilitate a sense of belonging.[3,78] Moreover, friendship can reduce anxiety and improve life satisfaction in its own right.[3,79] Cross-sectional studies among undergrads provide some evidence that people who use social media to connect with a diverse friend group tend to have higher social self-efficacy.[3,80] Yet, the relative support provided by online social connection may be influenced by the individual and how they engage with social media.[3,81]

Self-expression, Identity exploration, and Independence

There is some evidence that social media can support self-expression, identity exploration, and independence.[3,14,44,45,57,60,82,83] Adolescents who communicated more with friends online had a greater self-concept clarity.[60] One systematic review found that LGBTQ youth negotiated and explored identity using social media to manage identities though anonymity, censoring locations and content, restricting audiences, and using multiple accounts.[72] This suggests social media may support the mental health and well-being of LGTBQ youth through identity management.[72] In particular, the online environment of social media creates a space to revel and express differences.[84] Similarly, many cis girls are meticulous about which platforms and accounts they use for specific tasks, because it allows them to experiment with different forms of expression and ways of presenting themselves to their peers.[3,85] Self-disclosure, a key process in asserting personal agency, may be facilitated through digital platforms.[3,81]

Self-directed learning, Creative expression, and Civic engagement

Social media can also facilitate exposure to new ideas, raise awareness about current events, increase community participation and civic engagement, and allow collaboration on schoolwork.[2] A study of teens in western countries found that social media use predicts greater ability for both reading and navigating information online.[3,86] There is also some evidence that when social media is used for classroom writing exercises, students demonstrate less writing anxiety and increased agency.[87] Similarly, online fanfiction communities facilitate informal learning by creating a space

for youth to build literary skills and support the same skills in others.[87] The same can be said for other hobbies, interests, and activities that have a social media component and roughly 70 percent of teens use social media to express their creative side.[54] The informal learning environment of social media facilitates empowerment and agency among some young people.[3,88] It has also been associated with increases in self-motivation among adolescents.[3,88]

About two-thirds of teens ages 13-18 reported using social media to learn about different points of view or show support,[54] and 64 percent of teens look for news online.[3,89] Furthermore, evidence suggests youth who engage in online political discussions also engage in offline political discussions.[3,89,90] Therefore, social media may be a vehicle to engage and utilize the social and political power of young people through civic engagement.[3,90–92] Social media can facilitate political democracy, cultural democracy, and spread of knowledge.[93] Finally, there is some evidence that adolescents both seek out and share health information on social media.[53,54] Therefore, it may be an effective tool for health interventions and health promotion.[1,94,95] On the other hand, health misinformation can exacerbate adoption of harmful behaviors.[96]

ONLINE HARASSMENT AND EXPOSURE TO INAPPROPRIATE CONTENT

Cyberbullying and online harassment

There is evidence that social media increases risk of cyberbullying among youth.[1–3,60,83,97] According to a recent Pew survey, 46 percent of U.S. teens ages 13 to 17 report ever experiencing at least one of six cyberbullying behaviors.[51] Name-calling was most common, with 32 percent of teens reporting they have been called an offensive name online or on their cellphone.[51] False rumors (22 percent), receipt of explicit images (17 percent), pervasive questions about location (15 percent), physical threats (10 percent), and the sharing of explicit images of them without their consent (7 percent) were also reported.[51] There appear to be slight demographic differences in who experiences cyberbullying. Specifically, studies have shown that black teens experience more cyberbullying that their white peers,[51,98] LGBTQ youth experience more cyberbullying than their cisgender and heterosexual peers,[51,98] and adolescent girls experience more cyberbullying than adolescent boys.[51,63,99,100] Evidence also suggests that relationship issues (e.g., feeling left out and interpersonal drama) were the most common reason for cyberbullying among adolescent girls.[63,100]

Studies suggest that the size and type of the network as well as anonymity of those on the network impact the likelihood of harassment, but it is not easily predicted.[3,101,102] For instance, online harassment occurs often among video game users, particularly female gamers who commonly report sexual harassment.[3,103,104] One study found that indiscreet posting, time spent on social media, and personality traits were all predictors of cyberbullying.[105] There is some evidence of a relationship across studies between cyberbullying and depression among children and adolescents; however, the evidence of the effect of cyberbullying on other mental health conditions is inconsistent.[100] Adolescents' self-view and interpersonal relationships may be affected through social comparison and negative interactions, like cyberbullying and exposure to inappropriate content.[97]

Responses to cyberbullying are most often passive, with a pervasive lack of awareness or confidence that anything can be done.[100] Despite the prevalence of cyberbullying, some evidence suggests that in-person bullying is more common.[3,106]

Exposure to inappropriate content and misinformation

One major concern of parents, clinicians, researchers, and policy makers is that poorly regulated and moderated social media can result in youth exposure to inappropriate content (e.g., alcohol, tobacco, risky sexual behaviors, cyberflashing, porn, and self-harm).[1–3,107] A survey of more than 1,300 teens aged 13 to 17 found nearly three-fourths had seen pornography online, with social media being the point of access for about 18 percent.[3,108] Moreover, average first exposure was at 12 years old and accidental exposure accounted for 40 percent of cases.[3,108] Cyberflashing – the electronic transmission of sexually explicit photos without the recipients' consent – is a particularly troubling form of online harassment.[3,109] One survey found that 37 percent of girls and 20 percent of boys aged 12 to 18 had received sexual photos online, often from strangers,[3,110] and another study found more than 6 percent reporting the first flashing incident occurred between the ages of 12 and 14.[3,111] It is difficult to evaluate brief and limited exposures; however, there is evidence that repeated exposure to inappropriate content in childhood was associated with risky sexual behavior later in life.[107] Similarly, exposure to alcohol, tobacco, or risky sexual behaviors may be associated with initiation of those behaviors.[1]

Teens and adolescents may also be uniquely vulnerable to misinformation and disinformation because their maturity and cognitive capacities are still evolving.[3,112] Misinformation and disinformation can take a variety of forms including clickbait, hoax, rumor, satire, propaganda, and conspiracy theories.[113,114] Examples include things like foreign interference, political deceit, and claims for ineffective and unproven natural remedies and medical advice.[112] Concerningly, many people lack the ability to identify misinformation and disinformation as evidenced by one study which found that the percentage of people who share fake news without the intention to mislead is five times higher than intentional spreaders.[115] A 2018–2019 survey of 3,446 U.S. high-school students demonstrated that 52 percent believed that a grainy video claiming to show ballot-stuffing in the 2016 Democratic primaries constituted 'strong evidence' of voter fraud in the US, and only 0.1 percent were able to track down the original video even though a quick search showed that it was actually shot in Russia.[112,116] Similarly, two-thirds could not tell the difference between news stories and 'sponsored content' (i.e. adverts) on a website.[112,116] Although teens and adolescents may be particularly vulnerable to misinformation and disinformation, there is currently very little data available to provide a clear picture of how misinformation and disinformation may affect their development, well-being, and rights.[112]

IMPACTS OF SOCIAL MEDIA ON ADOLESCENT HEALTH

To understand the impacts of social media on adolescent health, the conflicting and often reciprocal mechanisms through which online experience and health (physical and mental) influence each other must be disentangled.[3] However, there are several factors that make this extremely challenging, including:

(1) the direction of the relationship between social media and health is difficult to determine - social media use influences health and health influences social media use;
(2) the research lacks uniform, consistent, and comparable methodologies;
(3) social media is so ubiquitous it is difficult to separate the impact of exposure;
(4) different levels of analysis may reveal different dynamics – with large scale studies showing population level trends and psychological studies showing mixed, small, or no associations;
(5) social media is not a monolith, the affordances of different platforms and types of social media engender a wide variety of interactions, behaviors, and health impacts; and
(6) the heterogeneity of the literature and the primary reliance on cross-sectional studies (or meta-analysis of cross-sectional studies) make definitive conclusions and causal

relationships limited. Most of the associations are qualified or limited to certain populations.[3]

Social Media and Physical Health: Sleep, Physical Activity, and Obesity.

There is evidence that social media use can disrupt sleep.[1–3,97,107,117,118] Specifically, increased duration of computer, internet, and social media exposure,[3,118] and the presence of a tv, computer, or mobile device in the bedroom in childhood were associated with fewer minutes of sleep, greater risk of sleep disturbances, longer sleep latency, worse sleep quality, and daytime dysfunction.[1,119] Gaming predicted delayed bedtimes and reduced attention the following day.[3,120] One study found that screen-based digital media use is closely associated with sleep duration and sleep quality in teens; however, they cautioned that more research was needed to determine the direction of the effect.[3,121] Another study found that smartphone use at night can delay sleep among adolescents.[3,122] In a nationally representative sample, one-third of parents of teens 12-17 had rules about smartphone use at bedtime and those kids had less daytime sleepiness.[3,123]

However, it is not clear if social media or devices more broadly are driving the relationship. There are three likely ways in which digital media use may disrupt sleep.[3,124] First, social media displaces sleep thereby delaying bedtime, disrupting sleep, and reducing sleep duration.[3,121,124] Second, devices can disrupt circadian rhythms though light emissions which heighten arousal and decrease sleepiness.[3,122,124] Third, social media may be psychologically stimulating in such a way that makes sleep difficult.[3,124,125] Determining which mechanism(s) are driving the association between digital media and poor sleep is necessary given that the cascading impacts of poor sleep and the potential harms of social media overlap significantly.

Observational studies suggest a significant association between poor sleep quality and excess social media use and negative mental health outcomes.[3,126] Therefore, the interplay between social media and sleep quality may impact mental health outcomes. Sleep loss is a risk factor for depression, mood disturbances, injuries, attention problems, and excessive weight gain.[3,127–129] Additionally, teens with restricted sleep have more problems with emotion regulation, anxiety, hostility, and fatigue.[3,130] One study also found that sleep-deprived participants showed worse mood, more social media use, and problems with concentration.[3,131] Moreover, findings from the Youth Risk Behavior Survey illustrated that teens who sleep four or fewer hours a night have 5.9 times higher odds of having a serious suicide attempt.[3,132] Some studies showed sleep quality mediating the relationship between social media use and negative mental health outcomes in youth.[126] In particular, if social media displaces sleep and hobbies, it can be predictive of anxiety and depression.[3,133] Similarly, when screen time displaces sleep and exercise it is predictive of problematic use.[3,134,135] However, the current body of evidence on the directionality and relationships between social media use, mental health, and sleep is inconclusive.[3,126]

There is some evidence that social media use may correlate to non-adequate nutrition, non-physiologic postures, weight gain, and obesity.[1,2,107,117] Excessive TV viewing in early childhood is associated with an increased risk of obesity.[1] Social media could be displacing physical activity, sleep, studying, and other hobbies, resulting in a more sedentary lifestyle and an increased risk of obesity.[3,107,136] In support of this, another study found that increased digital media use was associated with a sedentary lifestyle.[3,137] Social media use is also associated with consumption of fast food, sugary drinks, snacks, and mindless eating.[3,138] One study theorizes that this may be occurring because social media is displacing regular meals.[3,138]

Social Media and Mental Health: Anxiety, Depression, and Loneliness

The findings on the association between social media and adolescent mental health are small, inconsistent, or non-existent. Moreover, the differences in findings appear to be explained by bidirectional interactions, methodological weaknesses and differences, and/or individual rather than population differences.

Several meta-analyses, systematic reviews, and other studies have found small negative associations between social media use and depression, anxiety, psychological distress,[139] loneliness, internalizing problems, and low offline social support.[3,139–147] At the same time, numerous other studies found the relationship between social media and adolescent mental health is non-existent, mixed, or inconsistent.[148–151] Specifically, there was no significant association between social media use and depression, anxiety, and life satisfaction.[148,150,152] Additionally, there is inconsistent evidence that social media makes social comparison, envy, and well-being worse.[149] Importantly, many of these studies note that predictive relationships between social media use and well-being are reciprocal, as well as present only in certain populations, developmental windows, or among certain patterns of use.[49,141–143,151–155]

For instance, one review found that early studies show comparison and envy are common on social media and linked to ill-being, whereas recent studies find positive, person-specific, conditional, and reciprocal effects.[149] Similarly, one study found that social media use in and of itself is not a predictor of life satisfaction; rather the relationship between self-reported estimates of social media use and life satisfaction is more nuanced, reciprocal over time, gender specific, and likely dependent on analytic methods.[152] Another study found that life satisfaction is most negatively associated with social media use in younger adolescents, but also noted possible developmental windows of sensitivity -- at ages 14-15 and 19 for boys and at ages 11-13 and 19 for girls.[49] A longitudinal study that characterized subgroups based on type of social media use found that the high social media use subgroup predicted higher depressive symptoms, panic disorder, delinquent behaviors, family conflict, and lower family and friend support than the high Instagram/Snapchat and low social media subgroup.[154] Similarly, in a study of U.S. undergrads, social media use was not predictive of impaired mental health; however, “vaguebooking” -- the practice of making a post on social media that is intentionally vague but highly personal and emotional -- was predictive of suicidal ideation.[151] This suggests how individuals use social media is more important than the amount of time they spend on social media, particularly considering that perceived parent-child conflict was a stronger predictor of mental health issues than social media use.[151]

There is also some evidence that young people who report symptoms of depression are using digital tools to learn about and help their mental health problems.[155] One study found that girls and LGBTQ teens were more likely to seek out online resources for mental health and showed interest in stories of others with similar experiences.[155] Those who benefit most from social media appear to be those who are marginalized as well as those with chaotic home lives, suggesting the benefits of online social support are most salient when offline social support is lacking.[51,54] These findings highlight the importance of researching patterns, quality, and type of use in addition to amount of use.

Additionally, there are methodological issues that further complicate definitive conclusions. Several studies note that wide variation in methods and rigor make it difficult to synthesize findings.[139,143,154,156,157] For instance, one systematic review found a small association between self-reported social media use and depressive symptoms, but noted that the studies had high heterogeneity, which suggests that other factors are likely moderating the relationship.[143] Another systematic review argued that small associations and inconsistent results may be influenced by choice of mental health indication (e.g., presence of well-being is not necessarily the absence of ill-being and vice versa).[149] Furthermore, the research on social media and adolescent well-being

primarily comes from cross-sectional studies, therefore causal associations may be unwarranted.[49,140,152,156–158] Finally, this research should consider a person-specific approach as individual differences may explain the mixed and inconsistent results.[156]

Ultimately, the presence of small associations as well as inconsistent and conflicting results highlights that the evidence is still too weak to promote a uniform interpretation or to support the conclusion that social media causes changes in adolescent mental health at the population level.[3,159] Moreover, the fact that social media use is linked in complex and ubiquitous ways with other aspects of life means it is unclear what such a small effect demonstrates.[159] Ultimately, more research is needed along with improved transparency and greater appreciation for individual differences.[4,159]

Problematic Internet Use and Internet Gaming Disorder

Internet gaming disorder is defined as persistent and recurrent use of the internet to engage in games, leading to clinically significant impairment or distress.[41] Problematic internet use is defined as internet use that creates psychological, social, school and/or work difficulties in a person's life.[160] This can include video gaming, social media use, web-streaming, and buying; however, those activities are characterized as excessive or poorly controlled preoccupations, urges, or behaviors regarding computer use and internet access that lead to impairment or distress. The key factor is that internet use becomes problematic when it causes dysfunction in daily life activities (e.g., school, sleep, exercise).[3,26,161] There appears to be significant overlap in internet gaming disorder, problematic social media use, and problematic internet use.[3,162,163] At this point it is unclear whether problematic social media use and gaming disorder are distinct or different manifestations of disordered tech use.[3]

There is some evidence that internet gaming disorder predicts depression, anxiety, social phobia, poor school performance, sleep disruption, and poor relationships with parents and peers.[3,164–167] There is also some evidence that problematic internet use is associated with depression, disturbances in sleep and mood, upward social comparisons, cybervictimization, and poor academic performance.[3,4,58,72,168–172] Problematic social media use is most common among older age groups and may be associated with irritability, nervousness, loneliness, and morning tiredness.[169] There are gender differences in internet gaming disorder, as it affects males 5 times more than females.[173] Moreover, there is some evidence that boys are more addicted to games whereas girls are more addicted to social media.[3,174]

Some researchers suggest that problematic internet use could explain the small negative associations between social media and youth mental health. For instance, problematic social media use mediated the association between depressive symptoms and cyberbullying.[142] Additionally, one study found that teens with problematic internet use reported more difficulty identifying and describing emotions, and there is some evidence that emotion regulation is a significant mediator in quality of parent-adolescent relationship.[175] Some researchers theorize that problematic internet use might be a coping strategy to compensate for emotion regulation deficits, which might explain why a good relationship with parents reduces problematic internet use.[175] However, problematic use is more complex than simply the amount of time spent on social media. It includes enduring preoccupation with social media, inability to stop, neglect of one’s health and other areas of one’s life.[156] Therefore, more research is needed to better understand the relationships between problematic internet use, social media, and adolescent mental health.

Attention and Learning

There is limited evidence that social media use negatively impacts attention and learning. One study found that time spent on social media predicts concentration problems in adolescent girls.[3,176] Additionally, there are small associations between both frequency of social media use and number of platforms and attention deficit hyperactivity disorder (ADHD).[3,177–179] However, it is not clear what is driving the association between social media use and decreased attention.[1]

There is some evidence that reading on screens is fundamentally distracting.[3,180] Others have suggested that multitasking is the root of the problem. High proportions of youth engage in heavy smartphone use and media multitasking.[97] Moreover, a recent meta-analysis found associations between multitasking and problems with attention, behavior regulation, impulsiveness, and memory.[3,181] Specifically, media multitasking is associated with negative effects on cognitive control, academic performance, and socioeconomic functioning.[3,97,181,182] One study found that in three hours of studying, adolescents experienced an average of 35 social media distractions that diverted attention.[3,183] Additionally, another study found that the number of social media accounts correlated with parent reports of symptoms of inattention, hyperactivity, impulsivity, oppositional defiant disorder , anxiety, and depressive symptoms, and adolescent reports of fear of missing out and loneliness.[179] Therefore, it has been suggested that the amount of time spent online can have bidirectional effects on depressive symptoms and ADHD; this risk is particularly heightened in those with pre-existing poor mental health.[126]

Body Image and Eating Disorders

Significant research exists on the association between social media use and body image, but the findings are limited, and causal factors are difficult to differentiate. There is some evidence that social media use and consequent exposure to appearance-focused content may be weakly associated with poorer body image.[3,4,184,185] A cross-sectional study found that greater levels of self-objectifying social media use predicted greater body shame among youth, and the association was mediated by an associated increase in body surveillance.[3,186] Specifically, the role of body surveillance was stronger among girls and adolescents who are particularly focused on others for approval.[186] Body image concerns may be a key mechanism underlying the associations between adolescent girls' social media use and mental health.[187]

A scoping review found that social media use may have a variety of impacts on diet, exercise, and body image.[107] Similarly, another study found that the same platform that helped some patients find recovery support was also a source of body shaming and rumination for others.[3,188] Another review found that peer influences on social media span from healthy eating and exercise to disordered eating, and that dietary information shared on social media often misaligns with national dietary standards.[189] Similarly, one study found youth had an increased ability to recall unhealthy food, beverages, and brands particularly when celebrities and influencers are promoting them.[190]

PRIVACY

Researchers have found that the growing use of social networks has led to the emergence of ethical and privacy concerns regarding the management of user data and how social networks train algorithms for economic purposes to organize the content shown to users.[1,191] The new privacy paradox is that these sites have become so ubiquitous that users feel they must disclose information on them even though these sites do not provide adequate privacy controls.[3,192] Specifically, the privacy policies used by platforms either require or allow users to review and consent to their data collection and data use practices; however, most respondents agreed to the terms without reviewing them.[3,193,194] This could be because the policies themselves are long and technical, they do not

provide consumers with meaningful choices, and people are skeptical of whether policies achieve their goals.[194] Concern over what platforms do with user data coupled with a sense of futility over having the agency to change anything may explain why a recent Pew survey found overall strong bipartisan support for more regulation of what companies can do with people's data, with 72 percent of Americans reporting that there should be more regulation than there is now.[194]

These issues may be even more salient for children. A recent Pew study found that Americans worry about kids' online privacy, with 89 percent of respondents reporting that they are very or somewhat concerned about social media platforms knowing personal information about kids.[194] Similar concern arises over how advertisers, online games, and gaming aps collect and use children's data.[194] However, respondent expectations regarding responsibility for protecting kids is placed primarily on parents at 85 percent, followed by technology companies at 59 percent and the government at 46 percent.[194]

The Children's Online Privacy Protection Act (COPPA), which was enacted in 1998, recognizes that young children cannot consent to the terms of use for data collection, and thus prohibits enticing personal disclosures through games and restricts advertising to children. Yet, COPPA only applies to kids under 13. Consequently, recent legislation has focused on age-appropriate design and proposed additional protections for adolescents.

There is mixed evidence on how adolescents and adults feel about online privacy. There is some evidence that older users are more concerned about privacy than youth.[195] Additionally, a strong desire among adolescents for social connectedness suggests that youth may be more inclined to have relaxed privacy settings and a show a greater willingness to connect with strangers.[3,35,196] However, a different study found a negative relationship between age and privacy; noting that young people are more likely to have taken action to protect their privacy than older people.[192] Therefore, it is possible that the studies finding that young people are not concerned about their privacy may be because they are taking more precautions.

POTENTIAL APPROACHES TO PROTECT CHILDREN ON SOCIAL MEDIA

Despite widespread use among children and adolescents, the evidence on the potential harms and benefits is too weak to promote a uniform interpretation of the impact of social media on adolescent health at the population level. Nonetheless, the current body of research does highlight the importance of understanding the risks and benefits and proactively creating digital environments that protect and enrich children's and adolescents' health and well-being during critical stages of development.[1–4,41]

Recommendations for Industry

The most common recommendation for the social media industry is improved privacy protections, improved transparency, and a better system of reporting inappropriate content and ill-actors. Yet aside from internal efforts, like Facebook's Oversight Board, there has been little voluntary governance action on the part of industry.[197] Highlighting the success of the Global Internet Forum to Counterterrorism, the National Academy of Science, Engineering, and Medicine (NASEM) argues that the International Organization for Standardization (ISO) should convene an ongoing technical working group comprised of industry, academic, and civil stakeholders to develop standards for social media platform design, transparency, and data use.[3,198] Other researchers, professional organizations, and policy makers also advocate for development of industry standards.[4,197]

Specifically, the goals of the work group would be to develop standards that: (1) limit the personal information companies collect, the types of content available, and the prompts to extend time on a platform; and (2) develop easy to use, universal, transparent systems for reporting, follow-up, and adjudication for cases of online harassment and abuse.[3,4,197] Specifically, efforts should be made to move to a functional privacy system that emphasizes transparency of and access to inputs and outputs. On the front-end inputs would include: (1) a clear process for content moderation and use; (2) contents of privacy agreements; and (3) mandatory disclosures to users.[3] On the back-end, standard outputs might include: (1) platform health measures (e.g., content moderation and take down policies and data at the community, group level to evaluate platform toxicity); (2) algorithmic transparency standards and summaries at the user level; and (3) reports on efforts to remediate youth mental health problems on the platform.[3,4] This would improve privacy protections and transparency by making it clear what data is collected from minors, how it is collected and used, and what the consequences of use are. Furthermore, this would give companies and researchers more straightforward guidelines for measuring data collection risks that children encounter online, as well as technical standards to benchmark platform operations, transparency, and data use.[3] Arguably social media platforms would benefit from a standard guide of assessment to evaluate how their products influence youth well-being.

However, developing standards is insufficient unless social media companies adopt the standards both as their policy and as provisions in their terms of service.[3] There is a precedent of self-regulation in media (e.g., tv, movies, videogames, music) using industry standards, as well as early efforts at self-regulation evidenced by Facebook's Oversight Board.[3,197,199–201] However, given that the success of social media is contingent on engaging as many people for as long as possible, implementing standards aimed to reduce controversial, emotional, and inflammatory content might not be in their best interest. This is evidenced by the pending lawsuit to enjoin the California Age-Appropriate Design Code Act on first amendment violation claims.[202,203] Enacting a regulatory framework across jurisdictions on global companies is not always legally or logistically viable; however, voluntarily adopting standards now could reduce the likelihood of more sweeping regulatory action later.[3,197,204,205] Furthermore, evidence from political science literature on transnational governance shows that multistakeholder regulatory standards setting schemes can be a vital part of the corporate regulatory toolbox.[197] However, more research is needed to see how and if they can be implemented to protect adolescent social media users.[197]

A public statement of compliance with standards and a commitment to uphold those standards in the terms of service would be a meaningful step towards an enforceable legal structure.[3] Specifically, the Federal Trade Commission (FTC) can penalize firms that engage in unfair or deceptive business practices and has used this authority against companies that have failed to honor commitments made in their privacy policies and similar agreements.[206–208] Audit and systemic risk reports of compliance with the standards should be available to the FTC, researchers, and the public. Social media companies should make a good faith effort to ensure access to data that facilitates research on the effects of social media on child and adolescent health possibly including removal of the prohibition on researchers' use of publicly available data.[3] More transparency would allow for comparisons across platforms and over time, which would provide a better insight for the companies, the public, and the FTC. Creation of a standard would also support and inform the FTC's use of consent decrees as a regulatory tool.[3,209] Once a company agrees to a consent decree – terms of the decree determine obligations to remediate regardless of whether the terms are within the FTC's authority.[3,210] Creation of an industry standard could support the FTC's governance by consent decree, even for providers who do not explicitly adopt the standard.[3]

Once standards have been created and adopted, it would be much easier to assess and remedy harms posed by social media. For instance, standards could be used to evaluate whether the platform has age-verification processes, data encryption, and privacy policies.[3] Similarly, they could be used to determine whether a platform's content is suitable for children by evaluating the likelihood of exposure to illegal and maladaptive behavior.[41] The first step towards benchmarking is transparency and more fair competition in an opaque market.[3] For instance, ethical artificial intelligence (AI) tool kits could help facilitate more open communication among technology developers, researchers, policy makers, and civil society.[3,211] Additionally, public documentation of the provenance of the dataset used to calibrate machine learning models is gaining traction as way to mitigate harms from biased models.[3,212]

NASEM makes a persuasive case that an ongoing technical workgroup to develop industry standards, ideally facilitated by ISO, as well as near uniform industry adoption of the standards in their policies and terms of service would improve privacy protections, improve algorithmic and other transparency, and facilitate a better system of reporting inappropriate content and ill-actors. However, this is new territory and despite the ISO's strong track record of developing complex technical international standards (e.g., information security management and data protection), it is difficult to fully assess if something similar would be an effective tool to regulate social media.[3,198]

Recommendations for the Federal Government

In addition to developing and adopting industry standards, another approach is to improve privacy protections and age-appropriate design at the federal and state level through legislation. This is further supported by the Surgeon General's Advisory on the effects of social media on youth mental health, which urges action to ensure social media environments are healthy and safe.[4] As noted earlier, COPPA recognizes that young children cannot consent to the terms of use for data collection, and thus prohibits enticing personal disclosures through games and restricts advertising to children.[213] Currently, when companies violate COPPA by collecting data for children under the age of 13, the FTC can and has issued fines. Specifically, in 2019, the FTC required Google to pay $170 million for data collection in violation of COPPA.[214] However, COPPA only protects children under the age of 13 so arguably one way to improve privacy protections for children would be to expand COPPA to include all minors. In 2021, legislation to extend COPPA protections to kids through age 16 was proposed with the Children and Teens' Online Privacy Protection Act, which would also require platforms and providers to report on foreseeable risks of harm.[215] However, there has been no action on the proposed legislation. The FTC also has authority over unfair and deceptive practices in commerce. Therefore, in response to concerns about the erosion of consumer privacy, in particular with data collection and use practices, the FTC has issued guidance documents on internet advertising.[3,216–218] Moreover, there is proposed rulemaking on commercial surveillance and data security.[3,219] Additional guidance and/or revisions from the FTC regarding how to make systems for reporting cases of online harassment and abuse that comply with COPPA would be benefical.[3]

In addition to improving children's privacy and better regulating social media providers through the FTC and COPPA, it may be beneficial to develop support programs for children and adolescents who experience digital abuse and evaluate the effectiveness of such programs, and the US Substance Abuse and Mental Health Services Administration is well positioned to do this.[3] Finally, assuming industry leaders do not voluntarily remove the prohibitions in their terms of service on the use of publicly available data for research, Congress could pass legislation to ensure researchers can access data to examine the effects of social media on child and adolescent health.[3]

Recommendations for State and Local Agencies

One potential way of making technology safer for kids is through age-appropriate design.[3,4] Some of the goals of age-appropriate design include: (1) centering the rights and developmental needs of children and (2) improving privacy protections by addressing and modifying what data is collected from minors, how it is collected, and how it is used. In practice this might look like collecting the minimum information necessary and prohibiting the use of that information in commerce. It might also include shifting the burden to establish users' age to the producers of the technology as was done in the United Kingdom.[3,220] It would also likely discourage developmentally inappropriate persuasive design features (e.g., push notifications, like buttons, tones for new content, and endless scrolling).[41]

The increasing concerns about social media use and adolescent health has prompted federal, state, and local legislators to propose age-appropriate design measures to protect children while using the internet and internet-based forms of communication, including social media.[221,222] In 2023, 35 states and Puerto Rico introduced legislation around social media and youth, and 12 states enacted bills or adopted resolutions.[221] By and large, the goals of the legislation are to: (1) create study commissions and task forces to evaluate the relationship between social media and adolescent health; (2) require age verification and/or parental consent to open social media accounts; and (3) adding digital and media literacy to K-12 curriculums.

For instance, Utah enacted the Utah Social Media Regulation Act, which requires age verification of state residents and parental consent for those under the age of 18 to open an account.[223] It also limits the hours of access for certain users, subject to parental or guardian direction, and provides for a private right of action. Similarly, Arkansas created the Social Media Safety Act which requires age verification and parental consent for use of social media. It also establishes a mechanism for liability for failure to perform age verification for use of social media and for illegal retention of data.[224] In 2022, California passed the Age-Appropriate Design Code Act (AADC).[202] The law was modeled after the United Kingdom's Age-Appropriate Design Code which advocates for businesses to consider the best interests of children when designing, developing, and providing online services, products, or features likely to be accessed by children. Notable obligations under the Age-Appropriate Design Code Act include requiring providers to: (1) configure a high level of default privacy settings; (2) assess whether algorithms, data collection, or targeted advertising systems could harm children; and (3) use clear, age-appropriate language for user-facing information and documents.[222] In 2023 a lawsuit to invalidate the AADC on first amendment free speech grounds was filed in federal court by NetChoice, a coalition representing the country's tech companies.[203] The District for the Northern District of California granted a preliminary injunction against the AADC, the California Attorney General appealed, and a decision by the Ninth Circuit Court of Appeals is anticipated in Spring 2024.[202,203,225]

Efforts around age-appropriate design legislation are relatively new so the overall impacts are unclear. However, age verification, digital media literacy, and continued research appear beneficial and do not have obvious risks. Likewise, expansion of COPPA and provision of resources and support for those who experience online harassment have little formal evidence of effectiveness but are rationally grounded.

Recommendations for Parents and Kids

Parents and children are encouraged to use social media functions that facilitate social support, online companionship, emotional intimacy, and healthy socialization; particularly during periods of isolation, during stress, mental health crisis, and for marginalized groups.[41] To achieve this, it is recommended that families should collectively develop, review, and follow a family media use

plan, which should outline developmentally appropriate types, times, methods, places for, and amounts of acceptable media us.[1,2,4,41] For instance, there is evidence of the impact of excessive digital technology use (e.g., screentime, tv, and social media) by adolescents on negative health impacts.[1,2,226] However, there has been a push among researchers to move away from focusing on screentime and instead to consider how, why, when, and with whom youth are engaging online. Despite this, the American Association of Pediatrics, American Psychological Association, and many other organizations and policy makers advocate for screen time limits and media-free time.[1,2] Specifically, it is recommended that adolescents abstain from using screens 1 hour before bed and that adolescents should not sleep with digital devices in their bedrooms.[7,52] Additionally, there is some evidence supporting open, non-judgmental communication between caregivers and children and some degree of parental monitoring of social media use.[1,2,41,97] Recent surveys suggest roughly 63 percent of adolescents and 70.8 percent of parents reported parental monitoring, and 74.3 percent of adolescents reporting being friends with their parents online.[179] Open communication is helpful for teaching digital literacy, which is necessary for children to understand the limits of "free digital products" that process access in exchange for data on user demographics, politics, mental health, and sexuality generated through engagement and viewing behavior.[50]

Recommendations for Clinicians

It is recommended that clinicians be aware of and talk with children and families about the risks and benefits of social media use.[1–3,107,227] Specifically, communication with adolescents is the most effective in the context of a therapeutic alliance that is open and non-judgmental.[97] Physicians should encourage: (1) setting boundaries for screentime and social media use; (2) discuss the risks and benefits of social media, including impact of smartphones on learning and the importance of digital media literacy; and (3) encourage communication between caregivers and children and advocate use of the Family Media Toolkit and Family Media Use Plan.[1,2,58,60,97]

Recommendations for Training and Education

One way to reduce potential harm to adolescents using social media is through improved digital media literacy. Specifically, it is important to train adolescents and those teaching and advising them skills for assessing and validating information on social media and the internet more broadly.[41,50,60,97,227] Moreover, the approach to digital media literacy needs to be multi-tiered and tailored to children, parents, educators, and clinicians. Specifically, comprehensive digital media literacy should be integrated into the standards set by state boards of education. Moreover, the U.S. Department of Education should draw national attention to the importance of comprehensive digital media literacy.[3] This is necessary to create both an online environment that protects youth and social media consumers who are empowered to protect themselves. Furthermore, educators and clinicians need to be trained in digital media literacy so they can adequately teach and advise adolescents on the risks and benefits of social media.[1–4] This could include incorporation of digital media literacy requirements for licensure as well as ongoing professional development training and resources for both educators and clinicians.[3] In addition to incorporating digital media literacy into training and licensure, additional efforts to improve dissemination of health-related digital media literacy is suggested.[227]

Recommendations for Research

Currently, the research on social media and adolescent health is limited.[3,4] Therefore, federal and non-profit research funders should support a research agenda that prioritizes: (1) the health consequences of social media use and the mechanisms of harm, (2) the epidemiology of problematic use, (3) interventions and other efforts to reduce and remediate harms arising from

social media, (4) the role of parents and other adults in influencing positive use, and (5) algorithmic audits.[3,4] There is a need for validated tools to measure exposure to social media affordances, data sharing, and the establishment of long-term cohort studies. Special emphasis should be given to interdisciplinary approaches and study designs that attempt to understand causal directions.

RELEVANT AMA POLICY

The AMA has existing policy that addresses social media and mental health, gun violence, internet pornography, online streaming of sexual encounters, the effects of video game and internet overuse, disinformation, cannabis marketing, and online human subjects' research. In general, these policies advocate the use of education and legislation to: (1) increase awareness about potential risks associated with social media and internet use; and (2) reduce exposure to harmful content (e.g., gun violence, pornography, disinformation, etc.) particularly for children, adolescents, and young adults. Current policy also supports development and implementation of clinical tools for identification and treatment of harms that arise from exposure as well as continued research into potential harms and the effectiveness of screening and treatment. Detailed information on the current AMA policies can be found in the appendix.

CONCLUSION

Digital media, smartphones, and social media have a pervasive presence in nearly all aspects of youth and adolescent life. Despite substantial research efforts, the evidence is too weak to promote a uniform interpretation of the impact of social media on adolescent health at the population level. There are several factors contributing to the weak evidence including: (1) the reciprocal associations between social media use and health; (2) the lack of consistent and comparable methodologies; (3) entanglement of impact and exposure as a byproduct of social media's ubiquity; (4) different dynamics and trends depending on level of analysis; (5) the wide variety of interactions, behaviors, and health impacts engendered by social media; and (6) reliance on cross-sectional studies with high heterogeneity.

Although the evidence is too weak to provide a uniform interpretation, there are clear positive and negative trends. There is some evidence of potential benefit in the form of improved social support, identity development, civic engagement, and self-directed learning. There is also some evidence of potential harm including negative impacts on sleep, physical activity, and mental health, as well as exposure to inappropriate content, and data privacy issues. Furthermore, it is apparent that the relative risks and benefits of social media likely depend on individual differences in: (1) engagement with social media (e.g., what kids see and do online, who they talk to, when they use social media, and how they use social media); (2) pre-exiting strengths and weaknesses; and (3) the cultural, social, and physical environment.

Even though the evidence of harm is limited there is an urgent need for action for two reasons. First, the lack of algorithmic transparency, privacy protections, and accountability and redress for online harassment on most platforms is concerning given the power, reach, and ubiquity of social media. Second, the potential harms are serious, particularly during sensitive developmental periods; therefore, proactively creating digital environments that protect and enrich children's and adolescents' health and well-being is beneficial regardless of the evidence of harm. There are two key approaches that would likely facilitate the creation of safer, developmentally appropriate environments. First, federal and state legislative action (e.g., expansion of COPPA, implementation of age-appropriate design, and mechanisms to address online harassment), and second, development and widespread adoption of industry standards to benchmark platform operations, transparency, and data use. In addition to improving the digital environment, it is imperative that

there are simultaneous efforts to address harms that still arise including: (1) education and training on digital media literacy and the potential harms posed by social media; (2) improved screening and support for those who experience harms (e.g., problematic internet use and online harassment); and (3) continued research of the health impacts of social media.

RECOMMENDATION

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

1. That our AMA:

   (1) 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) encourages further clinical, epidemiological, and interdisciplinary research on the impact of social media on health.
   (3) supports education of clinicians, educators, and the public on digital media literacy and the health effects of social media.
   (4) 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) supports legislative, regulatory, and associated initiatives (e.g., development of industry standards, age-appropriate design, and funding programs that support those harmed by online harassment).
   (6) 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. (New HOD Policy)

2. That current AMA policy D-478.965, "Addressing Social Media and Social Networking Usage and its Impacts on Mental Health D-478.965" be amended by addition and deletion to read as follows:

   Our AMA: (1) 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) advocates for schools to provide safe and effective educational programs ~~by which~~ so that (a) all students can learn to identify and mitigate the onset of mental health sequelae of social media and social networking usage, (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), and (c) at risk students' access to social media can be limited and/or closely monitored as individually appropriate; (3) 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) advocates for and support media and social networking services addressing and developing safeguards for users, including protections for youth online privacy, effective controls allowing youth and caregivers to manage screentime content and access, and development and dissemination of age-appropriate digital literacy training; and (5) advocates for the

study of the positive and negative biological, psychological, and social effects of social media and social networking services use. (Modify Current HOD Policy)

Fiscal Note: $5,000 - $10,000

APPENDIX: Relevant AMA Policy

Addressing Social Media and Social Networking Usage and its Impacts on Mental Health D-478.965
Our AMA: (1) 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) advocates for schools to provide safe and effective educational programs by which students can learn to identify and mitigate the onset of mental health sequelae of social media and social networking usage; (3) 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) advocates for and support media and social networking services addressing and developing safeguards for users; and (5) advocates for the study of the positive and negative biological, psychological, and social effects of social media and social networking services use.

Minimizing the Influence of Social Media on Gun Violence H-478.977
1. Our American Medical Association calls upon all social media sites that allow posting of videos, photographs, and written online comments encouraging and glorifying the use of guns and gun violence to vigorously and aggressively remove such postings.
2. Our AMA strongly recommends social media sites continuously update and monitor their algorithms in order to detect and eliminate any information that discusses and displays guns and gun violence in a way that encourages viewers to act violently.
3. Our AMA will work with social media sites to provide educational content on the use of guns, inherent dangers, and gun safety in an effort to end the ongoing and devastating effects of gun violence in our communities.

Internet Pornography: Protecting Children and Youth Who Use the Internet and Social Media H-60.934
Our AMA:
(1) Recognizes the positive role of the Internet in providing health information to children and youth.
(2) Recognizes the negative role of the Internet in connecting children and youth to predators and exposing them to pornography.
(3) Supports federal legislation that restricts Internet access to pornographic materials in designated public institutions where children and youth may use the Internet.
(4) Encourages physicians to continue efforts to raise parent/guardian awareness about the importance of educating their children about safe Internet and social media use.
(5) Supports school-based media literacy programs that teach effective thinking, learning, and safety skills related to Internet and social media use.
(6) Actively support legislation that would strengthen child-centric content protection by internet service providers and/or search engines in order to limit the access of pornography to minors on the internet and mobile applications.

Addressing Public Health Disinformation Disseminated by Health Professionals D-440.914
Our AMA will collaborate with relevant health professional societies and other stakeholders:
(a) on efforts to combat public health disinformation disseminated by health professionals in all forms of media,
(b) address disinformation that undermines public health initiatives, and

(c) implement a comprehensive strategy to address health-related disinformation disseminated by health professionals that includes:
(1) Maintaining AMA as a trusted source of evidence-based information for physicians and patients.
(2) Ensuring that evidence-based medical and public health information is accessible by engaging with publishers, research institutions and media organizations to develop best practices around paywalls and preprints to improve access to evidence-based information and analysis.
(3) Addressing disinformation disseminated by health professionals via social media platforms and addressing the monetization of spreading disinformation on social media platforms.
(4) Educating health professionals and the public on how to recognize disinformation as well as how it spreads.
(5) Considering the role of health professional societies in serving as appropriate fact-checking entities for health-related information disseminated by various media platforms.
(6) Encouraging continuing education to be available for health professionals who serve as fact-checker to help prevent the dissemination of health-related disinformation.
(7) Ensuring licensing boards have the authority to take disciplinary action against health professionals for spreading health-related disinformation and affirms that all speech in which a health professional is utilizing their credentials is professional conduct and can be scrutinized by their licensing entity.
(8) Ensuring specialty boards have the authority to take action against board certification for health professionals spreading health-related disinformation.
(9) Encouraging state and local medical societies to engage in dispelling disinformation in their jurisdictions.

Television Broadcast and Online Streaming of Sexual Encounters and Public Health Awareness on Social Media Platforms H-485.994
Our AMA urges television broadcasters and online streaming services, producers, sponsors, and any associated social media outlets to encourage education about inclusive safe sexual practices, including but not limited to condom use and abstinence, in television or online programming of sexual encounters, and to accurately represent the consequences of unsafe sex.
Medical and Public Health Misinformation Online D-440.915
Our AMA:
(1) 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) 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) will continue to support the dissemination of accurate medical and public health information by public health organizations and health policy experts; and
(4) 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.

Marketing Guardrails for the "Over-Medicalization" of Cannabis Use D-95.958
Our AMA will: (1) send a formal letter to the Food and Drug Administration and Federal Trade Commission requesting more direct oversight of the marketing of cannabis for medical use; (2)

generate a formal letter for use by state medical societies requesting more direct oversight by state government of the marketing of cannabis; (3) support and encourage federal, state, and private sector research on the effects of cannabis marketing to identify best practices in protecting vulnerable populations, as well as the benefits of safety campaigns such as preventing impaired driving or dangerous use; (4) encourage state regulatory bodies to enforce cannabis-related marketing laws and to publicize and make publicly available the results of such enforcement activities; (5) encourage social media platforms to set a threshold age of 21 years for exposure to cannabis advertising and marketing and improve age verification practices on social media platforms; (6) encourage regulatory agencies to research how marketing best practices learned from tobacco and alcohol policies can be adopted or applied to cannabis marketing; and (7) support using existing AMA channels to educate physicians and the public on the health risks of cannabis to children and potential health risks of cannabis to people who are pregnant or lactating.

Principles of Human Subjects Research Shall Apply to Online Medical Research Projects H-460.898
Our American Medical Association declares social media sites' terms of service as an insufficient proxy for informed consent prior to being enrolled in any medical experiment and recommends that online social networks provide users with specific informed consent outlining the aims, risks and possible benefits of any medical experimental study prior to study enrollment.

Emotional and Behavioral Effects of Video Game and Internet Overuse H-60.915
Our AMA supports increased awareness of the need for parents to monitor and restrict use of video games and the Internet and encourage increased vigilance in monitoring the content of games purchased and played for children 17 years old and younger.

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REPORT OF THE COUNCIL ON SCIENCE AND PUBLIC HEALTH

CSAPH Report 11-A-24

Subject: Stand Your Ground Laws

Presented by: David J. Welsh, MD, MBA, Chair

Referred to: Reference Committee D

INTRODUCTION

American Medical Association Policy H-145.966, "Stand Your Ground Laws" as adopted by the House of Delegates at the 2023 Annual Meeting (Resolution 435), asked that our AMA study the public health implications of "Stand Your Ground" laws and castle doctrine.

BACKGROUND

"Castle doctrine" refers to the legal right of a person to defend himself against an intruder in his home or other property, even if the use of deadly force is required. Stand Your Ground (SYG) laws expanded castle doctrine beyond one's home or property to public spaces where individuals have a legal right to be. Prior to the enactment of SYG laws, most states followed the common law self-defense rule, which imposed a duty to retreat before using force in self-defense, if safe retreat was possible. SYG laws generally removed the duty to retreat from a threat before using force in self-defense. Under SYG laws, individuals are allowed to use force, including lethal force, if they reasonably believe it is necessary to protect themselves or others from imminent harm.

In 2005, Florida passed the first SYG law in the United States.[1] According to the National Conference of State Legislatures, as of March 2023, laws in at least 28 states and Puerto Rico provide that there is no duty to retreat from an attacker in any place in which one is lawfully present.[2] At least ten states include language stating one may "stand his or her ground," while eight states permit the use of deadly force in self-defense through judicial decisions or jury instructions.[2]

Those who support the enactment of SYG laws generally believe that people have a fundamental right to "defend themselves from attack with proportionate force in every place they have a lawful right to be" which is thought to deter criminals by increasing their perceived risk of encountering an armed victim.[2] Critics are concerned these laws "unnecessarily encourage the use of deadly force as a low-cost license to kill instead of reserving it only as a protective measure."[3] SYG laws are commonly referred to as "shoot first" laws and are thought to encourage people to take the law into their own hands. There are also concerns that the laws exacerbate social inequities.

In this report, your Council on Science and Public Health reviews the available evidence regarding the public health impact of castle doctrine and SYG laws.

METHODS

English language articles were selected from searches of PubMed and Google Scholar using the search terms "stand your ground", "castle doctrine", "self-defense law". Additional articles were

identified by manual review of the reference lists of pertinent publications. Web sites managed by government agencies and nonprofit organizations were also reviewed for relevant information.

DISCUSSION

There has been little research on the public health implications of castle doctrine. Researchers have sought to evaluate the effect of SYG and expanded self-defense laws on various factors including crime rates, homicide rates, and racial disparities in the application of the laws. It is worth noting at the outset that evaluating the effects of SYG laws is challenging, in part because the duty to retreat is a less distinct element of self-defense in practice.[4] Also because there are variations in the laws across jurisdictions and implementation of the law may also deviate from the original intent.[4]

Impact of SYG laws on homicide, firearm homicide, and violent crime

A retrospective analysis of data from 2000 to 2017 examined justifiable homicide (citizen-related justifiable homicide with a firearm) and homicide (non-justifiable citizen-related homicide) rates before and after enactment of SYG laws and in states with and without SYG laws. In states with SYG laws, the overall justifiable homicide rate was 0.126 per 100,000 population compared with 0.047 per 100,000 population in states without SYG laws. The homicide rate was 4.663 per 100,000 population in states with SYG laws compared to 3.301 per 100,000 population states without SYG laws.[5] In states with SYG laws, the rate of justifiable homicide increased with the enactment of SYG laws, from 0.091 pre-law to 0.141 per 100,000 population post-law, a 54.9 percent increase.[5] The homicide rate also increased with the enactment of SYG from 4.208 to 4.663 per 100,000 population, a 10.8 percent increase.[5] In states without SYG laws, the justifiable homicide rates increased 20 percent, from 0.044 to 0.053 per 100,000 population, but homicide rates decreased from 3.424 to 3.344 per 100,000 population, a 2.3 percent decrease.[5] The findings suggest that justifiable homicide and homicide were disproportionately higher in states with SYG laws and both the justifiable homicide rate by firearm and homicide rate had significant increases in states with SYG laws compared to states without such laws. While the intent of SYG laws was to deter violent crime, this analysis indicates the laws have had the opposite effect.[5]

Similarly, a cohort study evaluating the association of SYG laws with homicide and firearm homicide, nationally and by state, found that SYG laws were associated with an 8 – 11 percent national increase in monthly rates of homicide and firearm homicide.[6] Forty-one states were analyzed, including 23 states with SYG laws and 18 states without SYG laws. SYG laws were associated with a mean national increase of 7.8 percent in monthly homicide rates and 8.0 percent in monthly firearm homicide rates.[6] Increases in violent deaths varied across states, with the largest increases (16.2 to 33.5 percent) found in the South (e.g., Alabama, Florida, Georgia, Louisiana). The study found no differential associations by demographic group.[6]

A systematic review examining the available evidence on the impacts associated with SYG laws (or other expansions of self-defense laws) on violence, injury, crime, and firearm-related outcomes found the laws were associated with no change to small increases in violent crime (total and firearm homicide, aggravated assault, robbery) on average across states.[7] While Florida-based studies showed robust increases (24 percent to 45 percent) in firearm and total homicide.[7]

RAND's Gun Policy in America initiative examines the effects of firearm laws to improve public discussions and support the development of fair and effective firearm policies. Their review of the evidence on SYG laws concluded that there is moderate evidence that they may increase homicide rates, supportive evidence that they may increase firearm homicides, and limited evidence that they may increase the overall violent crime rates.[8]

Evaluating Florida's SYG law

Several studies have focused on evaluating Florida's SYG law specifically. In addition to this being the first jurisdiction with a SYG law, the high-profile and fatal shooting of Trayvon Martin, an unarmed Black teenager occurred in Sanford, Florida on February 26, 2012. Martin was killed by a White neighborhood watch volunteer who was later acquitted of second-degree murder and manslaughter on the basis of self-defense. The jury in the case was instructed about Florida's SYG law. The Governor of Florida created a Task Force on Citizen Safety and Protection to review the Florida statute to help "ensure the rights of all Floridians and visitors, including the right to feel safe and secure in our state."[9] The task force recommended keeping the SYG law in place, noting that all persons who are conducting themselves in a lawful manner have a fundamental right to stand their ground and defend themselves from attack with proportionate force in every place they have a lawful right to be.[9]

In evaluating the Florida law, several studies have found that it led to an increase in homicides and firearm homicides. A study evaluating whether Florida's SYG law had an impact on homicide and homicide by firearm between 2005 and 2014 found that the law was associated with a 24.4 percent increase in homicide and a 31.6 percent increase in firearm-related homicide.[10] Researchers found no change in rates of suicide or suicide by firearm.[10] A separate analysis of Florida's law found it was associated with a 44.6 percent increase in adolescent firearm homicide and may also exacerbate racial disparities.[11] A third analysis found that the impact of the law differed significantly by county urbanization, unemployment, and pre-law homicide rates.[12] The largest increases in homicide and firearm homicide occurred in proportionally safer, richer, and less ethnically diverse suburban counties. These findings suggest that the law may have had the opposite effect than intended, and more strongly impacted counties considered safe, suburban and economically successful.[12]

Social inequities

It has been hypothesized that SYG laws will exacerbate social inequities in violent victimization as and that Black defendants accused of crimes will not have the same protections under these laws as similarly situated White defendants.[13] However, a systematic review that examined comparisons by race showed mixed findings, indicating there are not dramatic differences in increases in homicide rates among Black versus White people following the enactment of SYG laws.[7] Data suggests that at least in Florida, there appears to be racial bias in the criminal justice process in rulings on SYG cases.[7] In examining SYG cases in Florida from 2005 to 2013, it was found that race of the victim was a significant predictor of case outcome.[14] After controlling for other variables, the defendant is two times more likely to be convicted in a case that involves White victims compared to those involving non-White victims.[14]

A separate examination of FBI data from 2005-2010, examining more than 53,000 homicides, found large disparities in rulings justified based on the race of the defendant and the victim.[15] Nationally, the likelihood of a homicide being ruled justified is 281 percent greater when the defendant is White and the victim is Black compared to cases where both the defendant and victim are White.[15] White-on-Black homicides were the most likely to be ruled as justified (11.4 percent) while Black-on-White homicide was least likely to be ruled as justified (1.2 percent).[15]

There is very little evidence examining gender differences in the implementation of SYG laws and a lack of focus on the impacts of these laws on intimate partner violence or domestic violence, the most common forms of violence against women.[7]

POSITION OF OTHER NATIONAL ORGANIZATIONS

In 2013, the American Bar Association convened a National Task Force on SYG Laws to review and analyze the recently enacted Stand Your Ground laws in multiple states and their impact on public safety and the criminal justice system.[3] The Task Force has conducted a comprehensive legal and multidisciplinary analysis of the impact of the SYG laws. The national investigation revealed several important findings:

1. Based on recent empirical studies, SYG states experienced an increase in homicides.
2. Multiple states have attempted to repeal or amend SYG laws.
3. The application of SYG laws is unpredictable, uneven, and results in racial disparities.
4. An individual's right to self-defense was sufficiently protected prior to SYG laws.
5. Victims' rights are undermined in states with statutory immunity from criminal prosecution and civil suits related to SYG cases.

EXISTING AMA POLICY

Existing AMA policy does not address self-defense, castle doctrine, or SYG laws. Current policy does recognize that violence represents a public health crisis which requires a comprehensive public health response and solution (Policy D-145.995, "Gun Violence as a Public Health Crisis"). Policy also recognizes that uncontrolled ownership and use of firearms is a serious threat to the public's health inasmuch as the weapons are one of the main causes of intentional and unintentional injuries and deaths (Policy H-145.997, "Firearms as a Public Health Problem in the United States - Injuries and Death"). AMA policy also affirms that physical and verbal violence between law enforcement officers and public citizens, particularly within racial and ethnic minority populations, is a social determinant of health (Policy H-515.95, "Research the Effects of Physical or Verbal Violence Between Law Enforcement Officers and Public Citizens on Public Health Outcomes").

CONCLUSION

"Castle doctrine" refers to the legal right of a person to defend himself against an intruder in his home or other property, even if the use of deadly force is required. There is a lack of studies examining the impact of these laws. SYG laws, or expanded castle doctrine, generally removed the duty to retreat from a threat before using force in self-defense. Under SYG laws, individuals are allowed to use force, including lethal force, if they reasonably believe it is necessary to protect themselves or others from imminent harm. While SYG laws can be challenging to evaluate, the best available evidence shows that these laws are associated with increased homicide and firearm homicide rates, resulting in preventable violent deaths. The application of SYG laws is unpredictable, uneven, and likely results in racial disparities.

RECOMMENDATIONS

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

1. That Policy H-145.966, "Stand Your Ground Laws" be adopted by addition and deletion to read as follows:

   Our AMA opposes stand your ground laws, which remove the duty to retreat before using lethal force if a person feels there is imminent risk of bodily harm, as these laws have been

shown to increase homicide and homicide firearm rates and there is evidence of racial inequity in the implementation of the laws.

Our AMA ~~will~~ supports continued study of the public health implications of "Stand Your Ground" laws and castle doctrine. (Modify Current HOD Policy)

2. That Policies H-145.997, "Firearms as a Public Health Problem in the United States - Injuries and Death," D-145.995, "Gun Violence as a Public Health Crisis," H-145.975, "Firearm Safety and Research, Reduction in Firearm Violence, and Enhancing Access to Mental Health Care," and D-145.999 "Epidemiology of Firearm Injuries" be reaffirmed. (Reaffirm HOD Policy)

Fiscal Note: Less than $1,000

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REPORT OF THE COUNCIL ON SCIENCE AND PUBLIC HEATLH (A-24)
Decreasing Youth Access to E-Cigarettes (Resolution 919-I-22)
(Reference Committee D)

EXECUTIVE SUMMARY

BACKGROUND: This report examines the available evidence regarding the health effects of electronic cigarettes and the evidence of effectiveness of federal, state, and local regulations to restrict youth access to e-cigarettes (i.e., face-to-face sales mandates, limits on marketing and promotion, retailer licensing, price policy implementation, flavor restrictions, inclusion of e-cigarettes in smoke-free indoor air policies, and the development of educational initiatives).

METHODS: English language reports were selected from searches of the PubMed, Google Scholar, and Cochrane Library databases using the search terms: “e-cigarettes”, “ENDS”, “electronic cigarette”, AND “youth access.” 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.

RESULTS: Despite the recent decline in e-cigarette use among high school students and ongoing efforts at the national, state, and local levels to implement tobacco control strategies, including Food and Drug Administration (FDA) regulatory actions, e-cigarette use among adolescents remains alarmingly high. According to the National Youth Tobacco Survey (NYTS), 2.13 million students use e-cigarettes, with 4.6 percent of middle school and 10.0 percent of high school students reporting current use. There is clear evidence of adverse health effects due to e-cigarette use, but the evidence on the long-term impacts is more attenuated, not as strong, and often based on small cross-sectional or relatively short longitudinal epidemiological studies. Additionally, there is limited evidence of the effectiveness of state-level efforts like face-to-face sales mandates, marketing and promotion limits, retailer licensing, price policies and taxes, and flavor restrictions on reducing e-cigarette initiation and use.

CONCLUSION: Despite the limited evidence, many policies enacted to address youth access to e-cigarettes are rooted in evidence-based nicotine control strategies that worked well with traditional cigarettes. Therefore, it seems likely that they have the potential to reduce e-cigarette initiation and use. Continued research is needed to better understand effective interventions and policies, including how they influence traditional cigarette smoking, e-cigarette vaping, and other tobacco use.

REPORT OF THE COUNCIL ON SCIENCE AND PUBLIC HEALTH

CSAPH Report 13-A-24

Subject: Decreasing Youth Access to E-Cigarettes

Presented by: David J. Welsh MD, MBA, Chair

Referred to: Reference Committee D

INTRODUCTION

The American Medical Association (AMA) House of Delegates (HOD) referred Resolution 919, "Decreasing Youth Access to E-cigarettes" for study. This resolution asked that our AMA support the inclusion of disposable and tank-based e-cigarettes in the language and implementation of any restrictions that are applied by the Food and Drug Administration (FDA) or other bodies to cartridge-based e-cigarettes. It also proposed amendments to policy H-495.986, "Tobacco Product Sales and Distribution," to (1) support measures that prevent retailers from opening new tobacco specialty stores in proximity to elementary schools, middle schools, and high schools and (2) support measures that decrease the overall density of tobacco specialty stores, including but not limited to, preventing retailers from opening new tobacco specialty stores in proximity to existing tobacco specialty stores.

The Reference Committee recommended adoption of the policy as amended, with amendment by deletion of number 2 above due to concerns that the density recommendations represented the restriction of free commerce capabilities. The resolution was ultimately referred for study due to the introduction of significant amendments on the HOD floor seeking to clarify multiple points in existing policy unrelated to the amendments proposed by the resolution.

The Council has previously presented several reports to the HOD on e-cigarettes, these include CSAPH Report 6-A-10, "Use of Electronic Cigarettes in Smoking Cessation Programs,"; CSAPH 2-I-14, "Electronic Cigarettes, Vaping, and Health: 2014 Update"; and CSAPH 5-A-18, "Tobacco Harm Reduction: A Comprehensive Nicotine Policy to Reduce Death and Disease Caused by Smoking," The AMA Board of Trustees also provides the HOD with an annual update on tobacco, which includes updates on e-cigarettes. This report will not repeat information included in those reports, but rather will provide an update on the narrow ask of the resolution, which focuses on youth access.

METHODS

English language reports were selected from searches of the PubMed, Google Scholar, and Cochrane Library databases using the search terms: "e-cigarettes", "ENDS", "electronic cigarette", AND "youth access." 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.

BACKGROUND

Tobacco use is the leading cause of preventable disease, disability, and death in the United States (U.S.). Moreover, tobacco product use, including the use of e-cigarettes, during adolescence increases the risk for lifelong nicotine addiction and adverse health consequences. This is an extremely important issue considering that in 2023, roughly 2.80 million U.S. middle and high school students used at least one tobacco product, including e-cigarettes.[1]

Current Prevalence and Recent Trends Among Youth

Youth e-cigarette use remains a critical public health concern in the U.S. For the 10th year, e-cigarettes have been the most commonly used tobacco product among both middle and high school students. According to the most recent data from the National Youth Tobacco Survey (NYTS), 2.13 million students use e-cigarettes with 4.6 percent of middle school and 10.0 percent of high school students reporting current use.[1,2] From 2022 to 2023, a significant decline in current e-cigarette use occurred among high school students (from 14.1 percent to 10.0 percent); this decline did not reflect a switch to cigarettes, whose use remained stable at 1.6 percent. While e-cigarette use increased among middle school students from 3.3 percent in 2022 to 4.6 percent in 2023, this increase was not statistically significant. Among students who had ever used an e-cigarette, 46.7 percent reported current use, 25.2 percent used e-cigarettes daily, and 89.4 percent used flavored e-cigarettes with fruit (63.4 percent) and candy (35.0 percent) being the most common flavors.[1]

Disposables were the most used device type among students who reported current e-cigarette use, with over 60 percent of students using disposable e-cigarettes. Prefilled and refillable pods or cartridges and open tank and mod systems were less frequently used at 16.1 percent and 5.9 percent respectively.[1] Disposable e-cigarettes have changed dramatically in recent years. Between 2017 and 2022, e-cigarettes quintupled in volume capacity, nearly tripled in average nicotine strength, and fell in average per ml price of e-liquid by nearly 70 percent.[3] The increased popularity of disposable e-cigarettes may be because they are relatively inexpensive, have a high nicotine content, and they are exempt from the 2020 FDA enforcement prioritization of prefilled and closed-cartridge e-cigarettes for flavors other than tobacco and menthol.[4]

Perceptions of harm and motivations for use

Several systematic reviews and studies have evaluated motivations for e-cigarette use and perceptions of harm. Commonly reported motivations include curiosity, appealing flavors, family and peer influence, and stress reduction.[5–8] One systematic review found that social acceptability, convenient and customizable features, a variety of flavors, and a lack of awareness about the presence of nicotine as common reasons for e-cigarette use.[9] Another found that youth report flavor variety, device modifiability, the ability to perform tricks, and concealment from authority figures among the primary appeals of e-cigarettes.[10] Findings suggest that prevalence of both e-cigarette and cigarette use among parents, siblings, and close friends was higher in adolescents who have ever used an e-cigarette.[7]

Adolescent e-cigarette users also exhibit lower perceptions of harm and more positive attitudes towards e-cigarettes when compared with non-users.[7,8,11] Specifically, in comparison to non-users, young people who were e-cigarette users were more likely to perceive e-cigarettes as healthier and less addictive than tobacco cigarettes.[8,12–14] One study found most e-cigarette users view flavored e-cigarettes as less harmful with 55.5 percent believing they were not addictive.[13] Other reviews echo this concerning finding that many individuals were unaware that e-cigarettes contained nicotine.[9,11] Still others found youth perceived gradations in harm relating to the frequency and intensity of use and by type of product.[15] In contrast, nonusers were more prone to consider e-cigarettes harmful to children.[7]

HEALTH EFFECTS OF E-CIGARETTE USE

The health effects of e-cigarette use have been reviewed in previous CSAPH reports. The evidence on the health impacts of e-cigarettes is mixed. There are clear short term adverse effects that could result from using e-cigarettes including sore throat, headache, cough, elevated heart rate, nausea, and vomiting.[11,16] Additionally, there are severe acute adverse effects including nicotine poisoning from accidental ingestion, e-cigarette or vaping product associated lung injury, and trauma from exploding devices that has been reported.[17] However, the evidence on long term impacts of e-cigarettes is more attenuated, not as strong, and often based on small cross-sectional or relatively short longitudinal epidemiological studies.

Despite the limited evidence on the long-term effects of e-cigarettes on health, there are potentially concerning trends regarding the association between both e-cigarette use and exposure to the ingredients found in e-cigarette vapor and negative cardiovascular, pulmonary, immune, and developmental health impacts that warrant continued study and evaluation.

Safety of Aerosolized e-liquid

Propylene glycol, glycerol, nicotine, flavoring agents, and their degradation byproducts (e.g., formaldehyde, acetaldehyde, acrolein, glycidol) have all been shown to have deleterious effects on respiratory tissues and function.[18,19] An analysis of 30 products on the U.S. market revealed that 13 were more than one percent by weight flavor chemicals identified as reactive aldehydes.[19] Reactive aldehydes are also thought to be the primary contributors to combustible cigarette–induced cardiovascular disease and chronic obstructive pulmonary disease (COPD).[20,21] Multiple analyses of e-cigarette vapor's cytotoxicity have demonstrated that while it varies, some flavors are cytotoxic or contain flavoring chemicals at concentrations high enough to be cytotoxic when vaped.[19,22]

E-cigarette vapor also contains heavy metals, likely from the heating element metals that are released into the aerosols.[20,23,24] A lifetime of chromium and nickel exposure from daily inhalation of two mL e-liquid was used to estimate the risk of cancer and noncancer health effects, with chromium and nickel estimated to be the primary contributors. Notably, nickel is one of the few carcinogens found to be higher in e-cigarettes than in combustible cigarettes.[20,25] E-cigarette vapor contains copious fine and ultra fine particles.[22] There is strong evidence that frequent low or short-term levels of exposure to fine and ultrafine particles can contribute to pulmonary and systemic inflammatory processes as well as potentially increasing the risk of cardiovascular and respiratory disease.[22,26–28] Moreover, higher e-liquid nicotine concentration is associated with higher particle numbers.[22]

Finally, most e-cigarettes contain nicotine, which activates the sympathetic nervous system, thereby directly effecting the cardiovascular system.[20,29] Nicotine-stimulated catecholamine release by the sympathetic nervous system activates β-adrenergic receptors in the heart, resulting in increased heart rate, cardiac contractility, and workload.[20,30] Long-term overstimulation of the sympathetic nervous system can result in cardiac remodeling, which promotes the development of heart failure and increases arrhythmogenesis.[20,29] Nicotine also affects the vasculature by inducing vasoconstriction, resulting in elevated blood pressure.[20,29,30] In a randomized study of healthy younger smokers, acute use of nicotine-containing e-cigarettes had vascular hemodynamic effects suggestive of vascular remodeling and increased sympathetic activation of the cardiovascular system.[20,31] The findings suggest cardiovascular changes consistent with the development of cardiovascular disease with nicotine inhalation from e-cigarettes.[20]

Cardiovascular, Pulmonary, and Immunological Impacts of e-cigarette use

There is some evidence that using e-cigarettes may negatively affect cardiovascular function. One review found that cardio-respiratory function in e-cigarette users was more impaired than in never smokers.[16,32] Reviews have also found that chronic e-cigarette users had elevated heart rate and blood pressure.[16,20] Other studies found that e-cigarettes may be associated with inflammation, oxidative stress, and hemodynamic imbalance, leading to increased risk of cardiovascular disease.[20,33–35] E-cigarette use might be linked to pre-symptomatic cardiovascular dysfunction, which could have a significant health impact during adulthood.[33] Research has also found that e-cigarette use was associated with sympathetic activation, vascular stiffening, and endothelial dysfunction.[20,36] There is also evidence of higher incidence tissue damage and compromised vascular function among e-cigarette users compared to non-users.[36]

The aerosol condensate generated from different e-cigarette devices, products, and e-liquids results in different effects on endothelial and pulmonary epithelial cell toxicity, likely a result of the extreme variability in product characteristics.[20] There is some evidence that e-cigarette users' airways are more friable than non-users.[16,37] The same review found changes in lung function over 3.5 years of use and speculated that long-term exposure could lead to emphysema, loss of pulmonary capillaries, and reduced airway function.[16,38] Another review found increased biomarkers of pulmonary disease among observational epidemiological studies associated with vaping as well as a higher incidence of pulmonary disease.[36] Several large population-based studies in adolescents have noted increased asthma diagnoses, school absences due to asthma, and respiratory symptoms for youth who currently use or have used e-cigarettes.[20,33]

There is some evidence suggesting e-cigarette use is associated with increased oxidative stress which can cause the release of pro-inflammatory cytokines.[16,39,40] Therefore, it is possible that e-cigarette use may impair ability to fight infection.[16] Similarly, research has found that e-cigarette use might be associated with reduced pulmonary immune function.[11]

FEDERAL ACTIONS

Legislative actions

Since 2018, federal legislative activity has included the 2019 amendment of the Federal Food, Drug, and Cosmetic Act to raise the federal minimum age for sale of tobacco products from 18 to 21 years. In 2020, the Preventing All Cigarette Trafficking (PACT) act was amended to prevent online sales of e-cigarettes to children.[41] Specifically, it requires remote sellers of tobacco products to pay all applicable federal, state, and local taxes, and comply with all applicable state and local laws including age verification. PACT also prohibits delivery vendors from using the U.S. postal service to ship e-cigarettes. These federal legislative actions arose in conjunction with administrative and judicial actions.

Administrative actions

In January of 2020, the FDA finalized enforcement policy on unauthorized flavored open-system tank- and cartridge-based e-cigarettes that appeal to children, including fruit and mint ingredients, but excluded menthol and tobacco-flavored products.[42] Importantly, disposable e-cigarettes were exempt from the policy and as a result there was a market shift to disposables. More recently, federal legislation expanded the definition of tobacco products to include synthetic nicotine in March 2022, in response to the emergence and market proliferation of disposable e-cigarettes with e-liquids advertising synthetic nicotine -- thereby granting FDA regulatory authority over these

products. To date, the FDA has authorized marketing of 23 tobacco-flavored e-cigarette products and devices from three companies with the FDA citing potential smoking cessation benefits to adults and low risks posed to youth.[43,44] Meanwhile, all other disposable e-cigarette brands are being sold without marketing authorization.[3]

STATE AND LOCAL ACTIONS

Considering the success of tobacco control policies to reduce traditional cigarette smoking among youth, there is reason to believe extending similar policies like online sales restrictions, limits on marketing and promotion, package and labeling requirements, retailer licensing requirements, retailer zoning and location restrictions, taxes, and flavor restrictions could reduce e-cigarette initiation and use among youth.[45]

Online Sales Restrictions

In 2020, PACT was amended to include e-cigarettes, thus prohibiting online sales of e-cigarettes to children. Yet, there are serious enforcement challenges posed by online sales and delivery services. A study that reviewed FDA e-cigarette warning letters issued by the Center for Tobacco Products to online retailers in 2018 showed that 98.2 percent of violations pertained to the sales of an e-cigarette product to a minor and/or use of marketing that appeals to children.[46]

In response, state and local governments have begun enacting legislation to further prohibit and regulate online sales. In June 2019, San Francisco, California, became the first city in the U.S. to ban the retail and online sale of e-cigarettes.[47,48] As of May 2022, the Public Health Law Center also found that at least fourteen states have laws prohibiting direct-to-consumer shipments of some tobacco products. Five of these states have enacted more comprehensive laws, including extending these prohibitions to e-cigarettes.[49] Additionally, an evaluation of e-cigarette delivery laws found extensive heterogeneity. There were 34 states with e-cigarette delivery sales laws in place, and of those states, 27 required at least one form of age verification, 12 required mandatory packaging labels, seven required permits for online vendors, seven required government ID for release, four did not specify, and 11 had no specific requirements.[50]

Limits on marketing and promotion

While the FDA has broad authority to restrict the advertising and marketing of all tobacco products, the FDA and FTC only currently require e-cigarette ads to be factually accurate and avoid targeting youth.[10,45]

A recent study of online e-cigarette vendors in California found that 50 percent of the websites included marketing themes related to physical health benefits of e-cigarette use, 57.7 percent had sales, discounts, and other promotions, 65.4 percent had fruit-flavored disposable e-cigarettes, 69.2 percent had promotional email newsletters, and 88.9 percent did not require users to create an age-verified account to receive email newsletters.[51] This is concerning considering that the lessons learned from traditional cigarette control demonstrate that the retail environment is a key driver of cigarette use.[52,53] Furthermore, a longitudinal cohort study using PATH data found that past 12-month and past 30-day e-cigarette use was significantly associated with recalled exposure to e-cigarette advertisement on social media, websites, and at gas stations and convenience stores.[54] Similarly, research demonstrates that e-cigarette use was associated with advertising and media exposure.[53]

Presently, there is little to no evidence that limits on marketing and promotion reduce e-cigarette use among youth, but there is a growing body of evidence that suggests marketing and promotion to youth are common and that exposure to e-cigarette advertising is associated with e-cigarette use. Therefore, continued efforts to regulate youth exposure to e-cigarettes in media, advertising, and other promotion is warranted.

Retailer licensing

Requiring retailers to obtain a license to sell e-cigarettes is another traditional cigarette control measure that might be helpful at reducing e-cigarette initiation and use. One cross-sectional study suggests that strong local tobacco retailer license ordinances, particularly those that also provide adequate resources to fund regular compliance checks and enforcement, may lower rates of cigarette and e-cigarette use among youth and young adults.[55] For instance, participants in jurisdictions with more restrictive ordinances had lower odds of ever cigarette use and of past 30-day use.[55] Additionally, compliance checks of vendors have been shown to reduce sales to minors; however, the actual impact on smoking rates is less clear as youth obtain e-cigarettes from means other than legal purchase.[55]

Currently, 40 states and territories require retailers to obtain a license to sell e-cigarettes over the counter.[56] Furthermore, when retailer licensing was implemented in Pennsylvania, it resulted in a significant decline in past 30-day e-cigarette use by adolescents.[45] A review of e-cigarette tobacco retail licensing law, identified 23 laws that clearly defined a license term, 23 laws required a license fee, and 19 laws identified penalties for violations that included both license suspension and revocation.[57] The evidence of effectiveness of retailer licensing regulations on e-cigarette initiation and use is limited, but promising.

E-cigarette tax and other price strategies

There is strong evidence that increasing traditional cigarette taxes decreases cigarette consumption and increases quit rates among both adults and adolescents.[58–60] Additionally, increasing the price of tobacco reduces tobacco initiation among youth.[59] Therefore, e-cigarette taxes and price strategies have been proposed as a potential tool to reduce e-cigarette use. However, the effectiveness of e-cigarette taxes and price strategies may depend on whether e-cigarettes and traditional cigarettes are used concurrently or as substitutes. If either e-cigarettes or traditional cigarettes are substitutes, then increased taxes on one would drive users to the other and vice versa.[58]

As of February 2024, 36 states and Washington DC have enacted an e-cigarette tax.[56] There is some evidence that e-cigarette taxes increased e-cigarette prices and reduced sales of e-cigarettes, but they also increase sales of traditional cigarettes, suggesting the two may be substitutes.[3,61–63] In contrast, one study found that higher cigarette excise taxes decrease both cigarette and e-cigarette purchases, suggesting that cigarettes and e-cigarettes are used in tandem.[64] as Additionally, one prospective cohort study of young adults in the U.S. found that increased prices of rechargeable e-cigarette products did not significantly change past 30-day e-cigarette use or cigarette use.[65]

While there is some evidence e-cigarette taxes curb e-cigarette use among youth, more evidence is needed to assess their effectiveness and better understand their impact on traditional cigarette use.

Flavor restrictions

In 2009 the FDA banned flavored cigarettes, but it was not until 2020 that similar federal bans were extended to e-cigarettes -- banning all non-tobacco and non-menthol flavored cartridge-based e-cigarettes.[10] Although the FDA flavor ban is a step in the right direction, disposable e-cigarettes were exempt, and the market shifted accordingly. A longitudinal cohort survey of adults aged 18-24 from Atlanta, Boston, Minneapolis, Oklahoma City, San Diego, Seattle found that only 8.4 percent of participants reduced their e-cigarette use after the FDA ban was implemented.[66] Instead, while 35.8 percent used available flavors like tobacco and menthol, 30.4 percent continued to use tank-based e-cigarettes, and 10.1 percent switched to tank-based e-cigarettes.[66]

This highlights the need for additional action at the state and local level. In 2018, San Francisco was the first city to ban all flavored tobacco products, including menthol, in conventional cigarettes.[47] After more than 200 localities imposed a variety of restrictions, Michigan became the first state to ban all flavored e-cigarettes under a temporary emergency order that is renewable.[47] Currently, over 360 localities have passed flavor restrictions.[67] Evidence is limited, but there are some promising findings from New York City and Massachusetts suggesting that sales for flavored tobacco products decreased overall following a ban.[45] Additionally, a cross-sectional study found that statewide restrictions on the sale of flavored e-cigarettes in Massachusetts, New York, Rhode Island, and Washington were associated with a reduction in total e-cigarette sales.[68]

E-cigarette retailer zoning and location restrictions

Current evidence indicates that e-cigarette retailers are frequently located near schools. In a study of two counties in Kentucky, an estimated 67.5 percent of sampled schools had at least one tobacco retailer that also sold e-cigarettes within one mile (1.61 km) of the school.[69] Another study from Orange County, California found that over half of public middle and high schools had at least one e-cigarette specialty retailer within one mile of the school.[70]

One study identified a significant positive association between e-cigarette retailer density within a half-mile of a high school and the likelihood that a student ever and currently used e-cigarettes.[71] Another study identified a significant positive association between the presence of e-cigarette specialty retailers within one-quarter mile of a middle school and the likelihood of e-cigarette lifetime use. However, a significant positive association was not present among high school students.[72] While site-based studies have found varying results, a study based on geospatial data found an association between the presence of tobacco retailers near certain schools and e-cigarette use among students, but this association was not consistent across all the studied counties.[73] Other research suggests a positive association between higher retailer density in egocentric residential neighborhoods around homes and current smoking in adults and adolescents; however, the density of retailers and their proximity to schools showed either no association or an inverse association with adolescent smoking.[74] Likewise, another study found that e-cigarette retailer proximity and density surrounding a school were not significantly associated with the likelihood of ever or currently using e-cigarettes.[75]

Many states and localities have tried to reduce exposure, initiation, and use of e-cigarettes through retailer zoning and location restrictions and these efforts are rationally grounded; however more research is needed to conclusively determine the impact of retailer proximity and youth initiation.

Product packaging

Under the Deeming Rule, e-cigarettes are required to include warning labels about the addictiveness of nicotine. Additionally, 33 states have implemented their own packaging laws.[45] There is some evidence that text-based warning messages influenced young non-smokers' perceptions in a way that may dissuade e-cigarette use, but warnings appearing on advertisements had little impact.[76] One study found that the perceived warning effectiveness for discouraging youth initiation was higher for warnings that focused on negative impacts to the brain and harmful chemicals compared to warnings focusing on nicotine dependency or use disorder.[77] In conclusion, there is limited evidence of the effectiveness of warning labels on e-cigarettes; however, there is evidence that many adolescents are unaware that e-cigarettes contain nicotine. Ultimately, more research is needed on nicotine warnings for e-cigarettes, including on the message content, placement, and the impact on consumers' product knowledge, risk perceptions, and use intentions.[78]

State and local regulatory efforts and pre-emption issues

State and local efforts to enact e-cigarette regulations often come across preemption barriers. Although many states have made efforts to enhance e-cigarette regulations through limits on promotions and advertising, requiring licensing for over-the-counter sales, including e-cigarettes in smoke free air policies, and implementing face-to-face sales mandates, state level preemption is prohibiting many cities and municipalities from implementing stricter local policies. In the U.S., 25 states preempt stricter local e-cigarette regulations in 55 laws. Specifically, 19 laws preempt advertising regulations, 11 laws preempt licensure requirements, four laws preempt ordinances for indoor clean air, and 21 laws preempt youth access. States without preemption laws should be encouraged to adopt language that expressly preserves local authority.[79]

EXISTING AMA POLICY

Existing AMA policy recognizes that the use of products containing nicotine in any form among youth, including e-cigarettes, is unsafe and can cause addiction. Furthermore, the AMA supports legislation and associated initiatives to prevent e-cigarettes from reaching youth and young adults through various means, including, but not limited to, CDC research, education, and a campaign for preventing and reducing use by youth, young adults and others of e-cigarettes, and combustible and emerging tobacco products (Policy H-495.972, "Electronic Cigarettes, Vaping, and Health"). The AMA also supports applying the same marketing and sales restrictions that are applied to tobacco cigarettes, including prohibitions on television advertising, product placement in television and films, and the use of celebrity spokespeople; requires the use of secure, child- and tamper-proof packaging and design, and safety labeling on containers of replacement fluids (e-liquids) used in e-cigarettes (Policy H-495.973, "FDA to Extend Regulatory Jurisdiction Over All Non-Pharmaceutical Nicotine and Tobacco Products").

AMA policy supports the development of model legislation regarding enforcement of laws restricting children's access to tobacco, including but not limited to attention to the following issues: (a) provision for licensure to sell tobacco and for the revocation thereof; (b) appropriate civil or criminal penalties (e.g., fines, prison terms, license revocation) to deter violation of laws restricting children's access to and possession of tobacco; (c) requirements for merchants to post notices warning minors against attempting to purchase tobacco and to obtain proof of age for would-be purchasers; (d) measures to facilitate enforcement; (e) banning out-of-package cigarette sales ("loosies"); and (f) requiring tobacco purchasers and vendors to be of legal smoking age (Policy H-495.986, "Tobacco Product Sales and Distribution").

CONCLUSION

Despite the recent decline in e-cigarette use among high school students and ongoing efforts at the national, state, and local levels to implement tobacco control strategies, including FDA regulatory actions, e-cigarette use among adolescents remains unacceptably high. According to the NYTS, 2.13 million students use e-cigarettes, with 4.6 percent of middle school and ten percent of high school students reporting current use.[1] There is clear evidence of adverse health effects due to e-cigarette use, but the evidence on the long-term impacts is more attenuated, not as strong, and often based on small cross-sectional or relatively short longitudinal epidemiological studies. Additionally, there is limited evidence of the effectiveness of state-level efforts like face-to-face sales mandates, marketing and promotion limits, retailer licensing, price policies and taxes, and flavor restrictions on reducing e-cigarette initiation and use. Despite the limited evidence, many polices enacted to address youth access are rooted in evidence-based nicotine control strategies that worked well with traditional cigarettes. Therefore, it seems likely that they have the potential to reduce e-cigarette initiation and use. Continued research is needed to better understand effective interventions and policies, including how they influence traditional cigarette smoking, e-cigarette vaping, and other tobacco use.

RECOMMENDATIONS

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

1. That our AMA supports the inclusion of all forms of e-cigarettes (e.g., disposable, refillable cartridge, and tank-based e-cigarettes) in the language and implementation of relevant nicotine-based policies and regulations by the Food and Drug Administration or other regulatory agencies. (New HOD Policy)

2. That current AMA Policy H-495.986, “Tobacco Product Sales and Distribution,” be amended by addition to read as follows:

   Tobacco Product Sales and Distribution, H-495.986
   (1) recognizes the use of e-cigarettes and vaping as an urgent public health epidemic and will actively work with the Food and Drug Administration and other relevant stakeholders to counteract the marketing and use of addictive e-cigarette and vaping devices, including but not limited to bans and strict restrictions on marketing to minors under the age of 21;
   (2) encourages the passage of laws, ordinances and regulations that would set the minimum age for purchasing tobacco products, including electronic nicotine delivery systems (ENDS) and e-cigarettes, at 21 years, and urges strict enforcement of laws prohibiting the sale of tobacco products to minors;
   (3) supports the development of model legislation regarding enforcement of laws restricting children's access to tobacco, including but not limited to attention to the following issues: (a) provision for licensure to sell tobacco and for the revocation thereof; (b) appropriate civil or criminal penalties (e.g., fines, prison terms, license revocation) to deter violation of laws restricting children's access to and possession of tobacco; (c) requirements for merchants to post notices warning minors against attempting to purchase tobacco and to obtain proof of age for would-be purchasers; (d) measures to facilitate enforcement; (e) banning out of-package cigarette sales ("loosies"); and (f) requiring tobacco purchasers and vendors to be of legal smoking age;
   (4) requests that states adequately fund the enforcement of the laws related to tobacco sales to minors;

(5) opposes the use of vending machines to distribute tobacco products and supports ordinances and legislation to ban the use of vending machines for distribution of tobacco products;
(6) seeks a ban on the production, distribution, and sale of candy products that depict or resemble tobacco products;
(7) opposes the distribution of free tobacco products by any means and supports the enactment of legislation prohibiting the disbursement of samples of tobacco and tobacco products by mail;
(8) (a) publicly commends (and so urges local medical societies) pharmacies and pharmacy owners who have chosen not to sell tobacco products, and asks its members to encourage patients to seek out and patronize pharmacies that do not sell tobacco products; (b) encourages other pharmacists and pharmacy owners individually and through their professional associations to remove such products from their stores; (c) urges the American Pharmacists Association, the National Association of Retail Druggists, and other pharmaceutical associations to adopt a position calling for their members to remove tobacco products from their stores; and (d) encourages state medical associations to develop lists of pharmacies that have voluntarily banned the sale of tobacco for distribution to their members; and
(9) opposes the sale of tobacco at any facility where health services are provided; and
(10) supports measures that decrease the overall density of tobacco specialty stores, including but not limited to, preventing retailers from opening new tobacco specialty stores in close proximity to schools. (Modify Current AMA Policy)

That our AMA reaffirm Policies H-495.970, "Regulation of "Cool/Non-Menthol" Tobacco Products, H-495.971 "Opposition to Addition of Flavors to Tobacco Products," and H-495.976, "Opposition to Exempting the Addition of Menthol to Cigarettes." (Reaffirm HOD Policy)

Fiscal Note: less than $1,000

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AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES

Resolution: 401
(A-24)

Introduced by: Integrated Physician Practice Section

Subject: Addressing Social Determinants of Health Through Closed Loop Referral Systems

Referred to: Reference Committee D

Whereas, existing policy addresses data collection on social determinants of health (H-165.822) as well as data interoperability between physician practices, community-based organizations, and other related social care organizations (H-160.896); and

Whereas, once patients are screened positive for social needs, these patients are then referred to community-based organizations and other related social care organizations for intervention; and

Whereas, the White House Office of Science and Technology Policy's *U. S. Playbook to Address Social Determinants of Health* supports the development of "backbone organizations" as infrastructure to link health care systems to community service organizations[1]; and

Whereas, "backbone organizations" should be able to act as closed loop referral systems that keep updated lists of community resources and track completion of referrals; and

Whereas, physician practices still report challenges with using closed loop referral systems to address social determinants of health[2]; therefore be it

RESOLVED, that our American Medical Association study the effectiveness and best practices of closed loop referral systems in addressing social determinants of health. (Directive to Take Action)

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

Received: 4/17/2024

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2. Biedler LB et al. "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.

RELEVANT AMA POLICY

Health Plan Initiatives Addressing Social Determinants of Health H-165.822

Our AMA:
1. recognizing that social determinants of health encompass more than health care, 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;
2. supports continued efforts by public and private health plans to address social determinants of health in health insurance benefit designs;
3. encourages public and private health plans to examine implicit bias and the role of racism and social determinants of health, including through such mechanisms as professional development and other training;
4. supports 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;
5. supports 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; and
6. 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.
Citation: CMS Rep. 7, I-20; Reaffirmed: CMS Rep. 5, I-21; Reaffirmed: CMS Rep. 5, A-22

Expanding Access to Screening Tools for Social Determinants of Health/Social Determinants of Health in Payment Models H-160.896
1. Our AMA supports payment reform policy proposals that incentivize screening for social determinants of health and referral to community support systems.
2. Our AMA: (a) will advocate for data interoperability between physicians' practices, public health, vaccine registries, community-based organizations, and other related social care organizations to promote coordination across the spectrum of care, while maintaining appropriate patient privacy; (b) adopts the position that electronic health records should integrate and display information on social determinants of health and social risk so that such information is actionable by physicians to intervene and mitigate the impacts of social factors on health outcomes; (c) will advocate for adequate standards and capabilities for electronic health records to effectively tag and protect sensitive data before it can be shared or reshared; and (d) supports ongoing monitoring and data collection regarding unintended harm to patients from sharing information on social determinants of health and social risk.
Citation: BOT Rep. 39, A-18; Reaffirmed: CMS Rep. 10, A-19; Appended: Res. 40, A-22

AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES

Resolution: 402
(A-24)

Introduced by: Medical Student Section

Subject: Guardianship and Conservatorship Reform

Referred to: Reference Committee D

Whereas, 1.3 million people (including their $50 billion in assets) are in court-appointed guardianships or conservatorships, the vast majority of which are permanent guardianships, the most restrictive form and the most difficult and expensive to amend[1]; and

Whereas, due to wide state variation, data on guardian abuse is limited, but reports indicate hundreds of cases of physical and financial abuse[1-4;] and

Whereas, a Senate Committee on Aging report noted the harm of our guardianship system on older and disabled patients, and emphasized the need for less restrictive alternatives[1]; and

Whereas, the elderly American population is projected to nearly double by 2060 and comprise over 20% of the total population[1,5-6]; and

Whereas, physicians play a major role in determining guardianships by providing medical evidence and expertise[7]; and

Whereas, individuals with intellectual and developmental disabilities (IDD) face barriers to adequate capacity determinations that increase their risk of overly restrictive guardianships[8]; and

Whereas, supported decision making (SDM) is a less restrictive alternative to guardianships already adopted by 12 states and several other countries that demonstrates preservation of decision-making capacity, cognitive function, and social support[9-11]; therefore be it

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)

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

Received: 03/28/2024

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RELEVANT 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. [CCB/CLRPD Rep. 3, A-14; Reaffirmed: BOT Rep. 9, I-15; Reaffirmed: Res. 517, A-16; Reaffirmed: BOT Rep. 05, I-16; Reaffirmed in lieu of: Res. 121, A-17]

Code of Medical Ethics Opinion 2.1.2 Decisions for Adult Patients Who Lack Capacity
Respect for patient autonomy is central to professional ethics and physicians should involve patients in health care decisions commensurate with the patient's decision-making capacity. Even when a medical condition or disorder impairs a patient's decision-making capacity, the patient may still be able to participate in some aspects of decision making. Physicians should engage patients whose capacity is impaired in decisions involving their own care to the greatest extent possible, including when the patient has previously designated a surrogate to make decisions on his or her behalf.
When a patient lacks decision-making capacity, the physician has an ethical responsibility to:
(a) Identify an appropriate surrogate to make decisions on the patient's behalf:
(i) the person the patient designated as surrogate through a durable power of attorney for health care or other mechanism; or
(ii) a family member or other intimate associate, in keeping with applicable law and policy if the patient has not previously designated a surrogate.
(b) Recognize that the patient's surrogate is entitled to the same respect as the patient.
(c) Provide advice, guidance, and support to the surrogate.
(d) Assist the surrogate to make decisions in keeping with the standard of substituted judgment, basing decisions on:
(i) the patient's preferences (if any) as expressed in an advance directive or as documented in the medical record;
(ii) the patient's views about life and how it should be lived;
(iii) how the patient constructed his or her life story; and
(iv) the patient's attitudes toward sickness, suffering, and certain medical procedures.
(e) Assist the surrogate to make decisions in keeping with the best interest standard when the patient's preferences and values are not known and cannot reasonably be inferred, such as when the patient has not previously expressed preferences or has never had decision-making capacity. Best interest decisions should be based on:
(i) the pain and suffering associated with the intervention;
(ii) the degree of and potential for benefit;
(iii) impairments that may result from the intervention;
(iv) quality of life as experienced by the patient.
(f) Consult an ethics committee or other institutional resource when:
(i) no surrogate is available or there is ongoing disagreement about who is the appropriate surrogate;
(ii) ongoing disagreement about a treatment decision cannot be resolved; or
(iii) the physician judges that the surrogate's decision:
a. is clearly not what the patient would have decided when the patient's preferences are known or can be inferred;
b. could not reasonably be judged to be in the patient's best interest; or
c. primarily serves the interests of the surrogate or other third party rather than the patient.
AMA Principles of Medical Ethics: I,III,VIII*;* Issued: 2016

AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES

Resolution: 403
(A-24)

Introduced by: Medical Student Section

Subject: Occupational Screenings for Lung Disease

Referred to: Reference Committee D

Whereas, from 1999 to 2016, the average years of potential life lost due to pneumoconiosis has increased from 8.1 to 12.6 years[1]; and

Whereas, the recent resurgence of pneumoconiosis poses a threat to younger patients, with increased disease burden at initial diagnosis, and affects a growing number of occupations such as metal miners, denim workers, pottery and ceramics workers, and stone masons[2-6.]; and

Whereas, laborers affected by pneumoconiosis are disproportionately of Latine or American Indian descent, are more likely to live in isolated and rural communities without access to adequate preventive care, and are less likely to have graduated high school[7-8.]; and

Whereas, many laborers who depended heavily on mobile health clinics and screening centers were left without options for care when many of these were halted due to COVID[8.]; and

Whereas, occupational screening measures, including the federal National Institute for Occupational Safety & Health's Coal Workers' Health Surveillance Program for radiographic and spirometric screenings, have helped decrease pneumoconiosis mortality[5,9-12]; therefore be it

RESOLVED, that our American Medical Association amend Policy H-365.988, "Integration of Occupational Medicine, Environmental Health, and Injury Prevention Programs into Public Health Agencies" by addition and deletion as follows:

> Integration of Occupational Medicine, Environmental Health, and Injury Prevention Programs into Public Health Agencies, H-365.988
> Our AMA ~~supports~~: (1) supports the integration of occupational health and environmental health and injury prevention programs within existing health departments at the state and local level; (2) supports taking a leadership role in assisting state medical societies in implementation of such programs; ~~and~~ (3) supports working with federal agencies to ensure that "health" is the primary determinant in establishing environmental and occupational health policy; (4) recognizes barriers to accessibility and utilization of such programs; (5) recognizes inequities in occupational health screenings for pulmonary lung disease and supports efforts to increase accessibility of these screenings in marginalized communities; and (6) encourages utilization of accessible screenings, such as those used in the NIOSH Coal Workers Health Surveillance Program, for other at risk occupational groups and utilization of these free screenings. (Modify Current HOD Policy)

Fiscal Note: Minimal - less than $1,000

Received: 3/28/2024

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RELEVANT AMA POLICY

H-185.936 Lung Cancer Screening to be Considered Standard Care

Our AMA: (1) recommends that coverage of screening low-dose CT (LDCT) scans for patients at high risk for lung cancer by Medicare, Medicaid, and private insurance be a required covered benefit; (2) will empower the American public with knowledge through an education campaign to raise awareness of lung cancer screening with low-dose CT scans in high-risk patients to improve screening rates and decrease the leading cause of cancer death in the United States; and (3) will work with interested national medical specialty societies and state medical associations to urge the Centers for Medicare & Medicaid Services and state Medicaid programs to increase access to low-dose CT screening for Medicaid patients at high risk for lung cancer by including it as a covered benefit, without cost-sharing or prior authorization requirements, and increasing funding for research and education to improve awareness and utilization of the screening among eligible enrollees. [Sub. Res. 114, A-14; Appended: Res. 418, A-22; Appended: Res. 112, A-23]

H-135.944 Further Limit of Asbestos in the United States

Our AMA supports legislation further restricting the use of asbestos in the United States. [Res. 215, A-07; Reaffirmed: BOT Rep. 22, A-17]

AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES

Resolution: 404
(A-24)

Introduced by: Medical Student Section

Subject: Protections Against Surgical Smoke Exposure

Referred to: Reference Committee D

Whereas, surgical smoke refers to smoke produced by electrical surgical devices in the operating room, which can pose an occupational hazard to healthcare workers[1, 2, 3]; and

Whereas, the carcinogenic effects of surgical smoke exposure from one operation have been estimated to be equal to the effects of smoking one pack of cigarettes (or six unfiltered cigarettes per gram of tissue ablated)[2,4]; and

Whereas, surgical smoke can cause acute effects such as headache, cough, sore throat, eye irritation, nausea, and dizziness[5,6]; and

Whereas, surgical smoke is associated with an increased risk of cancer, inflammatory interstitial pneumonia, and emphysema among surgeons compared to the general population[7,8,9]; and

Whereas, the harms of surgical smoke cannot be sufficiently prevented by use of surgical masks or by general operating room ventilation[5,10]; and

Whereas, the CDC recommends the use of local exhaust ventilation (such as portable smoke evacuators and room suction systems) alongside general ventilation to adequately reduce exposure to harmful particulates, but local exhaust ventilation is often not used[11-14]; and

Whereas, NIOSH's Health and Safety Practices Survey of Healthcare Workers indicates that staff who receive increased training and who work at employers with standard procedures for surgical smoke hazards are more likely to use local exhaust ventilation[13]; and

Whereas, the Occupational Safety and Health Association (OSHA) has no standardized protocol for surgical smoke exposure, but the National Fire Protection Association (NFPA) recently included a requirement to capture smoke in their 2024 edition of the Health Care Facilities Code, which is used by the Centers for Medicare and Medicaid Services[15-16]; and

Whereas, fifteen states have laws to reduce surgical smoke exposure[16]; therefore be it

RESOLVED, that our American Medical Association support efforts to limit surgical smoke exposure in operating rooms. (New HOD Policy)

Fiscal Note: Minimal - less than $1,000

Received: 4/5/2024

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RELEVANT AMA POLICY

H-365.996 Regulation of Occupational Carcinogens
The AMA supports using the best available scientific data, including data derived from animal models, as a basis for regulation of occupational carcinogens.
[Sub. Res. 81, I-82; Reaffirmed: CLRPD Rep. A, I-92; Reaffirmed: CSA Rep. 8, A-03; Reaffirmed: CSAPH Rep. 1, A-13; Modified: CSAPH Rep. 8, A-23]

H-365.980 OSHA Regulations Pertaining to Physicians' Offices and Hospitals
The AMA continues to review the data and rationale used to substantiate OSHA regulations pertaining to medical practice in physician offices and health care facilities. Where OSHA rules and regulations are found to be unnecessary or inappropriate, the AMA will work for their modification or repeal. [Sub. Res. 218, A-94; Reaffirmed: BOT Rep. 29, A-04; Reaffirmed: BOT Rep. 19, A-14]

H-295.939 Protecting Medical Trainees from Hazardous Exposure
1. Our AMA will encourage all health care-related educational institutions to apply the Occupational Safety and Health Administration (OSHA) Blood Borne Pathogen standard and OSHA hazardous exposure regulations, including communication requirements, equally to employees, students, and residents/fellows.
2. Our AMA recommends: (a) that the Accreditation Council for Graduate Medical Education revise the common program requirements to require education and subsequent demonstration of competence regarding potential exposure to hazardous agents relevant to specific specialties, including but not limited to: appropriate handling of hazardous agents, potential risks of exposure to hazardous agents, situational avoidance of hazardous agents, and appropriate responses when exposure to hazardous material may have occurred in the workplace/training site; (b) (i) that medical school policies on hazardous exposure include options to limit hazardous agent exposure in a manner that does not impact students' ability to successfully complete their training, and (ii) that medical school policies on continuity of educational requirements toward degree completion address leaves of absence or temporary reassignments when a

pregnant trainee wishes to minimize the risks of hazardous exposures that may affect the trainee's and/or fetus' personal health status; (c) that medical schools and health care settings with medical learners be vigilant in updating educational material and protective measures regarding hazardous agent exposure of its learners and make this information readily available to students, faculty, and staff; and (d) medical schools and other sponsors of health professions education programs ensure that their students and trainees meet the same requirements for education regarding hazardous materials and potential exposures as faculty and staff. [Sub. Res. 229, I-92; Reaffirmed: CME Rep. 2, A-03; Reaffirmed: CME Rep. 2, A-13; Modified: CME/CSAPH Joint Rep. 01, A-19]

AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES

Resolution: 405
(A-24)

Introduced by: Medical Student Section

Subject: Default Proceed Firearm Sales and Safe Storage Laws

Referred to: Reference Committee D

Whereas, default proceed sales, referred to as the "Charleston loophole," allow vendors to proceed with firearm sales if a background check is inconclusive after three business days, and related deaths and injuries have resulted in $88 million in settlements[1-3]; and

Whereas, in 2021, the Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) received 5,201 transaction denials due to delayed background checks, which are intended to result in retrieval of firearms from individuals who were able to purchase a firearm but later failed their background check[4-9]; and

Whereas, perpetrators in both the 2015 Charleston Church and 2017 Sutherland Springs shootings obtained firearms through default proceed sales, despite criminal records that should have restricted them from purchasing firearms[9-11]; and

Whereas, 22% of default proceed sales in 2018 resulted in transfer of a gun to prohibited purchasers with a history of domestic violence[12]; and

Whereas, 77% of delayed background checks remain unresolved after 88 days, resulting in destruction of the record, the transaction request, and any data collected from the Federal Bureau of Investigation's National Instant Criminal Background Check System[13-15]; and

Whereas, while the AMA has supported the Bipartisan Background Checks Act, the AMA has not publicly supported the Default Proceed Sale Transparency Act[16-18]; and

Whereas, the Giffords Law Center defines safe storage of firearms as locked storage of an unloaded firearm with ammunition stored in a separate location[19]; and

Whereas, while the AMA supports child access prevention (CAP) laws, these laws vary widely in their applicability, with some only applying if reasonable belief exists that a child could gain access to the firearm, some only if a child does gain access to a firearm, and some only if a child causes injury or death with a firearm[19-20]; and

Whereas, unlike CAP laws, safe storage laws broadly require storage that also prevents access by unauthorized adults and firearm theft[20]; and

Whereas, 20 states have CAP laws, but only 5 states have safe storage laws[20-21]; and

Whereas, 1 million firearms were stolen from private owners from 2017 to 2021, and studies indicate that guns stored unlocked are more likely to be stolen and that 80% of perpetrators in K-12 school shootings stole their firearms from a relative[22-25]; and

Whereas, most firearms used in crimes start as legal purchases that are later trafficked as illegal firearms, often through theft, with nearly half of the 1.4 million documented firearms used in crimes from 2017 to 2021 being purchased 3 years or less prior to the crime[26-29]; and

Whereas, the majority of stolen firearms are stolen from vehicles, with at least 40,000 firearms stolen in 2020[30-31]; and

Whereas, while household access to a firearm is associated with a 1700% increased suicide risk, safe storage can account for 60% of the reduction in suicide mortality[32-36]; and

Whereas, the AMA has not publicly supported the Firearm Owners Responsibility and Safety Act, which would have created a comprehensive federal safe storage requirement not limited to child access[37]; therefore be it

RESOLVED, that our American Medical Association amend Policy H-145.996, "Firearm Availability," by addition as follows;

Firearm Availability H-145.996

1. Our AMA: (a) advocates a waiting period and background check for all firearm purchasers; (b) encourages legislation that enforces a waiting period and background check for all firearm purchasers; (c) opposes firearm sales to individuals for whom a background check has not been completed; (d) opposes destruction of any incomplete background checks for firearm sales; (e) advocates for public annual reporting by relevant agencies on inappropriate firearm sales, including number of default proceed sales; number of firearms retrieved from individuals after these sales through criminal investigations, across state lines, or via other means; and average time passed between background check completion and retrieval; and (f~~e~~) urges legislation to prohibit the manufacture, sale or import of lethal and non-lethal guns made of plastic, ceramics, or other non-metallic materials that cannot be detected by airport and weapon detection devices.
2. Our AMA supports requiring the licensing/permitting of firearms-owners and purchasers, including the completion of a required safety course, and registration of all firearms.
3. Our AMA supports "gun violence restraining orders" for individuals arrested or convicted of domestic violence or stalking, and supports extreme risk protection orders, commonly known as "red-flag" laws, for individuals who have demonstrated significant signs of potential violence. In supporting restraining orders and "red-flag" laws, we also support the importance of due process so that individuals can petition for their rights to be restored.
4. Our AMA advocates for (a) federal and state policies that prevent inheritance, gifting, or transfer of ownership of firearms without adhering to all federal and state requirements for background checks, waiting periods, and licensure; (b) federal and state policies to prevent "multiple sales" of firearms, defined as the sale of multiple firearms to the same purchaser within five business days; and (c) federal and state policies implementing background checks for ammunition purchases.

(Modify Current HOD Policy); and be it further

RESOLVED, that our American Medical Association amend Policy H-145.990, "Prevention of Firearm Accidents in Children," by addition as follows:

> Prevention of Firearm Accidents in Children H-145.990
> 1) Our AMA (a) supports increasing efforts to reduce pediatric firearm morbidity and mortality by encouraging its members to (i) inquire as to the presence of household firearms as a part of childproofing the home; (ii) educate patients to the dangers of firearms to children; (iii) encourage patients to educate their children and neighbors as to the dangers of firearms; and (iv) routinely remind patients to obtain firearm safety locks, to store firearms under lock and key, and to store ammunition separately from firearms;(b) encourages state medical societies to work with other organizations to increase public education about firearm safety; (c) encourages organized medical staffs and other physician organizations, including state and local medical societies, to recommend programs for teaching firearm safety to children; and (d) supports enactment of Child Access Prevention laws and other types of comprehensive safe storage laws that are consistent with AMA policy.
> 2) Our AMA and all interested medical societies wil (a) educate the public about: (b) best practices for firearm storage safety; (c) misconceptions families have regarding child response to encountering a firearm in the home; and (c) the need to ask other families with whom the child interacts regarding the presence and storage of firearms in other homes the child may enter.

(Modify Current HOD Policy)

Fiscal Note: Minimal - less than $1,000

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RELEVANT AMA POLICY

H-145.970 Violence Prevention

Our AMA: (1) encourages the enactment of state laws requiring the reporting of all classes of prohibited individuals, as defined by state and federal law, to the National Instant Criminal Background Check System (NICS); (2) supports federal funding to provide grants to states to improve NICS reporting; and (3) encourages states to automate the reporting of relevant information to NICS to improve the quality and timeliness of the data. [BOT Rep. 11, I-18; Reaffirmed: CSAPH Rep. 3, I-21]

H-145.972 Firearms and High-Risk Individuals
Our AMA supports: (1) the establishment of laws allowing family members, intimate partners, household members, and state, federal, local, and tribal law enforcement personnel to petition a court for the removal of a firearm when there is a high or imminent risk for violence; and (2) the establishment of laws and procedures through which physicians and other medical professionals can, in partnership with appropriate parties, contribute to the inception and development of such petitions; (3) prohibiting persons who are under domestic violence restraining orders, convicted of misdemeanor domestic violence crimes or stalking, from possessing or purchasing firearms; (4) expanding domestic violence restraining orders to include dating partners; (5) requiring states to have protocols or processes in place for requiring the removal of firearms by prohibited persons; (6) requiring domestic violence restraining orders and gun violence restraining orders to be entered into the National Instant Criminal Background Check System; and (7) efforts to ensure the public is aware of the existence of laws that allow for the removal of firearms from high-risk individuals.
Our AMA will work with relevant parties to update medical curricula and physician training regarding how to approach conversations with patients and families and to utilize Extreme Risk Protection Orders. [CSAPH Rep. 04, A-18; Reaffirmed: BOT Rep. 11, I-18; Reaffirmed: CSAPH Rep. 3, I-21; Modified: Res. 405, A-23]

H-145.991 Waiting Periods for Firearm Purchases
The AMA supports using its influence in matters of health to effect passage of legislation in the Congress of the U.S. mandating a national waiting period that allows for a police background and positive identification check for anyone who wants to purchase a handgun from a gun dealer anywhere in our country. [Sub. Res. 34, I-89; Reaffirmed: BOT Rep. 8, I-93; Reaffirmed: BOT Rep. 50, I-93; Reaffirmed: CSA Rep. 8, A-05; Reaffirmation A-07; Reaffirmed: BOT Rep. 22, A-17; Modified: Res. 401, A-17; Reaffirmation: A-18; Reaffirmation: I-18]

H-145.992 Waiting Period Before Gun Purchase
The AMA supports legislation calling for a waiting period of at least one week before purchasing any form of firearm in the U.S. [Res. 171, A-89; Reaffirmed: BOT Rep.50, I-93; Reaffirmed: CSA Rep. 8, A-05; Reaffirmation A-07; Reaffirmed: BOT Rep. 22, A-17; Reaffirmation: A-18]

H-145.978 Gun Safety
Our AMA: (1) recommends and promotes the use of trigger locks and locked gun cabinets as safety precautions; and (2) endorses standards for firearm construction reducing the likelihood of accidental discharge when a gun is dropped and that standardized drop tests be developed. [Res. 425, I-98; Reaffirmed: Res. 409, A-00; Reaffirmed: CSAPH Rep. 1, A-10; Reaffirmation A-13; Modified: CSAPH Rep. 8, A-23]

H-145.999 Gun Regulation
Our AMA supports stricter enforcement of present federal and state gun legislation and the imposition of mandated penalties by the judiciary for crimes committed with the use of a firearm, including the illegal possession of a firearm. [Sub. Res. 31, I-81; Reaffirmed: CLRPD Rep. F, I-91; Amended: BOT Rep. I-93-50; Reaffirmed: Res. 409, A-00; Reaffirmation A-07; Reaffirmed: BOT Rep. 22, A-17; Modified: Res. 401, A-17; Reaffirmation: I-18]

AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES

Resolution: 406
(A-24)

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

Subject: Opposition to Pay-to-Stay Incarceration Fees

Referred to: Reference Committee D

Whereas, "pay-to-stay" fees require individuals to pay for their own imprisonment to cover housing and food costs and are used in 49 states, including $249 daily in Connecticut, $80 daily in Maine and Kentucky, $66 daily in Ohio, and $20 daily in Alabama[1-5]; and

Whereas, average hourly wages during incarceration are $0.13 to $1.30 per hour, and in the first year after release, 49% earn $500 or less and 80% earn less than $15,000[6-7]; and

Whereas, because only 10-15% are ever collected, pay-to-stay fees do not significantly contribute to prison budgets, but permanently damage the credit records of individuals leaving incarceration if not paid within 180 days after release and harm future prospects for stable employment and housing[5,8,9]; and

Whereas, pay-to-stay fees keep formerly incarcerated individuals trapped in a cycle of poverty and imprisonment, as debts hinder re-entry, contribute to recidivism, and force individuals to forgo basic necessities in order to make payments[10-12]; therefore be it

RESOLVED, that our American Medical Association oppose fees charged to incarcerated individuals for room and board and advocate for federal and state efforts to repeal statutes and ordinances which permit inmates to be charged for room and board. (Directive to Take Action)

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

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RELEVANT AMA Policy

D-430.992 Reducing the Burden of Incarceration on Public Health
1. 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; and (3) housing support for formerly incarcerated people, including programs that facilitate access to immediate housing after release from carceral settings.
2. 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]

AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES

Resolution: 407
(A-24)

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

Subject: Racial Misclassification

Referred to: Reference Committee D

Whereas, the National Center for Health Statistics maintains a National Death Index (NDI), a centralized database of death record information on file in state vital statistics offices[1-2]; and

Whereas, this data can be linked to databases maintained by agencies like the Centers for Disease Control, Food and Drug Administration, and Centers for Medicare and Medicaid Services to increase the availability of information on an individual's cause of death[1-5]; and

Whereas, a key limitation of these vital statistic data is the misclassification of race and ethnicity on death certificates and in other databases (e.g., inaccurate from minority identification to white), limiting the quality and applicability of data available for racial and ethnic minority populations experiencing health disparities[6-7]; and

Whereas, populations more likely to be misclassified on their death certificates include, but are not limited to, American Indians and Alaska Natives (AI/AN), Asian Americans, and Native Hawaiians and Other Pacific Islanders (NHPI)[6,8-13]; and

Whereas, a retrospective linkage of regional records maintained by the Indian Health Service and Oklahoma State Health Department Vital Records reported a 29% underestimation of all-cause mortality in the AI/AN population[6]; and

Whereas, an updated version of the National Longitudinal Mortality Study (1999-2011 decedents versus 1990-1998 decedents) found that racial misclassification remained high at 40% for the AI/AN population and changed from 5% to 3%, for the Hispanic population and from 7% to 3% for the Asian or Pacific Islander (API) population[14-15]; and

Whereas, racial misclassification on death certificates is compounded by missing or incorrect race and ethnicity data in other databases, such as those maintained by federal health programs, hospital systems, and related entities[15-19]; and

Whereas, a 2021 study of 4,231,370 Medicare beneficiaries who utilized home health care services in 2015 found substantial racial misclassification of self-identified Hispanic, Asian American, Pacific Islander, and AI/AN beneficiaries (more than 80% for AI/AN in 24 states and Puerto Rico) as non-Hispanic white[20]; and

Whereas, a 2019 study that conducted ICD-9/ICD-10 record linkages between the Northwest Tribal Registry and Oregon and Washington hospital discharge datasets increased the ascertainment of neonatal abstinence syndrome cases among AI/AN newborns by 8.8% in Oregon and by 18.1% in Washington[21]; and

Whereas, according to the United States Centers for Disease Control and Prevention, more AI/AN patients are misclassified as another race in cancer registry records than patients in other racial groups, likely from one group to identification as non-Hispanic white[22-23]; and

Whereas, a 2021 prospective observational study of patients admitted to an urban Level 1 trauma center found that 45 of 98 patients self-identifying as Hispanic (45.9%) had inaccurately recorded ethnicity in the trauma registry[24]; and

Whereas, decedent race and ethnicity may be subject to bias as a 2018 project by the National Consortium for Urban Indian Health found that 48% of surveyed funeral directors were recording an individual's race on death certificates by observation of the individual rather than asking their next of kin[9,25]; and

Whereas, mortality-related research data, combined with other clinically-based registries, is a fundamental tool for establishing public health priorities (e.g., advocacy, resource allocation, stakeholder engagement) at the local, state, tribal and federal level and is an important part of Indigenous Data Sovereignty (H-460.884)[26]; therefore be it

RESOLVED, that our American Medical Association amend H-85.953, "Improving Death Certification Accuracy and Completion," by addition as follows:

> Improving Death Certification Accuracy and Completion H-85.953
> 1. Our AMA: (a) acknowledges that the reporting of vital events is an integral part of patient care; (b) urges physicians to ensure completion of all state vital records carefully and thoroughly with special attention to the use of standard nomenclature, using legible writing and accurate diagnoses; and (c) supports notifying state medical societies and state departments of vital statistics of this policy and encouraging their assistance and cooperation in implementing it.
> 2. Our AMA also: (a) supports the position that efforts to improve cause of death statistics are indicated and necessary; (b) endorses the concept that educational efforts to improve death certificates should be focused on physicians, particularly those who take care of patients in facilities where patients are likely to die, namely in acute hospitals, nursing homes and hospices; and (c) supports the concept that training sessions in completion of death certificates should be (i) included in hospital house staff orientation sessions and clinical pathologic conferences; (ii) integrated into continuing medical education presentations; (iii) mandatory in mortality conferences; and (iv) included as part of in-service training programs for nursing homes, hospices and geriatric physicians.
> 3. Our AMA further: (a) promotes and encourages the use of ICD codes among physicians as they complete medical claims, hospital discharge summaries, death certificates, and other documents; (b) supports cooperating with the National Center for Health Statistics (NCHS) in monitoring the four existing models for collecting tobacco-use data; (c) urges the NCHS to identify appropriate definitions, categories, and methods of collecting risk-factor data, including quantification of exposure, for inclusion on the U.S. Standard Certificates, and that subsequent data be appropriately disseminated; and (d) continues to encourage all physicians to report tobacco use, exposure to environmental tobacco smoke, and other risk factors using the current standard death certificate format.

4. Our AMA further supports HIPAA-compliant data linkages between Native Hawaiian and Tribal Registries, population-based and hospital-based clinical trial and disease registries, and local, state, tribal, and federal vital statistics databases aimed at minimizing racial misclassification. (Modify Current HOD Policy)

Fiscal Note: Minimal - less than $1,000

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RELEVANT AMA Policy

H-315.963 Accurate Collection of Preferred Language and Disaggregated Race and Ethnicity to Characterize Health Disparities

Our AMA encourages the Office of the National Coordinator for Health Information Technology (ONC) to expand their data collection requirements, such that electronic health record (EHR) vendors include options for disaggregated coding of race, ethnicity, and preferred language. [Res. 03, I-19]

H-350.950 Tribal Public Health Authority

Our AMA will support; (1) the Department of Health and Human Services issuing guidance, through the Centers for Disease Control and Prevention and the Indian Health Service, on Public Health and Tribal-affiliated data-sharing with American Indian and Alaska Native Tribes and Villages and Tribal Epidemiology Centers; and (2) the use of data-sharing agreements between local and state public health departments and American Indian and Alaska Native Tribes and Villages and Tribal Epidemiology Centers. [Res. 206, A-23]

AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES

Resolution: 408
(A-24)

Introduced by: Medical Student Section, American College of Physicians

Subject: Indian Water Rights

Referred to: Reference Committee D

Whereas, the United States is a signatory of the 2007 United Nations Declaration on the Rights of Indigenous People (UNDRIP), which states that Indigenous Peoples "have the right to own, use, develop, and control the lands, territories and resources that they possess by reason of traditional ownership or other traditional occupation or use, as well as those which they have otherwise acquired"[1]; and

Whereas, nearly half of American Indian/Alaska Native (AI/AN) households on reservations lack access to clean water or adequate sanitation, including 6.5% of American Indian households on and off reservations and 13.5% of Alaska Native villages and reservations (compared to under 1% of the general US population)[2-6]; and

Whereas, regardless of income, AI/AN households are 10 times as likely as white households to lack indoor plumbing, an early correlate of high COVID rates on reservations[2,7]; and

Whereas, only 42 AI/AN Tribes and Villages meet Environmental Protection Agency (EPA) standards for water quality[8]; and

Whereas, a third of Navajo Nation residents lack access to clean water and are 67 times more likely than other Americans to live without running water or toilets, due in part to drought and heavy metals, such as uranium, leached from abandoned mining sites[9-11]; and

Whereas, unsafe groundwater resources on the Navajo Nation and other Tribal lands, lead to higher rates of cancer, kidney disease, autoimmune disorders, skin infection, diabetes, and infant hospitalizations for pneumonia[12-14]; and

Whereas, water systems are part of Indigenous ways of knowing and ceremonies in many Indigenous cultures, thus water insecurity impacts physical, cultural, and spiritual wellbeing in AI/AN communities, with loss of culture itself a risk factor for many chronic conditions among AI/AN individuals[13-17]; and

Whereas, individuals without adequate water sources require vehicles, sleds, or wheelbarrows to travel miles to wells and water stations and haul water back to their homes[18]; and

Whereas, Navajo Nation families spend $43,000 per acre-foot of water with hauled water, compared to $600 for the average American with running water[16]; and

Whereas, Winters v US (1908) ruled that Tribes and their members have a right to sufficient water access for residential, economic, governmental, and other needs[19-20]; and

Whereas, lengthy disputes over Indian water rights to settle claims of water rights holders and improve water management in AI/AN communities are expensive to litigate[21]; and

Whereas, Congress must approve all Indian water right settlements between Tribes, states, and the US, delaying implementation, funds, and land transfers for years[22-24]; and

Whereas, the Biden-Harris Administration is coordinating federal agencies to meet Tribal water needs, support Indian water right settlements, and increase Tribal participation in stewardship of federal lands and water systems of significance to Tribal Nations[25]; and

Whereas, the Indian Health Service (IHS) investigates and manages environmental health services on Tribal lands, including the provision of health services[26]; and

Whereas, the IHS provides environmental engineering and sanitation facilities to AI/AN communities, including the cooperative development and construction of safe water sources, wastewater management, and solid waste systems[27-28]; and

Whereas, Indian water rights settlements harm access to health care, considering the year long closure of a newly constructed hospital on the Navajo Nation due to inadequate access to on-site water[29]; and

Whereas, for every $1 spent on water and sewage infrastructure, the IHS could save $1.23 in healthcare costs from diseases related to unsafe water[30]; therefore be it

RESOLVED, that our American Medical Association raise awareness about ongoing water rights issues for federally-recognized American Indian and Alaska Native Tribes and Villages in appropriate forums (Directive to Take Action); and be it further

RESOLVED, that our AMA support improving access to water and adequate sanitation, water treatment, and environmental support and health services on American Indian and Alaska Native trust lands. (New HOD Policy)

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

Received: 4/10/2024

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RELEVANT AMA Policy

H-135.928 Safe Drinking Water

Our AMA supports updates to the U.S. Environmental Protection Agency's Lead and Copper Rule as well as other state and federal laws to eliminate exposure to lead through drinking water by:
(1) Removing, in a timely manner, lead service lines and other leaded plumbing materials that come into contact with drinking water;

(2) Requiring public water systems to establish a mechanism for consumers to access information on lead service line locations;
(3) Informing consumers about the health-risks of partial lead service line replacement;
(4) Requiring the inclusion of schools, licensed daycare, and health care settings among the sites routinely tested by municipal water quality assurance systems;
(5) Creating and implementing standardized protocols and regulations pertaining to water quality testing, reporting and remediation to ensure the safety of water in schools and child care centers;
(6) Improving public access to testing data on water lead levels by requiring testing results from public water systems to be posted on a publicly available website in a reasonable timeframe thereby allowing consumers to take precautions to protect their health;
(7) Establishing more robust and frequent public education efforts and outreach to consumers that have lead service lines, including vulnerable populations;
(8) Requiring public water systems to notify public health agencies and health care providers when local water samples test above the action level for lead;
(9) Seeking to shorten and streamline the compliance deadline requirements in the Safe Drinking Water Act; and
(10) Actively pursuing changes to the federal lead and copper rules consistent with this policy.
[Res. 409, A-16; Modified: Res. 422, A-18; Reaffirmed: BOT Rep. 29, A-19]

D-440.924 Universal Access for Essential Public Health Services
Our AMA: (1) supports equitable access to the 10 Essential Public Health Services and the Foundational Public Health Services to protect and promote the health of all people in all communities; (2) encourages state, local, tribal, and territorial public health departments to pursue accreditation through the Public Health Accreditation Board (PHAB); (3) will work with appropriate stakeholders to develop a comprehensive list of minimum necessary programs and services to protect the public health of citizens in all state and local jurisdictions and ensure adequate provisions of public health, including, but not limited to clean water, functional sewage systems, access to vaccines, and other public health standards; and (4) will work with the National Association of City and County Health Officials (NACCHO), the Association of State and Territorial Health Officials (ASTHO), the Big Cities Health Coalition, the Centers for Disease Control and Prevention (CDC), and other related entities that are working to assess and assure appropriate funding levels, service capacity, and adequate infrastructure of the nation's public health system, including for rural jurisdictions. [Res. 419, A-19; Modified: CSAPH Rep. 2, A-22]

H-350.977 Indian Health Service
The policy of the AMA is to support efforts in Congress to enable the Indian Health Service to meet its obligation to bring American Indian health up to the general population level. The AMA specifically recommends: (1) Indian Population: (a) In current education programs, and in the expansion of educational activities suggested below, special consideration be given to involving the American Indian and Alaska native population in training for the various health professions, in the expectation that such professionals, if provided with adequate professional resources, facilities, and income, will be more likely to serve the tribal areas permanently; (b) Exploration with American Indian leaders of the possibility of increased numbers of nonfederal American Indian health centers, under tribal sponsorship, to expand the American Indian role in its own health care; (c) Increased involvement of private practitioners and facilities in American Indian care, through such mechanisms as agreements with tribal leaders or Indian Health Service contracts, as well as normal private practice relationships; and (d) Improvement in transportation to make access to existing private care easier for the American Indian population.
(2) Federal Facilities: Based on the distribution of the eligible population, transportation facilities and roads, and the availability of alternative nonfederal resources, the AMA recommends that those Indian Health Service facilities currently necessary for American Indian care be identified and that an immediate construction and modernization program be initiated to bring these facilities up to current standards of practice and accreditation.
(3) Manpower: (a) Compensation for Indian Health Service physicians be increased to a level competitive with other Federal agencies and nongovernmental service; (b) Consideration should be given to increased compensation for service in remote areas; (c) In conjunction with improvement of Service facilities, efforts should be made to establish closer ties with teaching centers, thus increasing both the available manpower and the level of professional expertise available for consultation; (d) Allied health professional staffing of Service facilities should be maintained at a level appropriate to the special needs of the population served; (e) Continuing education opportunities should be provided for those health

professionals serving these communities, and especially those in remote areas, and, increased peer contact, both to maintain the quality of care and to avert professional isolation; and (f) Consideration should be given to a federal statement of policy supporting continuation of the Public Health Service to reduce the great uncertainty now felt by many career officers of the corps.
(4) Medical Societies: In those states where Indian Health Service facilities are located, and in counties containing or adjacent to Service facilities, that the appropriate medical societies should explore the possibility of increased formal liaison with local Indian Health Service physicians. Increased support from organized medicine for improvement of health care provided under their direction, including professional consultation and involvement in society activities should be pursued.
(5) Our AMA also support the removal of any requirement for competitive bidding in the Indian Health Service that compromises proper care for the American Indian population.
(6) Our AMA will advocate that the Indian Health Service (IHS) establish an Office of Academic Affiliations responsible for coordinating partnerships with LCME- and COCA-accredited medical schools and ACGME-accredited residency programs.
(7) Our AMA will encourage the development of funding streams to promote rotations and learning opportunities at Indian Health Service, Tribal, and Urban Indian Health Programs. [CLRPD Rep. 3, I-98; Reaffirmed: CLRPD Rep. 1, A-08; Reaffirmation A-12; Reaffirmed: Res. 233, A-13; Appended: Res. 305, A-23; Reaffirmed: BOT Rep. 09, A-23]

AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES

Resolution: 409
(A-24)

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

Subject: Toxic Heavy Metals

Referred to: Reference Committee D

Whereas, toxic heavy metals (THMs) including mercury, lead, cadmium, chromium, and arsenic enter the environment through natural processes as well as via anthropogenic activities such as power plants, landfills, mining, fossil fuel use, urban runoff, and agriculture[1-3]; and

Whereas, national regulations protecting the public from THM exposure are sporadic, eg no air quality standards for cadmium levels, no regulations on heavy metals in soil[4-6]; and

Whereas, urban farms and gardens are at risk of higher levels of heavy metal contaminants in soil, air, water, and food[6-9]; and

Whereas, individuals at military bases are chronically exposed to toxic heavy metals due to the use of burn pits[10]; and

Whereas, the World Health Organization (WHO) ranks the US in the top 10 for highest levels of arsenic contamination in groundwater, and dangerous levels of arsenic have been found in drinking water wells in over 25 states, exposing over 2 million people[11-12]; and

Whereas, infant and toddler foods have been found to contain THM levels above recommended limits by the Food and Drug Administration (FDA), although the FDA advises that even low levels of THMs can accumulate in children causing chronic illness[13]; and

Whereas, American Indian persons are exposed to THMs from historic mining sites and on average have higher THM blood levels, associated with heart and lung disease risk[14-15]; and

Whereas, low-income and minoritized communities are disproportionately exposed to chronically high THM levels from hazardous waste sites and air pollution[9,16-23]; and

Whereas, THMs may cause acute adverse effects at high concentrations such as psychosis and multi-organ toxicities, and chronic exposure, even below current regulatory limits, may increase risk for heart disease, stroke, dementia, cancer, and infertility[1,3-4,24-25]; and

Whereas, the American Heart Association states that THMs are a direct risk factor for cardiovascular disease and recommends protections to prevent public exposure and development of clinical monitoring standards[3-4]; and

Whereas, inconsistency across thresholds between the FDA, EPA, Agency for Toxic Substances and Disease Registry, and WHO and lack of updates reflecting new research contribute to difficulty in THM regulation and resulting unchecked bioaccumulation[12,15, 26]; therefore be it

RESOLVED, that our American Medical Association urge governmental agencies to establish and enforce limits for identified hazardous pollutants and heavy metals in our food, water, soil, and air (Directive to Take Action); and be it further

RESOLVED, that our AMA support efforts to monitor and educate individuals on (a) the chronic effects of exposure to toxic heavy metals including at levels below regulation limits, and (b) the burden of toxicity in communities, especially near urban, Superfund, and industrial sites. (New HOD Policy)

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RELEVANT AMA Policy

H-135.911 Environmental Health Equity in Federally Subsidized Housing
1. Our American Medical Association acknowledges the potential adverse health impacts of living in close proximity to Superfund sites or other contaminated lands.
2. Our AMA advocates for mandated disclosure of Superfund sites or other contaminated lands proximity to those purchasing, leasing, or currently residing in housing in close proximity to Superfund sites or other contaminated lands.
3. Our AMA supports efforts of public agencies to study the safety of proposed public housing expansions with respect to pollutant exposure and to expand construction of new public and publicly subsidized housing properties on lands without demonstrated unsafe levels of hazardous pollutants. [Res. 415, A-23]

H-135.949 Support of Clean Air and Reduction in Power Plant Emissions:
(1)Our AMA supports (a) federal legislation and regulations that meaningfully reduce the following four major power plant emissions: mercury, carbon dioxide, sulfur dioxide and nitrogen oxide; and (b) efforts to limit carbon dioxide emissions through the reduction of the burning of coal in the nation's power generating plants, efforts to improve the efficiency of power plants and continued development, promotion, and widespread implementation of alternative renewable energy sources in lieu of carbon-based fossil fuels. (2) Our AMA will: (a) support the Environmental Protection Agency's proposal, under the Clean Air Act, to regulate air quality for heavy metals and other air toxins emitted from smokestacks. The risk of dispersion through air and soil should be considered, particularly for people living downwind of smokestacks; and (b) urge the EPA to finalize updated mercury, cadmium, and air toxic regulations for monitoring air quality emitted from power plants and other industrial sources, ensuring that recommendations to protect the public's health are enforceable. [Res. 429, A-03; Reaffirmation I-07; Reaffirmed in lieu of Res. 526, A-12; Reaffirmed: Res. 421, A-14; Modified: Res. 506, A-15; Modified: Res. 908, I-17; Appended: Res. 401, A-22]

D-135.022 Addressing Inequity in Onsite Wastewater Treatment
(1)Our American Medical Association supports that federal, state, local, and tribal, governments suspend enforcement of sanitation laws that could result in criminal charges, fines, jail time, and potential property loss for residents who lack the means to purchase functioning septic systems, especially in underserved communities and American Indian reservations. (2) Our AMA supports research by federal, state, and local governments to develop strategies to reduce insufficient wastewater management and eliminate detrimental health effects due to inadequate wastewater systems. (3) Our AMA will work with interested parties to reduce and eliminate inadequate wastewater treatment systems. [Res. 407, A-23]

D- 135.997 Environmental Contributors to Disease and Advocating for Environmental Justice
Our AMA will (1) advocate for the greater public and private funding for research into the environment causes of disease, and urge the National Academy of Sciences to undertake an authoritative analysis of environmental causes of disease; (2) ask the steering committee of the Medicine and Public Health Initiative Coalition to consider environmental contributors to disease and environmental racism as a priority public health issues; (3) encourage federal, state, and local agencies to address and remediate environmental injustice, environmental racism, and all other environmental conditions that are adversely impacting health, especially in marginalized communities; and (4) lobby Congress to support ongoing initiatives that include reproductive health outcomes and development particularly in minority populations in Environmental Protection Agency Environmental Justice policies. [Res. 402, A-03; Appended: Res. 927, I-11; Reaffirmed in lieu of: Res. 505, A-19; Modified: Res. 415, A-23]

AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES

Resolution: 410
(A-24)

Introduced by: Medical Student Section

Subject: Access to Public Restrooms

Referred to: Reference Committee D

Whereas, when surveyed, 1 in 5 reported experiencing a public bowel/urinary accident, and over half said they or a relative struggled to find public restrooms in the past week;[1] and

Whereas, the US has only 8 public toilets per 100,000 people, far fewer than Iceland (56), Switzerland (46), and New Zealand (45);[2] and

Whereas, public restrooms are important to sanitation and infection control, with limited access directly tied to recent hepatitis A outbreaks in San Diego and Philadelphia;[3-9] and

Whereas, people who are unhoused, especially those who menstruate, are affected by restricted restroom access due to inability to pay, and public urination or defecation can lead to criminal and civil penalties, including lifelong sex offender registration homelessness;[10-14] and

Whereas, several states and municipalities' Restroom Access Acts (RAAs) require business to provide restrooms to customers with permanent bowel-related conditions, but these laws are minimally enforced and exclude many other individuals with medical needs;[14] and

Whereas, public restrooms are often inequitable in size in number for women and transgender, nonbinary, and gender-diverse individuals, despite different usage than cis men;[15-17] and

Whereas, women often need restrooms more than cis men due to menstruation and higher rates of Crohn's disease, irritable bowel syndrome, cystitis, and incontinence;[18-22] and

Whereas, while restroom parity laws in numerous states and municipalities have increased the ratio of women's to men's stalls and improved access, they often do not apply retroactively and do not address parity for transgender, nonbinary, and gender-diverse individuals;[23] and

Whereas, transgender people are up to 6 times more likely to avoid public restrooms due to discrimination, harassment, and being questioned for their gender;[24] and

Whereas, gender-inclusive bathrooms have demonstrated reductions in wait times for women by over 60 seconds while increasing wait times for men by only 20 seconds;[25] and

Whereas, several cities have passed ordinances requiring new buildings to have gender-neutral bathrooms and incentivizing construction of new public restrooms;[26-30] therefore be it

RESOLVED, that our American Medical Association support access to clean, accessible, and permanent public restrooms that, at minimum, contain a toilet and sink, regardless of any identifying characteristics such as gender identity, appearance, employment status, or commercial status (New HOD Policy); and be it further

RESOLVED, that our AMA support parity in restroom access by gender identity, including increasing the number of female and gender-neutral bathrooms available in both new and existing buildings. (New HOD Policy)

Fiscal Note: Minimal - less than $1,000

Received: 4/19/2024

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RELEVANT AMA Policy

H-65.964 Access to Basic Human Services for Transgender Individuals

Our AMA: (1) opposes policies preventing transgender individuals from accessing basic human services and public facilities in line with one's gender identity, including, but not limited to, the use of restrooms; and (2) will advocate for the creation of policies that promote social equality and safe access to basic human services and public facilities for transgender individuals according to one's gender identity. [Res. 010, A-17]

D-90.992 Preserving Protections of the Americans with Disabilities Act of 1990

1. Our AMA supports legislative changes to the Americans with Disabilities Act of 1990, to educate state and local government officials and property owners on strategies for promoting access to persons with a disability.
2. Our AMA opposes legislation amending the Americans with Disabilities Act of 1990, that would increase barriers for disabled persons attempting to file suit to challenge a violation of their civil rights.
3. Our AMA will develop educational tools and strategies to help physicians make their offices more accessible to persons with disabilities, consistent with the Americans With Disabilities Act as well as any applicable state laws. [Res. 220, I-17]

AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES

Resolution: 411
(A-24)

Introduced by: Oklahoma

Subject: Missing and Murdered Indigenous Persons

Referred to: Reference Committee D

Whereas, there is an epidemic of violence and a rising number of cases of abduction and murder of American Indian and Alaska Native persons (AI/AN) in the United States (U.S.), with greater than 2 in 5 AI/AN women raped in their lifetime, and homicide reported in the top 10 leading causes of death according to The National Intimate Partner and Sexual Violence Survey (NIPSVS) [1, 2, 3]; and

Whereas, the NIPSVS reported that non-Hispanic AI/AN individuals experienced the second highest rate of homicide compared to their counterparts in all other racial and ethnic groups in 2020[3]; and

Whereas, due to factors such as racial misclassification, underreporting, and distrust between law enforcement and Indigenous communities, published statistics likely underestimate the number of sexual violence crimes and missing and murdered AI/AN persons[4]; and

Whereas, the U.S. Bureau of Indian Affairs has called for additional investigative resources to address this epidemic of violence[1]; and

Whereas, in 2019, President Trump signed Executive Order 13898, which established the two-year, multi-agency Operation Lady Justice Task Force to address the concerns of AI/AN Tribes and Villages regarding missing and murdered persons[5]; and

Whereas, in 2020, Operation Lady Justice released their first report in collaboration with tribal leaders and community members which suggested establishing local, tribal, regional, and national alert systems for AI/AN persons similar to Amber Alert[5]; and

Whereas, in 2020, Public Law No. 116-165, Savanna's Act, was signed into law to increase coordination and data-sharing among Federal, State, Tribal, and local law enforcement agencies in an attempt to improve federal prosecution rates and involvement in missing or murdered AI/AN person-cases[6]; and

Whereas, in 2021, the US Department of Interior launched the formation of the Missing & Murdered Unit (MMU) to provide additional resources and interagency cooperation with necessary stakeholders such as the Federal Bureau of Investigation on this pressing issue[7]; and

Whereas, the Urban Indian Health Institute, one of the nation's 12 Tribal Epidemiology Centers, found that the rate of missing AI/AN women in Washington State was 78.64 per 100,000, which was more than four times the rate for non-Hispanic white women in 2018[8]; and

Whereas, in 2022, Washington State established a statewide and first-in-the-nation Missing and Murdered Indigenous Women's and People's Alert System (MIPA)[9]; and

Whereas, MIPA makes AI/AN persons eligible for law enforcement assistance who do not otherwise meet strict AMBER Alert criteria and can also be used for AI/AN persons believed to be in danger and presumed to be unable to return to safety without assistance[9]; and

Whereas, in the 6 months since it was first implemented, the Washington State MIPA has been activated 33 times and 27 individuals have been located, with 4 of those cases directly attributed to MIPA[10]; and

Whereas, several states have now passed legislation to coordinate responses between tribal and non-tribal law enforcement entities and implement AI/AN-specific emergency alert systems, including Arizona, Colorado, Minnesota, Montana, North Dakota, Nebraska, New Mexico, Oregon, South Dakota, and California [8, 11, 12]; and

Whereas, the Urban Indian Health Institute has also challenged lawmakers and policymakers to consider a number of factors in their responses to this crisis, including law enforcement stigma towards substance use in AI/AN communities, non-reporting of LGBTQ2S+ identification for missing and murdered AI/AN persons, lack of coordination between tribal, state, and federal law enforcement, and inadequate protocols regarding AI/AN persons living away from their tribal lands[9]; therefore be it

RESOLVED, that our American Medical Association supports emergency alert systems for American Indian and Alaska Native tribal members reported missing on reservations and in urban areas. (New HOD Policy)

Fiscal Note: Minimal - less than $1,000

Received: 4/22/2024

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RELEVANT AMA POLICY

Addressing Sexual Violence and Improving American Indian and Alaska Native Women's Health Outcomes D-350.985
1. Our AMA advocates for mitigation of the critical issues of American Indian/Alaska Native women's health that place Native women at increased risk for sexual violence, and encourages allocation of sufficient resources to the clinics serving this population to facilitate health care delivery commensurate with the current epidemic of violence against Native women.
2. Our AMA will collaborate with the Indian Health Service, Centers for Disease Control and Prevention (CDC), Tribal authorities, community organizations, and other interested stakeholders to develop programs to educate physicians and other health care professionals about the legal and cultural contexts of their American Indian and Alaska Native female patients as well as the current epidemic of violence against Native women and the pursuant medical needs of this population.
3. Our AMA will collaborate with the Indian Health Service, CDC, Tribal authorities, and community organizations to obtain or develop appropriate American Indian and Alaska Native women's health materials for distribution to patients in the spirit of self-determination to improve responses to sexual violence and overall health outcomes. [Res. 208, I-15]

Preventing Anti-Transgender Violence H-65.957
Our AMA will: (1) partner with other medical organizations and stakeholders to immediately increase efforts to educate the general public, legislators, and members of law enforcement using verified data related to the hate crimes against transgender individuals highlighting the disproportionate number of Black transgender women who have succumbed to violent deaths: (2) advocate for federal, state, and local law enforcement agencies to consistently collect and report data on hate crimes, including victim demographics, to the FBI; for the federal government to provide incentives for such reporting; and for demographic data on an individual's birth sex and gender identity be incorporated into the National Crime Victimization Survey and the National Violent Death Reporting System, in order to quickly identify positive and negative trends so resources may be appropriately disseminated; (3) advocate for a central law enforcement database to collect data about reported hate crimes that correctly identifies an individual's birth sex and gender identity, in order to quickly identify positive and negative trends so resources may be appropriately disseminated; (4) advocate for stronger law enforcement policies regarding interactions with transgender individuals to prevent bias and mistreatment and increase community trust; and (5) advocate for local, state, and federal efforts that will increase access to mental health treatment and that will develop models designed to address the health disparities that LGBTQ individuals experience.
Res. 008, A-19

Missing Children Identification H-60.996
The AMA supports (1) development of a means of identifying children; and (2) education of the public and parents on the fingerprinting and documentation of characteristic identifying marks as a matter of record, should it be necessary to assist officials in locating a missing child. [Res. 98, A-84; Reaffirmed by CLRPD Rep. 3 - I-94; Reaffirmed: CSA Rep. 6, A-04; Reaffirmed: CSAPH Rep. 1, A-14]

Fund for Public Health Emergency Response H-440.825
Our AMA supports the reauthorization and appropriation of sufficient funds to a public health emergency fund within the Department of Health and Human Services to facilitate adequate responses to public health emergencies without redistributing funds from established public health accounts. [Res. 420, A-16]

AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES

Resolution: 412
(A-24)

Introduced by: Indiana

Subject: Lithium Battery Safety

Referred to: Reference Committee D

Whereas, more pieces of equipment utilize lithium batteries; and

Whereas, lithium batteries have limited useful lifetime use; and

Whereas, disposal and recycling of lithium batteries is not a well-established system; and

Whereas, improper storage of lithium batteries can lead to fires; and

Whereas, putting out lithium battery fires can be difficult and requires robust resources; and

Whereas, rural communities' fire department coverage resources can be less robust and less able to handle lithium battery fires; and

Whereas, local agencies often are not aware of lithium battery storage in their area; therefore be it

RESOLVED, that our American Medical Association seek legislation to increase environmental and public safety oversight of lithium batteries and businesses that store and dispose of lithium batteries. (Directive to Take Action)

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

Received: 4/23/2024

AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES

Resolution: 413
(A-24)

Introduced by: Michigan

Subject: Sexuality and Reproductive Health Education

Referred To: Reference Committee D

Whereas, the American Academy of Pediatrics (AAP) has identified the timely need for equitable access to comprehensive sex education as a critical component of adolescent health; and

Whereas, the Centers for Disease Control and Prevention (CDC) states: “A quality sexual health education curriculum includes medically accurate, developmentally appropriate, and culturally relevant content and skills that target key behavioral outcomes and promote healthy sexual development. The curriculum is age-appropriate and planned across grade levels to provide information about health risk behaviors and experiences.”; and

Whereas, the CDC identifies the following benefits of students receiving sexual health education: Delay initiation of sexual intercourse; Have fewer sex partners; Have fewer experiences of unprotected sex; Increase their use of protection, specifically condoms; and, Improve their academic performance; and

Whereas, meta-analysis of comprehensive sex education programs showed marked effectiveness reducing sexual partners, unprotected sex, sexually transmitted infections (STIs), and pregnancy, while abstinence-only sex education programs did not indicate a statistically significant reduction in these measures; and

Whereas, states that have laws that require or stress abstinence-only programs have higher rates of teenage pregnancy; and

Whereas, in states that do not require medically accurate sexual education, rates of teen pregnancy, birth, and sexually transmitted infection are the highest; and

Whereas, 95 percent of unintended pregnancies were due to lack of contraception use and incorrect or inconsistent contraception usage; and

Whereas, the APP states that “comprehensive sex education should occur across the developmental spectrum, beginning at early ages and continuing throughout childhood and adolescence”; and

Whereas, our American Medical Association Policy H-170.968 also recognizes the importance of “developmentally appropriate sexuality education programming in the schools at all levels, at local option and direction”; therefore be it

RESOLVED, that our American Medical Association reaffirm AMA Policy H-170.968, “Sexuality Education, Sexual Violence Prevention, Abstinence, and Distribution of Condoms in Schools,” and continue to advocate for the adoption of developmentally appropriate, culturally sensitive, comprehensive sexuality and reproductive health education and reproductive rights curriculum. (Reaffirm HOD Policy)

Fiscal Note: Minimal - less than $1,000

Received: 4/23/2024

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RELEVANT AMA POLICY

Sexuality Education, Sexual Violence Prevention, Abstinence, and Distribution of Condoms in Schools H-170.968

(1) Supports the concept of sexuality education in the home, when possible, as well as developmentally appropriate sexuality education programming in the schools at all levels, at local option and direction;
(2) Urges schools at all education levels to implement comprehensive, developmentally appropriate sexuality education programs that: (a) are based on rigorous, peer reviewed science; (b) incorporate sexual violence prevention; (c) show promise for delaying the onset of sexual activity and a reduction in sexual behavior that puts adolescents at risk for contracting human immunodeficiency virus (HIV) and other sexually transmitted diseases and for becoming pregnant; (d) include an integrated strategy for making condoms and other effective barrier protection methods available to students and for providing both factual information and skill-building related to reproductive biology, sexual abstinence, sexual responsibility, contraceptives including condoms, alternatives in birth control, and other issues aimed at prevention of pregnancy and sexual transmission of diseases; (e) utilize classroom teachers and other professionals who have shown an aptitude for working with young people and who have received special training that includes addressing the needs of LGBTQ+ youth; (f) appropriately and comprehensively address the sexual behavior of all people, inclusive of sexual and gender minorities; (g) include ample involvement of parents, health professionals, and other concerned members of the community in the development of the program; (h) are part of an overall health education program; and (i) include culturally competent materials that are language-appropriate for Limited English Proficiency (LEP) pupils;
(3) Continues to monitor future research findings related to emerging initiatives that include abstinence-only, school-based sexuality education, and consent communication to prevent dating violence while promoting healthy relationships, and school-based condom availability programs that address sexually transmitted diseases and pregnancy prevention for young people and report back to the House of Delegates as appropriate;
(4) Will work with the United States Surgeon General to design programs that address communities of color and youth in high risk situations within the context of a comprehensive school health education program;
(5) Opposes the sole use of abstinence-only education, as defined by the 1996 Temporary Assistance to Needy Families Act (P.L. 104-193), within school systems;
(6) Endorses comprehensive family life education in lieu of abstinence-only education, unless research shows abstinence-only education to be superior in preventing negative health outcomes;
(7) Supports federal funding of comprehensive sex education programs that stress the importance of preventing unwanted teenage pregnancy and sexually transmitted infections via comprehensive education, including contraceptive choices, abstinence, and safer sex, and opposes federal funding of community-based programs that do not show evidence-based benefits; and
(8) Extends its support of comprehensive family-life education to community-based programs promoting abstinence as the best method to prevent teenage pregnancy and sexually-transmitted diseases while also discussing the roles of condoms and birth control, as endorsed for school systems in this policy;
(9) Supports the development of sexual education curriculum that integrates dating violence prevention through lessons on healthy relationships, sexual health, and conversations about consent; and
(10) Encourages physicians and all interested parties to develop best-practice, evidence-based, guidelines for sexual education curricula that are developmentally appropriate as well as medically, factually, and

technically accurate. [CSA Rep. 7 and Reaffirmation I-99; Reaffirmed: Res. 403, A-01; Modified Res. 441, A-03; Appended: Res. 834, I-04; Reaffirmed: CSAPH Rep. 7, A-09; Modified: Res. 405, A-16; Appended: Res. 401, A-16; Appended: Res. 414, A-18; Appended: Res. 428, A-18; Modified: Res. 413, A-22]

AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES

Resolution: 414
(A-24)

Introduced by: California

Subject: Addressing the Health Sector's Contributions to the Climate Crisis

Referred to: Reference Committee D

Whereas, the sharp rises of greenhouse gas (GHG) emissions has already warmed the planet by more than1.2°C over pre-industrial levels, which has negatively affected public health;[1] and

Whereas, globally, the U.S. health care sector is responsible for 25% of all health care GHG emissions, more than any other country;[2] and

Whereas, health care organizations spend over $6.5 billion on energy each year, with that amount rising to meet patients' needs;[3] and

Whereas, effective use of virtual health services can also reduce emissions in the health care sector by reducing patient travel to physician offices and facilities;[4] and

Whereas, "greenwashing" occurs when an entity makes a misleading claim or implies to consumers that a product or service is environmentally friendly or has a greater positive environmental impact than it actually does;[5] and

Whereas, many physicians and health care facilities are looking for more sustainable and environmentally friendly health care equipment and medications and can thus be vulnerable to claims of "greenwashing" because the environmental reporting standards for health care products can contain gaps that can make interpretation difficult and inconsistent;[6] and

Whereas, the Securities and Exchange Commission (SEC) has proposed rule changes that would require, among other things, GHG emissions reporting by all registrants, which would also require reporting of a company's climate targets, how they will meet those goals, and data on their progress and how that progress was achieved;[7] and

Whereas, the Inflation Reduction Act (IRA) has allocated almost $400 billion toward efforts to increase green energy and reduce carbon emissions;[8,9] and

Whereas, the IRA also allocated $3 billion to fund an environmental justice grant program to provide grants to community-based organizations in disadvantaged communities;[8,9] and

Whereas, in March 2023, the Centers for Medicare and Medicaid Services (CMS) issued a categorical waiver that would allow most health care facilities to use a health care microgrid system (HCMS) as a source of emergency power;[10] and

Whereas, HCMS power sources can rely entirely on, or be supplemented by, a combination of clean energy technologies, which include fuel cells, solar panels, wind turbines, and energy storage systems;[10] and

Whereas, our AMA has extensive policy establishing climate changes as a public health crisis, supporting measurable targets for limiting global warming, reducing greenhouse gas emissions, and encouraging the health sector to lead by example but does not have specific policy related to efforts specific to the health care sector; therefore be it

RESOLVED, that our American Medical Association recognizes that clinical quality and safety should not be sacrificed as strategies for reducing greenhouse gasses and waste (New HOD Policy); and be it further

RESOLVED, that our AMA recognizes that animal-based agriculture is a significant contributor to greenhouse gas emissions and supports efforts to increase and promote plant-based menu options in hospital food services, for both health and environmental reasons (New HOD Policy); and be it further

RESOLVED, that our AMA expects that health systems will provide transparency and avoid misleading the public regarding their greenhouse gas emissions, including but not limited to providing definitions used in the calculations of their net-zero emissions (New HOD Policy); and be it further

RESOLVED, that our AMA opposes corporate “greenwashing,” or the act of making misleading statements about the environmental benefits of products and/or services (New HOD Policy); and be it further

RESOLVED, that our AMA supports the development of locally managed and reliable electrical microgrids that operate independently from the larger electrical grid for hospitals and other health care facilities to use as a way to reduce reliance on diesel generation for back-up services while maintaining critical care functions during emergencies and supports grants being provided to independent practices to facilitate this development (New HOD Policy); and be it further

RESOLVED, that our AMA supports the use of virtual health care, where appropriate, with reasonable reimbursement, as a strategy to reduce the carbon footprint of health care (New HOD Policy); and be it further

RESOLVED, that our AMA support financial assistance for health care entities, including community health centers, clinics, rural health centers, small- and medium-sized physician practices, transitioning to environmentally sustainable operations (New HOD Policy); and be it further

RESOLVED, that our AMA support the development of concise clinical guidelines and patient education materials to assist physician practices and patients to reduce adverse organizational and personal impacts on climate change. (New HOD Policy)

Fiscal Note: Minimal - less than $1,000

Received: 4/23/2024

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RELEVANT AMA POLICY

H-135.938 Global Climate Change and Human Health

Our AMA: 1. Supports scientific consensus that the Earth is undergoing adverse global climate change and that anthropogenic contributions are significant. These climate changes have adversely affected the physical and mental health of people. We recognize that minoritized and marginalized populations, children, pregnant people, the elderly, rural communities, and those who are economically disadvantaged will suffer disproportionate harm from climate change. 2. Supports educating the medical community on the adverse public health effects of global climate change and incorporating the health implications of climate change into the spectrum of medical education, including topics such as population displacement, heat waves and drought, flooding, infectious and vector-borne diseases, and potable water supplies. 3. (a) Recognizes the importance of physician involvement in policymaking at the state, national, and global level and supports efforts to search for novel, comprehensive, and economically sensitive approaches to mitigating climate change to protect the health of the public; and (b) recognizes that whatever the etiology of global climate change, policymakers should work to reduce human contributions to such changes. 4. Encourages physicians to assist in educating patients and the public on the physical and mental health effects of climate change and on environmentally sustainable practices, and to serve as role models for promoting environmental sustainability. 5. Encourages physicians to work with local and state health departments to strengthen the public health infrastructure to ensure that the global health effects of climate change can be anticipated and responded to more efficiently, and that adaptation interventions are equitable and prioritize the needs of the populations most at risk. 6. Supports epidemiological, translational, clinical and basic science research necessary for evidence-based global climate change policy decisions related to health care and treatment. 7. Encourages physicians to assess for environmental determinants of health in patient history-taking and encourages the incorporation of assessment for environmental determinants of health in patient history-taking into physician training. [Modified: CSAPH Rep. 2, I-22; Modified: Res. 424, A-22; Reaffirmation: I-19; Reaffirmed: CSAPH Rep. 04, A-19; Reaffirmation A-14; CSAPH Rep. 3, I-08]

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.
[Appended: CSAPH Rep. 02, I-22; Res. 420, A-22]

H-150.949 Healthful Food Options in Health Care Facilities
1. Our AMA 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; and (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.
[Appended: Res. 304, A-21; Modified: Res. 904, I-19; Modified: Res. 425, A-18; Appended: Res. 406, A-17; Reaffirmed: CSAPH Rep. 1, A-14; Res. 410, A-04]

G-630.135 Eliminating Food Waste Through Recovery
Our AMA will: (1) consider sustainability and mitigation of food waste in vendor and venue selection; and (2) encourage vendors and relevant third parties to practice sustainability and mitigate food waste through donations.
[Res. 603, A-18]

H-135.939 Green Initiatives and the Health Care Community
Our AMA supports: (1) responsible waste management and clean energy production policies that minimize health risks, including the promotion of appropriate recycling and waste reduction; (2) the use of ecologically sustainable products, foods, and materials when possible; (3) the development of products that are non-toxic, sustainable, and ecologically sound; (4) building practices that help reduce resource utilization and contribute to a healthy environment; (5) the establishment, expansion, and continued maintenance of affordable, accessible, barrier-free, reliable, and clean-energy public transportation; and (6) community-wide adoption of 'green' initiatives and activities by organizations, businesses, homes, schools, and government and health care entities.
[Modified: Res. 923, I-19; Modified: Res. 516, A-18; Reaffirmed in lieu of: Res. 504, A-16; Reaffirmed in lieu of Res. 402, A-10; Reaffirmation A-09; CSAPH Rep. 1, I-08]

D-120.929 Permitting the Dispensing of Stock Medications for Post Discharge Patient Use and the Safe Use of Multi-dose Medications for Multiple Patients
Our AMA will: (1) work with national specialty societies, state medical societies and/or other interested parties to advocate for legislative and regulatory language that permits the practice of dispensing stock-item medications to individual patients upon discharge in accordance with labeling and dispensing protocols that help ensure patient safety, minimize duplicated patient costs, and reduce medication waste; and (2) work with the Food and Drug Administration, national specialty societies, state medical societies and/or other interested parties to advocate for legislative and regulatory language that permits the practice of using multi dose medications, such as eye drops, injectables and topical medications in accordance with safe handling and dispensing protocols that help ensure patient safety, minimize duplicated patient costs, and reduce medication waste.
[Res. 234, I-21]

H-135.949 Support of Clean Air and Reduction in Power Plant Emissions
(1) Our AMA supports (a) federal legislation and regulations that meaningfully reduce the following four major power plant emissions: mercury, carbon dioxide, sulfur dioxide and nitrogen oxide; and (b) efforts to limit carbon dioxide emissions through the reduction of the burning of coal in the nation's power generating plants, efforts to improve the efficiency of power plants and continued development, promotion, and widespread implementation of alternative renewable energy sources in lieu of carbon-based fossil fuels. 2. Our AMA will: (a) support the Environmental Protection Agency’s proposal, under the Clean Air Act, to regulate air quality for heavy metals and other air toxins emitted from smokestacks. The risk of dispersion through air and soil should be considered, particularly for people living downwind of smokestacks; and (b) urge the EPA to finalize updated mercury, cadmium, and air toxic regulations for

monitoring air quality emitted from power plants and other industrial sources, ensuring that recommendations to protect the public's health are enforceable.
[Appended: Res. 401, A-22; Modified: Res. 908, I-17; Modified: Res. 506, A-15; Reaffirmed: Res. 421, A-14; Reaffirmed in lieu of Res. 526, A-12; Reaffirmation I-07; Res. 429, A-03]

D-135.996 Reducing Sources of Diesel Exhaust
Our AMA will: (1) encourage the US Environmental Protection Agency (EPA) to set and enforce the most stringent feasible standards to control pollutant emissions from both large and small non-road engines including construction equipment, farm equipment, boats and trains; (2) encourage all states to continue to pursue opportunities to reduce diesel exhaust pollution, including reducing harmful emissions from glider trucks and existing diesel engines; (3) call for all trucks traveling within the United States, regardless of country of origin, to be in compliance with the most stringent and current diesel emissions standards promulgated by US EPA; and (4) send a letter to US EPA Administrator opposing the EPA's proposal to roll back the "glider Kit Rule" which would effectively allow the unlimited sale of re-conditioned diesel truck engines that do not meet current EPA new diesel engine emission standards.
[Modified: Res. 521, A-18; Reaffirmation A-14; Reaffirmation A-11; Reaffirmed in lieu of Res. 507, A-09; Res. 428, A-04]

H-135.931 Health Risks of Hydraulic Fracturing
1. Our AMA encourages appropriate agencies and organizations to study the potential human and environmental health risks and impacts of hydraulic fracturing. 2. Our AMA: (A) supports the full disclosure of chemicals placed into the natural environment during the petroleum, oil and natural gas exploration and extraction process; and (B) supports the requirement that government agencies record and monitor the chemicals placed into the natural environment for petroleum oil and natural gas extraction and the chemicals found in flowback fluids, to monitor for human exposures in well water and surface water, and to share this information with physicians and the public. 3. Our AMA supports research on the implementation of buffer zones or well set-backs between oil and gas development sites and residences, schools, hospitals, and religious institutions, to determine the distance necessary to ensure public health and safety.
[Appended: Res. 908, I-17; Appended: Sub. Res. 508, A-15; Res. 405, A-13]

D-480.963 COVID-19 Emergency and Expanded Telemedicine Regulations
Our AMA: (1) will continue to advocate for the widespread adoption of telehealth services in the practice of medicine for physicians and physician-led teams post SARS-COV-2; (2) will advocate that the Federal government, including the Centers for Medicare & Medicaid Services (CMS) and other agencies, state governments and state agencies, and the health insurance industry, adopt clear and uniform laws, rules, regulations, and policies relating to telehealth services that: (a) provide equitable coverage that allows patients to access telehealth services wherever they are located, and (b) provide for the use of accessible devices and technologies, with appropriate privacy and security protections, for connecting physicians and patients; (3) will advocate for equitable access to telehealth services, especially for at-risk and under-resourced patient populations and communities, including but not limited to supporting increased funding and planning for telehealth infrastructure such as broadband and internet-connected devices for both physician practices and patients; and (4) supports the use of telehealth to reduce health disparities and promote access to health care.
[Reaffirmation: A-22; Reaffirmed: Res. 239, A-22; Reaffirmed: CMS Rep. 7, A-21; Alt. Res. 203, I-20]

H-480.936 Telemedicine Services and Health Equity
Our AMA will encourage policymakers to recognize the scope and circumstances for underserved populations including seniors and patients with complex health conditions with the aim to ensure that these patients have the technology-use training needed to maximize the benefits of telehealth and its potential to improve health outcomes.
[Res. 213, A-23]

H-135.923 AMA Advocacy for Environmental Sustainability and Climate
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.

[Reaffirmation: I-19; Res. 924, I-16]

D-135.997 Environmental Contributors to Disease and Advocating for Environmental Justice
Our AMA will (1) advocate for the greater public and private funding for research into the environment causes of disease, and urge the National Academy of Sciences to undertake an authoritative analysis of environmental causes of disease; (2) ask the steering committee of the Medicine and Public Health Initiative Coalition to consider environmental contributors to disease and environmental racism as a priority public health issues; (3) encourage federal, state, and local agencies to address and remediate environmental injustice, environmental racism, and all other environmental conditions that are adversely impacting health, especially in marginalized communities; and (4) lobby Congress to support ongoing initiatives that include reproductive health outcomes and development particularly in minority populations in Environmental Protection Agency Environmental Justice policies.
[Modified: Res. 415, A-23; Reaffirmed in lieu of: Res. 505, A-19; Appended: Res. 927, I-11; Res. 402, A-03]

D-440.912 AMA Public Health Strategy
1. Our AMA will distribute evidence-based information on the relationship between climate change and human health through existing platforms and communications channels, identify advocacy and leadership opportunities to elevate the voices of physicians on the public health crisis of climate change, and centralize our AMA's efforts towards environmental justice and an equitable transition to a net-zero carbon society by 2050. 2. Our AMA Board of Trustees will provide an update on loss of coverage and uninsurance rates following the return to regular Medicaid redeterminations and the end of the COVID-19 Public Health Emergency, the ensuing financial and administrative challenges experienced by physicians, physician practices, hospitals, and the healthcare system; and a report of actions taken by the AMA and recommendation for further action to address these issues at I-2023. 3. Our AMA Board of Trustees will provide a strategic plan or outline for the AMA's plan to address and combat the health effects of climate change at I-2023. 4. Our AMA Board of Trustees will provide an update on the efforts and initiatives of the AMA's gun violence task force at I-2023. 5. Our AMA will continue to support increased funding for public health infrastructure and workforce, which should include funding for preventative medicine-related residency programs, to increase public health leadership in this country.
[Modified: BOT Rep. 05, I-23; BOT Rep. 17, A-23]

H-470.953 Evaluating Green Space Initiatives
Our AMA supports appropriate stakeholders in conducting studies to evaluate different green space initiatives that could be implemented in communities to improve patients' health and eliminate health disparities.
[Res. 905, I-15]

H-135.923 AMA Advocacy for Environmental Sustainability and Climate
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.
[Reaffirmation: I-19; Res. 924, I-16]

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Our AMA will (1) advocate for the greater public and private funding for research into the environment causes of disease, and urge the National Academy of Sciences to undertake an authoritative analysis of environmental causes of disease; (2) ask the steering committee of the Medicine and Public Health Initiative Coalition to consider environmental contributors to disease and environmental racism as a priority public health issues; (3) encourage federal, state, and local agencies to address and remediate environmental injustice, environmental racism, and all other environmental conditions that are adversely impacting health, especially in marginalized communities; and (4) lobby Congress to support ongoing initiatives that include reproductive health outcomes and development particularly in minority populations in Environmental Protection Agency Environmental Justice policies.
[Modified: Res. 415, A-23; Reaffirmed in lieu of: Res. 505, A-19; Appended: Res. 927, I-11; Res. 402, A-03]

H-135.973 Stewardship of the Environment
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.
[Reaffirmation I-16; Reaffirmed in lieu of Res. 402, A-10; Reaffirmed in lieu of Res. 417, A-04; Amended: CSA Rep. 8, A-03; Amended: CLRPD Rep. D, I-92; CSA Rep. G, I-89]

H-135.919 Climate Change Education Across the Medical Education Continuum
Our AMA: (1) supports teaching on climate change in undergraduate, graduate, and continuing medical education such that trainees and practicing physicians acquire a basic knowledge of the science of climate change, can describe the risks that climate change poses to human health, and counsel patients on how to protect themselves from the health risks posed by climate change; (2) will make available a prototype presentation and lecture notes on the intersection of climate change and health for use in undergraduate, graduate, and continuing medical education; and (3) will communicate this policy to the appropriate accrediting organizations such as the Commission on Osteopathic College Accreditation and the Liaison Committee on Medical Education.
[Res. 302, A-19]

AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES

Resolution: 415
(A-24)

Introduced by: California

Subject: Building Environmental Resiliency in Health Systems and Physician Practices

Referred to: Reference Committee D

Whereas, climate change disproportionately impacts the most vulnerable;[1-3] and

Whereas, "resilience" is an effort to preemptively prepare for a crisis, absorb the impact of a crisis, adjust to new conditions, and build on lessons learned to create a more robust future;[4]and

Whereas, significant investments in renewable energy sources, such as solar and hydro power, can reduce facility emissions due to energy use;[5]and

Whereas, the World Health Organization (WHO) highlights the health care workforce as key actors in developing a facility's climate resilience because they are the main implementors of climate change mitigation measures and serve as a direct link to communities and populations most adversely affected by climate change;[4] and

Whereas, the WHO notes that health care facilities can greatly reduce the potential risk to staff, patients, and the surrounding communities by appropriately responding to, and reducing exposure to, hazardous water and waste;[4] and

Whereas, investments in flood- and storm-resistant construction and low-carbon construction practices can increase a facility's safety and durability in a changing climate;[6] and

Whereas, the Inflation Reduction Act (IRA) has allocated almost $400 billion toward efforts to increase green energy and reduce carbon emissions;[7] therefore be it

RESOLVED, that our American Medical Association support a resilient, accountable health care system capable of delivering effective and equitable care in the face of changing health care demands due to climate change (New HOD Policy); and be it further

RESOLVED, that our AMA encourage health care organizations to develop climate resilience plans, for the continuity of operations in an emergency, that take into account the needs of groups in their community that experience disproportionate risk of climate-related harm and ensure the necessary collaboration between different types of healthcare facilities (New HOD Policy); and be it further

RESOLVED, that our AMA recognizes that climate resilience and mitigation efforts will be community-specific and supports physician engagement at the local level to promote community alliances for environmental justice and equity. (New HOD Policy)

Fiscal Note: Minimal - less than $1,000

Received: 4/23/2024

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7. *Building a Clean Energy Economy: A Guidebook to the Inflation Reduction Act's Investments in Clean Energy and Climate Action,* THE WHITE HOUSE (January 2023), *available at* **https://www.whitehouse.gov/wp-content/uploads/2022/12/Inflation-Reduction-Act-Guidebook.pdf**.

RELEVANT AMA POLICY

H-135.938 Global Climate Change and Human Health

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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. [Res. 420, A-22; Appended: CSAP Rep. 02, I-22]

H-135.939 Green Initiatives and the Health Care Community
Our AMA supports: (1) responsible waste management and clean energy production policies that minimize health risks, including the promotion of appropriate recycling and waste reduction; (2) the use of ecologically sustainable products, foods, and materials when possible; (3) the development of products that are non-toxic, sustainable, and ecologically sound; (4) building practices that help reduce resource utilization and contribute to a healthy environment; (5) the establishment, expansion, and continued maintenance of affordable, accessible, barrier-free, reliable, and clean-energy public transportation; and (6) community-wide adoption of 'green' initiatives and activities by organizations, businesses, homes, schools, and government and health care entities. [Modified: Res. 923, I-19; Modified: Res. 516, A-18; Reaffirmed in lieu of: Res. 504, A-16; Reaffirmed in lieu of Res. 402, A-10; Reaffirmation A-09; CSAPH Rep. 1, I-08]

H-135.923 AMA Advocacy for Environmental Sustainability and Climate
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. [Reaffirmation: I-19; Res. 924, I-16]

D-440-912 AMA Public Health Strategy
1. Our AMA will distribute evidence-based information on the relationship between climate change and human health through existing platforms and communications channels, identify advocacy and leadership opportunities to elevate the voices of physicians on the public health crisis of climate change, and centralize our AMA's efforts towards environmental justice and an equitable transition to a net-zero carbon society by 2050. 2. Our AMA Board of Trustees will provide an update on loss of coverage and uninsurance rates following the return to regular Medicaid redeterminations and the end of the COVID-19 Public Health Emergency, the ensuing financial and administrative challenges experienced by physicians, physician practices, hospitals, and the healthcare system; and a report of actions taken by the AMA and recommendation for further action to address these issues at I-2023. 3. Our AMA Board of Trustees will provide a strategic plan or outline for the AMA's plan to address and combat the health effects of climate change at I-2023. 4. Our AMA Board of Trustees will provide an update on the efforts and initiatives of the AMA's gun violence task force at I-2023. 5. Our AMA will continue to support increased funding for public health infrastructure and workforce, which should include funding for preventative medicine-related residency programs, to increase public health leadership in this country. [Modified: BOT Rep. 05, I-23; BOT Rep. 17, A-23]

H-135.923 AMA Advocacy for Environmental Sustainability and Climate
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. [Reaffirmation: I-19; Res. 924, I-16]

H-135.973 Stewardship of the Environment
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. [Reaffirmation I-16; Reaffirmed in lieu of Res. 402, A-10; Reaffirmed in lieu of Res. 417, A-04; Amended: CSA Rep. 8, A-03; Amended: CLRPD Rep. D, I-92; CSA Rep. G, I-89]

H-135.919 Climate Change Education Across the Medical Education Continuum
Our AMA: (1) supports teaching on climate change in undergraduate, graduate, and continuing medical education such that trainees and practicing physicians acquire a basic knowledge of the science of climate change, can describe the risks that climate change poses to human health, and counsel patients on how to protect themselves from the health risks posed by climate change; (2) will make available a prototype presentation and lecture notes on the intersection of climate change and health for use in undergraduate, graduate, and continuing medical education; and (3) will communicate this policy to the appropriate accrediting organizations such as the Commission on Osteopathic College Accreditation and the Liaison Committee on Medical Education. [Res. 302, A-19]

AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES

Resolution: 416
(A-24)

Introduced by: California

Subject: Furthering Environmental Justice and Equity

Referred to: Reference Committee D

Whereas, climate change disproportionately impacts the most vulnerable;[1-3] and

Whereas, communities of color, communities with predominantly low socioeconomic status, immigrant and refugee communities and Indigenous communities are some of the communities disproportionately burdened by "environmental hazards, unhealthy land uses, psychosocial stressors, historical traumas, and systemic racism," which can drive environmental health disparities;[5] and

Whereas, environmental impact statements and health impact assessments can help communities understand the distribution of environmental burdens and benefits they face and begin re-evaluating how the benefits and costs of environmental resources are distributed; [5] and

Whereas, "redlined" areas were neighborhoods that local lenders flagged as high-risk investments by virtue of the neighborhood's racial and ethnic composition; [6] and

Whereas, because of the redlining practices of the 1930s, large sources of pollution, such as industrial plants, major roadways and shipping ports, were sited in and around these targeted neighborhoods and these neighborhoods remain attractive to new polluting projects that require access to cheap land, such as transportation projects; [7] and

Whereas, redlining practices allowed for zoning decisions that exposed, and continue to disproportionately expose, communities of color to the damaging effects of pollution and poor air quality; [8] and

Whereas, heat islands are urbanized areas that experience higher temperatures than outlying areas and areas formerly graded D under Home Owners' Loan Corporation policy have on average approximately 23% tree canopy cover today; [9] and

Whereas, the Inflation Reduction Act allocated $3 billion to fund an environmental justice grant program to provide grants to community-based organizations in disadvantaged communities;[4] therefore be it

RESOLVED, that our American Medical Association support state and local climate-health risk assessments, disease surveillance and early warning systems, and research on climate and health, with actions to improve and/or correct the findings (New HOD Policy); and be it further

RESOLVED, that our AMA support measures to protect frontline communities from the health harms of proximity to fossil fuel extraction, refining and combustion, such as the best available technology to reduce local pollution exposure from oil refineries, or health safety buffers from oil extraction operations (New HOD Policy); and be it further

RESOLVED, that our AMA support 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 that have been impacted by other discriminatory development and building practice, thereby protecting residents of these communities from displacement. (New HOD Policy)

Fiscal Note: Minimal - less than $1,000

Received: 4/23/2024

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RELEVANT AMA POLICY

H-135.938 Global Climate Change and Human Health
Our AMA: 1. Supports scientific consensus that the Earth is undergoing adverse global climate change and that anthropogenic contributions are significant. These climate changes have adversely affected the physical and mental health of people. We recognize that minoritized and marginalized populations, children, pregnant people, the elderly, rural communities, and those who are economically disadvantaged will suffer disproportionate harm from climate change. 2. Supports educating the medical community on the adverse public health effects of global climate change and incorporating the health implications of climate change into the spectrum of medical education, including topics such as population displacement, heat waves and drought, flooding, infectious and vector-borne diseases, and potable water supplies. 3. (a) Recognizes the importance of physician involvement in policymaking at the state, national, and global level and supports efforts to search for novel, comprehensive, and economically sensitive approaches to mitigating climate change to protect the health of the public; and (b) recognizes that whatever the etiology of global climate change, policymakers should work to reduce human contributions to such changes. 4. Encourages physicians to assist in educating patients and the public on the physical and mental health effects of climate change and on environmentally sustainable practices, and to serve as role models for promoting environmental sustainability. 5. Encourages physicians to work with local and state health departments to strengthen the public health infrastructure to ensure that the global health effects of climate change can be anticipated and responded to more efficiently, and that adaptation interventions are equitable and prioritize the needs of the populations most at risk. 6. Supports epidemiological, translational, clinical and basic science research necessary for evidence-based global climate change

policy decisions related to health care and treatment. 7. Encourages physicians to assess for environmental determinants of health in patient history-taking and encourages the incorporation of assessment for environmental determinants of health in patient history-taking into physician training. [Modified: CSAPH Rep. 2, I-22; Modified: Res. 424, A-22; Reaffirmation: I-19; Reaffirmed: CSAPH Rep. 04, A-19; Reaffirmation A-14; CSAPH Rep. 3, I-08]

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. [Appended: CSAPH Rep. 02, I-22; Res. 420, A-22]

H-135.939 Green Initiatives and the Health Care Community
Our AMA supports: (1) responsible waste management and clean energy production policies that minimize health risks, including the promotion of appropriate recycling and waste reduction; (2) the use of ecologically sustainable products, foods, and materials when possible; (3) the development of products that are non-toxic, sustainable, and ecologically sound; (4) building practices that help reduce resource utilization and contribute to a healthy environment; (5) the establishment, expansion, and continued maintenance of affordable, accessible, barrier-free, reliable, and clean-energy public transportation; and (6) community-wide adoption of 'green' initiatives and activities by organizations, businesses, homes, schools, and government and health care entities. [Modified: Res. 923, I-19; Modified: Res. 516, A-18; Reaffirmed in lieu of: Res. 504, A-16; Reaffirmed in lieu of Res. 402, A-10; Reaffirmation A-09; CSAPH Rep. 1, I-08]

H-135.923 AMA Advocacy for Environmental Sustainability and Climate
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. [Reaffirmation: I-19; Res. 924, I-16]

D-135.997 Environmental Contributors to Disease and Advocating for Environmental Justice
Our AMA will (1) advocate for the greater public and private funding for research into the environment causes of disease, and urge the National Academy of Sciences to undertake an authoritative analysis of environmental causes of disease; (2) ask the steering committee of the Medicine and Public Health Initiative Coalition to consider environmental contributors to disease and environmental racism as a priority public health issues; (3) encourage federal, state, and local agencies to address and remediate environmental injustice, environmental racism, and all other environmental conditions that are adversely impacting health, especially in marginalized communities; and (4) lobby Congress to support ongoing initiatives that include reproductive health outcomes and development particularly in minority populations in Environmental Protection Agency Environmental Justice policies. [Modified: Res. 415, A-23; Reaffirmed in lieu of: Res. 505, A-19; Appended: Res. 927, I-11; Res. 402, A-03]

D-440.912 AMA Public Health Strategy
1. Our AMA will distribute evidence-based information on the relationship between climate change and human health through existing platforms and communications channels, identify advocacy and leadership opportunities to elevate the voices of physicians on the public health crisis of climate change, and centralize our AMA's efforts towards environmental justice and an equitable transition to a net-zero carbon society by 2050. 2. Our AMA Board of Trustees will provide an update on loss of coverage and uninsurance rates following the return to regular Medicaid redeterminations and the end of the COVID-19

Public Health Emergency, the ensuing financial and administrative challenges experienced by physicians, physician practices, hospitals, and the healthcare system; and a report of actions taken by the AMA and recommendation for further action to address these issues at I-2023. 3. Our AMA Board of Trustees will provide a strategic plan or outline for the AMA's plan to address and combat the health effects of climate change at I-2023. 4. Our AMA Board of Trustees will provide an update on the efforts and initiatives of the AMA's gun violence task force at I-2023. 5. Our AMA will continue to support increased funding for public health infrastructure and workforce, which should include funding for preventative medicine-related residency programs, to increase public health leadership in this country. [Modified: BOT Rep. 05, I-23; BOT Rep. 17, A-23]

H-470.953 Evaluating Green Space Initiatives
Our AMA supports appropriate stakeholders in conducting studies to evaluate different green space initiatives that could be implemented in communities to improve patients' health and eliminate health disparities. [Res. 905, I-15]

H-135.923 AMA Advocacy for Environmental Sustainability and Climate
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. [Reaffirmation: I-19; Res. 924, I-16]

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H-135.949 Support of Clean Air and Reduction in Power Plant Emissions
(1) Our AMA supports (a) federal legislation and regulations that meaningfully reduce the following four major power plant emissions: mercury, carbon dioxide, sulfur dioxide and nitrogen oxide; and (b) efforts to limit carbon dioxide emissions through the reduction of the burning of coal in the nation's power generating plants, efforts to improve the efficiency of power plants and continued development, promotion, and widespread implementation of alternative renewable energy sources in lieu of carbon-based fossil fuels. 2. Our AMA will: (a) support the Environmental Protection Agency’s proposal, under the Clean Air Act, to regulate air quality for heavy metals and other air toxins emitted from smokestacks. The risk of dispersion through air and soil should be considered, particularly for people living downwind of smokestacks; and (b) urge the EPA to finalize updated mercury, cadmium, and air toxic regulations for monitoring air quality emitted from power plants and other industrial sources, ensuring that recommendations to protect the public’s health are enforceable. [Appended: Res. 401, A-22; Modified: Res. 908, I-17; Modified: Res. 506, A-15; Reaffirmed: Res. 421, A-14; Reaffirmed in lieu of Res. 526, A-12; Reaffirmation I-07; Res. 429, A-03]

H-135.973 Stewardship of the Environment
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. [Reaffirmation I-16; Reaffirmed in lieu of Res. 402, A-10; Reaffirmed in lieu of Res. 417, A-04; Amended: CSA Rep. 8, A-03; Amended: CLRPD Rep. D, I-92; CSA Rep. G, I-89]

AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES

Resolution: 417
(A-24)

Introduced by: California

Subject: Reducing Job-Related Climate Risk Factors

Referred to: Reference Committee D

Whereas, heat causes more deaths per year in the U.S. than any other weather hazard; and

Whereas, individuals who work outdoors, especially those working in construction and agriculture, may be frequently exposed to extreme heat conditions and be at-risk for occupational heat-related illnesses, such as dehydration, heat exhaustion, and heat stroke;[13] and

Whereas, the Occupational Safety and Health Administration Heat Illness Prevention tool includes “indoor work in warm/hot environments with heat sources such as ovens, fires, hot tar, and/or other radiant heat sources,” as a job-related risk factor for heat exposure at a workplace;[14] and

Whereas, indoor and outdoor cold work conditions need to be addressed as well; therefore be it

RESOLVED, that our American Medical Association support enforcement of existing outdoor health standards and the establishment of enforceable indoor heat and outdoor cold illness prevention standards, for occupational settings, schools, licensed health care and other congregate facilities. (New HOD Policy)

Fiscal Note: Minimal - less than $1,000

Received: 4/23/2024

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2. *Employer Checklist for Outdoor and Indoor Heat-Related Injury and Illness Prevention,* Occupational Safety and Health Administration website at https://www.osha.gov/sites/default/files/Activity_FF_EmployerHeatChecklist.pdf.

RELEVANT AMA POLICY

D-135.967 Advocating for Heat Exposure Protections for All Workers
Our AMA: (1) will advocate for all workers to have access to preventive cool-down rest periods in shaded, ventilated, and/or cooled areas for prevention of injury from sun exposure and heat injury as well as appropriate access to emergency services when signs and symptoms of heat exposure injury; (2) will advocate for legislation that creates federal standards for protections against heat stress and sun exposure specific to the hazards of the workplace; (3) supports policy change at the federal level via legislation or administrative rule changes by the Occupational Safety and Health Administration (OSHA) that would require that workers receive health educational materials about prevention and recognition

of heat exhaustion and heat exposure injury that is in the worker's primary language: (4) will work with the United States Department of Labor, OSHA, and other appropriate federal stakeholders to develop and enforce evidence-based policies, guidelines, and protections against heat injury for workers independent of legal status; and (5) recognizes there are particular medical conditions and medications, including but not limited to psychotropics, which increase an individual's vulnerability to the negative impacts of heat and sun exposure and advocate for recognition of this, as well as additional protections as part of any guidelines, legislation or other policies. [Res. 502, I-21]

H-130.951 Heat-Related Illness
The AMA recognizes the significant public health threat imposed by heat-related emergencies, and provides the following policy: (1) Physicians should identify patients at risk for extreme heat-related illness such as the elderly, children, individuals with physical or mental disabilities, alcoholics, the chronically ill, and the socially isolated. Patients, family members, friends, and caretakers should be counseled about prevention strategies to avoid such illness. Physicians should provide patients at risk with information about cooling centers and encourage their use during heat emergencies. (2) The AMA encourages patients at risk for heat-related illness to consider wearing appropriate medical identification. [Reaffirmed: CSAPH Rep. 01, A-17; Reaffirmed: CSAPH Rep. 3, A-07; CSA Rep. 10, A-97]

H-135.938 Global Climate Change and Human Health
Our AMA: 1. Supports scientific consensus that the Earth is undergoing adverse global climate change and that anthropogenic contributions are significant. These climate changes have adversely affected the physical and mental health of people. We recognize that minoritized and marginalized populations, children, pregnant people, the elderly, rural communities, and those who are economically disadvantaged will suffer disproportionate harm from climate change. 2. Supports educating the medical community on the adverse public health effects of global climate change and incorporating the health implications of climate change into the spectrum of medical education, including topics such as population displacement, heat waves and drought, flooding, infectious and vector-borne diseases, and potable water supplies. 3. (a) Recognizes the importance of physician involvement in policymaking at the state, national, and global level and supports efforts to search for novel, comprehensive, and economically sensitive approaches to mitigating climate change to protect the health of the public; and (b) recognizes that whatever the etiology of global climate change, policymakers should work to reduce human contributions to such changes. 4. Encourages physicians to assist in educating patients and the public on the physical and mental health effects of climate change and on environmentally sustainable practices, and to serve as role models for promoting environmental sustainability. 5. Encourages physicians to work with local and state health departments to strengthen the public health infrastructure to ensure that the global health effects of climate change can be anticipated and responded to more efficiently, and that adaptation interventions are equitable and prioritize the needs of the populations most at risk. 6. Supports epidemiological, translational, clinical and basic science research necessary for evidence-based global climate change policy decisions related to health care and treatment. 7. Encourages physicians to assess for environmental determinants of health in patient history-taking and encourages the incorporation of assessment for environmental determinants of health in patient history-taking into physician training. [Modified: CSAPH Rep. 2, I-22; Modified: Res. 424, A-22; Reaffirmation: I-19; Reaffirmed: CSAPH Rep. 04, A-19; Reaffirmation A-14; CSAPH Rep. 3, I-08]

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D-440.912 AMA Public Health Strategy
1. Our AMA will distribute evidence-based information on the relationship between climate change and human health through existing platforms and communications channels, identify advocacy and leadership opportunities to elevate the voices of physicians on the public health crisis of climate change, and centralize our AMA's efforts towards environmental justice and an equitable transition to a net-zero carbon society by 2050. 2. Our AMA Board of Trustees will provide an update on loss of coverage and uninsurance rates following the return to regular Medicaid redeterminations and the end of the COVID-19 Public Health Emergency, the ensuing financial and administrative challenges experienced by physicians, physician practices, hospitals, and the healthcare system; and a report of actions taken by the AMA and recommendation for further action to address these issues at I-2023. 3. Our AMA Board of Trustees will provide a strategic plan or outline for the AMA's plan to address and combat the health effects of climate change at I-2023. 4. Our AMA Board of Trustees will provide an update on the efforts and initiatives of the AMA's gun violence task force at I-2023. 5. Our AMA will continue to support increased funding for public health infrastructure and workforce, which should include funding for preventative medicine-related residency programs, to increase public health leadership in this country. [Modified: BOT Rep. 05, I-23; BOT Rep. 17, A-23]

H-135.973 Stewardship of the Environment
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. [Reaffirmation I-16; Reaffirmed in lieu of Res. 402, A-10; Reaffirmed in lieu of Res. 417, A-04; Amended: CSA Rep. 8, A-03; Amended: CLRPD Rep. D, I-92; CSA Rep. G, I-89]

AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES

Resolution: 418
(A-24)

Introduced by: Resident and Fellow Section

Subject: Early and Periodic Eye Exams for Adults

Referred to: Reference Committee D

Whereas, eye exams are a screening tool that uses evidence-based medicine to assess for the presence or absence of diseases to provide treatment and work to preserve vision[1-2]; and

Whereas, the American Academy of Ophthalmology (AAO) recommends that all adults get a complete eye examination by an ophthalmologist at age 40 in order to detect common diseases, provide early treatment, and preserve vision[3-4]; and

Whereas, those under the age of 40 who are healthy and have good vision should receive a eye exam every 5–10 years[3-5]; and

Whereas, adults who suffer from chronic systemic conditions are more likely to develop eye disorders and subsequent vision loss from eye disorders than their healthy peers and would benefit from earlier screening to better manage their disorders[6-7]; and

Whereas, diseases such as diabetes and high blood pressure, as well as family history of eye disease, significantly raise an individual's chances of developing eye related disease, and people with this history are not recommended to wait to get an eye exam until they are 40 years old[3,6-7]; and

Whereas, diabetic patients can develop diabetic retinopathy, earlier cataracts, and glaucoma; this increased risk does not start when the patient can be classified as elderly, but has rather been shown to start from the age of 45 years according to the Centers for Disease Control and Prevention (CDC)[8-11]; and

Whereas, according to the CDC, approximately 4.5% of adults aged 45–64 have undiagnosed diabetes, something which a baseline or routine eye exam could aid in diagnosing as according to the National Eye Institute[8-12]; and

Whereas, 40–45% of Americans with diabetes have visibly evident diabetic retinopathy, which can show up early in the disease process of diabetes[11]; and

Whereas, according to the CDC, early detection and treatment can prevent or delay blindness due to diabetic retinopathy in 90% of people with diabetes, but 50% or more of them don’t get their eyes examined or are diagnosed too late for effective treatment and could therefore benefit from early eye examinations[1]; and

Whereas, hypertensive patients likewise have similar ocular manifestations such as: hypertensive retinopathy, choroidopathy, and ocular neuropathy[13-14]; and

Whereas, earlier screening and treatment for these patients has been shown to reduce the burden of blindness due to diabetic retinopathy and hypertensive eye disease[15]; and

Whereas, diabetes and hypertension continue to increase in prevalence in the U.S. making this a growing issue that should be addressed sooner rather than later to decrease sequelae and financial burden[9,16]; and

Whereas, Medicare and other insurance companies do not cover routine eye examinations without a pre-existing diagnosis[17]; and

Whereas, the AMA supports evidence-based screening in policy G-600.064, “AMA Endorsement of Screening Tests or Standards,” stating "Our AMA continues to advocate its policies on medical necessity determinations to government agencies, managed care organizations, third party payers, and private sector health care accreditation organizations."[18]; and

Whereas, the AMA has policy supporting eye screenings for children (Encouraging Vision Screenings for Schoolchildren H-425.977) and for the elderly (Eye Exams for the Elderly H-25.990); however, for all adults, but especially for those adults at high risk, screenings need to occur between childhood and old age[19-20]; and

Whereas, the AAO has policy that supports the screening of children and the elderly, as well as healthy adults at age 40, and particularly supports that all individuals who are “at high risk of developing ocular abnormalities related to systemic diseases such as diabetes mellitus and hypertension or who have a family history of eye disease, require periodic comprehensive eye examinations to prevent or minimize vision loss[21]”; and

Whereas, the AMA does not have a policy encouraging eye screenings for either adults between childhood and elderliness nor those especially vulnerable adults who are at high risk of developing ocular abnormalities related to systemic diseases or who have a family history of eye disease and addressing this gap will actively decrease vision loss; and

Whereas, current United States Preventive Services Task Force (USPSTF) guidelines do not have any recommendations regarding adult eye examinations and have only weighed in on the evidence regarding vision screening, stating “evidence is insufficient to assess the balance of benefits and harms of screening for impaired visual acuity in older adults”[22]; and

Whereas, vision screening as discussed in the USPSTF is a completely distinct diagnostic tool to an eye examination which is discussed in this resolution; and

Whereas, the AAO describes vision screening as a distinct entity from eye examinations; and furthermore that vision screenings are unable “to provide the same results as a comprehensive eye and vision examination” from an ophthalmologist or optometrist and that “Comprehensive eye examinations are the only effective way to confirm or rule out any eye disease[23]”; and

Whereas, this is especially true in the setting of undiagnosed hypertensive and diabetic retinopathies, where vision loss happens late in the course of the disease and where, according

to the CDC, patients "may not notice symptoms in the early stage. That's why it's very important to get a dilated eye exam at least once a year to catch any problems early when treatment is most effective[24]"; and

Whereas, various recent proposals from the executive and legislative branches (including President Biden's 2022 budget request, House bill H.R. 33 introduced to the House of Representatives in 2023, and the Senate bill S.842 introduced to the Senate also in 2023) have proposed the creation of additional benefits for routine eye exams under Medicare Part B, showing significant political interest in increasing insurance benefits for eye exams[25-27]; and

Whereas, by updating AMA policy H-25.990 to include eye examinations for those older than 40 years and who have chronic systemic conditions affecting development of eye disease our AMA will be in line with current AAO guidelines[3,4]; therefore be it

RESOLVED, that our American Medical Association amend policy H-25.990 "Eye Exams for the Elderly" by addition to read as follows:

Eye Exams for the Elderly and Adults H-25.990

Our AMA (1) encourages the development of programs and/or outreach efforts to support periodic eye examinations and access to affordable prescription eyeglasses for elderly patients and adults who suffer from chronic systemic conditions that increase their likelihood of developing eye disease as well as a baseline eye examination for all adults aged 40 and above. (2) Our AMA encourages physicians to work with their state medical associations and appropriate specialty societies to create statutes that uphold the interests of patients and communities and that safeguard physicians from liability when reporting in good faith the results of vision screenings.

(Modify Current HOD Policy)

Fiscal Note: Minimal - less than $1,000

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RELEVANT AMA POLICY:

AMA Endorsement of Screening Tests or Standards G-600.064
(1) Delegates, state, or specialty societies submitting a resolution seeking endorsement or AMA adoption of specific screening tests must also submit an evidence-based review that determines the strength or quality of the evidence supporting their request, and that evaluates the degree to which the test satisfies the minimal criteria for validating the appropriateness of the screening test, which are: (a) the test must be able to detect the target condition earlier than without screening and with sufficient accuracy to avoid producing large numbers of false-positive and false-negative results; and (b) screening for and treating persons with early disease should improve the likelihood of favorable health outcomes compared with treating patients when they present with signs or symptoms of disease. (2) This review will be made available to the reference committee, which will either recommend to the House of Delegates that the resolution be referred or not be adopted. [CSA Rep. 7, A-02CC&B Rep. 3, I-08 Reaffirmed: CCB/CLRPD Rep. 3, A-12 Reaffirmed: CCB/CLRPD Rep. 1, A-22]

Early and Periodic Screening, Diagnosis, and Treatment D-290.987
Our AMA recognizes the importance of the Early and Periodic Screening, Diagnosis, and Treatment (EPSDT) program and will advocate for EPSDT to remain intact as critical to the health and well-being of children. [Res. 708, I-05 Modified: CMS Rep. 1, A-15]

Insurance Coverage of Periodic Health Care Services H-185.965
Our AMA adopts the policy that patients should be able to receive insurance coverage for periodic services performed within an appropriately flexible interval (i.e., once annually, rather than having to wait precisely 365 days). [Res. 128, A-99 Reaffirmed: CMS Rep. 5, A-09 Modified: Sub. Res. 811, I-10Reaffirmed: CMS Rep. 01, A-20]

Eye Exams for the Elderly H-25.990
1. Our American Medical Association encourages the development of programs and/or outreach efforts to support periodic eye examinations and access to affordable prescription eyeglasses for elderly patients.
2. Our AMA encourages physicians to work with their state medical associations and appropriate specialty societies to create statutes that uphold the interests of patients and communities and that safeguard physicians from liability when reporting in good faith the results of vision screenings.

[Res. 813, I-05 Reaffirmed: CSAPH Rep. 1, A-15, Modified: CMS Rep. 02, A-23]

Encouraging Vision Screenings for Schoolchildren H-425.977
Our AMA: (1) encourages and supports outreach efforts to provide vision screenings for school-age children prior to primary school enrollment; (2) encourages the development of programs to improve school readiness by detecting undiagnosed vision problems; and (3) supports periodic pediatric eye screenings based on evidence-based guidelines with referral to an ophthalmologist for a comprehensive professional evaluation as appropriate. [Res. 430, A-05Modified: CSAPH Rep. 1, A-15]

AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES

Resolution: 419
(A-24)

Introduced by: Medical Student Section

Subject: Addressing the Health Risks of Extreme Heat

Referred to: Reference Committee D

Whereas, since the 1960s, the annual number of heat waves in the US has tripled from 2 to 6, with concurrent increases in heat intensity resulting in the hottest summer ever in 2023[1,2]; and

Whereas, heat is the most deadly weather phenomenon and caused 1,714 deaths in 2022, nearly 6 times as much as the 297 deaths in 2004[3,4]; and

Whereas, prolonged heat exposure is associated with emergency visits, hospitalizations, and deaths due to cardiovascular, kidney, respiratory, and psychiatric illnesses, adverse pregnancy and birth outcomes, and increased healthcare costs[5-7]; and

Whereas, a 2023 study in *Circulation*, the journal of the American Heart Association, estimates 4,300 to 5,500 excess deaths due to heat by mid-century, based on socioeconomic status[8]; and

Whereas, 25% of the US experiences reduced resilience to extreme heat exposure, especially due to housing quality, vehicle access, and poverty[9]; and

Whereas, because infrastructure in urban areas absorbs and re-emits heat more than natural landscapes, daytime temperatures in these cities can increase by 1.7 degrees compared to other areas, which further intensifies heat waves in metropolitan regions[10,11]; and

Whereas, greenspaces in cities, such as large parks, can reduce temperatures by up to 2 degrees, mitigating the heat island effect and heat-related morbidity and mortality[12,13]; and

Whereas, historically redlined neighborhoods have decreased tree canopy coverage and lower normalized difference vegetation indexes (NDVIs) compared to other areas[14]; and

Whereas, the Stafford Act, passed in 1988, does not consider extreme heat a major disaster eligible for Federal Emergency Management Agency (FEMA) assistance[15,16]; and

Whereas, the Centers for Disease Control and Prevention (CDC) Climate and Health Technical Report on “heat response plans” defines them as “a coordinated plan that describes and organizes activities to prevent heat-related morbidity and mortality in a community,” including surveillance, public health messaging, front-line health and social services, cooling centers, water and fan distribution, energy assistance, and greenspaces[17]; and

Whereas, heat response plans, household air conditioning, and availability of cool areas have been associated with decreased heat-related mortality, with a greater effect for elderly populations and people in neighborhoods with low education levels[18,19]; and

Whereas, many homes experience dangerously high indoor heat indexes during extreme heat, but 7.5% lack air conditioning, including 12% of low-income households[20,21]; and

Whereas, a 2021 study of 25 US cities found that nearly 90% of people were not within walking distance of a cooling center and that people aged 65 and over were particularly affected[22];

Whereas, a US Census survey found that 26% of Americans were forced to forgo food, medicine, or another necessary expense to pay an energy bill, and 17% had kept their home at an unsafe or unhealthy temperature in the past year[23]; and

Whereas, funding for the Low Income Home Energy Assistance Program (LIHEAP), which helps families pay for energy bills and basic weatherization, has fallen from $5.1 billion in 2009 to $3.8 billion in 2022, and now less than 20% of eligible households receive aid[24,25]; and

Whereas, an analysis of US public and private prisons revealed that a 10-degree temperature increase is correlated with a 5.2% increase in mortality, 6.7% increase in cardiovascular mortality, and 22% increase in suicide (mostly affecting men over 65)[26]; and

Whereas, the Federal Bureau of Prisons suggests temperatures at “76°F in the cooling season and 68°F in the heating season,” but its Facilities Operations Manual acknowledges that the “age of heating and cooling systems” affects the ability to maintain these ranges[27]; and

Whereas, many state attempts to implement temperature standards in prisons have stalled, and 44 states lack universal air conditioning in their prison systems, many of which are located in deteriorating facilities that will be further affected by climate change[28,29]; therefore be it

RESOLVED, that our American Medical Association support funding for subsidizing energy costs and air conditioning units for low-income households to maintain safe temperatures during periods of extreme temperature (New HOD Policy); and be it further

RESOLVED, that our AMA support the implementation and enforcement of state and federal temperature standards in prisons, jails, and detention centers, including the implementation of air conditioning in areas that experience dangerously high temperatures. (New HOD Policy)

Fiscal Note: Minimal - less than $1,000

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RELEVANT AMA Policy

Heat-Related Illness H-130.951

The AMA recognizes the significant public health threat imposed by heat-related emergencies, and provides the following policy: (1) Physicians should identify patients at risk for extreme heat-related illness such as the elderly, children, individuals with physical or mental disabilities, alcoholics, the chronically ill, and the socially isolated. Patients, family members, friends, and caretakers should be counseled about prevention strategies to avoid such illness. Physicians should provide patients at risk with information about cooling centers and encourage their use during heat emergencies. (2) The AMA encourages patients at risk for heat-related illness to consider wearing appropriate medical identification. [CSA Rep. 10, A-97; Reaffirmed: CSAPH Rep. 3, A-07; Reaffirmed: CSAPH Rep. 01, A-17]

H-470.953 Evaluating Green Space Initiatives

Our AMA supports appropriate stakeholders in conducting studies to evaluate different green space initiatives that could be implemented in communities to improve patients' health and eliminate health disparities. [Res. 905, I-15]

Advocating for Heat Exposure Protections for All Workers D-135.967
Our AMA: (1) will advocate for all workers to have access to preventive cool-down rest periods in shaded, ventilated, and/or cooled areas for prevention of injury from sun exposure and heat injury as well as appropriate access to emergency services when signs and symptoms of heat exposure injury; (2) will advocate for legislation that creates federal standards for protections against heat stress and sun exposure specific to the hazards of the workplace; (3) supports policy change at the federal level via legislation or administrative rule changes by the Occupational Safety and Health Administration (OSHA) that would require that workers receive health educational materials about prevention and recognition of heat exhaustion and heat exposure injury that is in the worker's primary language: (4) will work with the United States Department of Labor, OSHA, and other appropriate federal stakeholders to develop and enforce evidence-based policies, guidelines, and protections against heat injury for workers independent of legal status; and (5) recognizes there are particular medical conditions and medications, including but not limited to psychotropics, which increase an individual’s vulnerability to the negative impacts of heat and sun exposure and advocate for recognition of this, as well as additional protections as part of any guidelines, legislation or other policies. [Res. 502, I-21]

AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES

Resolution: 420
(A-24)

Introduced by: Pennsylvania, Mississippi

Subject: Equity in Dialysis Care

Referred to: Reference Committee D

Whereas, kidney disease disproportionately affects communities of color; and

Whereas, Black or African Americans are almost four times more likely and Hispanic or Latino Americans are 1.3 times more likely to have kidney failure compared to White or Caucasian Americans; and

Whereas, although they make up only 13.5% of the population, Black Americans make up more than 35% of dialysis patients; and

Whereas, the major causes of kidney disease, including diabetes, hypertension, and cardiovascular disease, are all more prevalent among Black patients; and

Whereas, although a kidney transplant is the optimal treatment for kidney failure, Black patients face barriers to access at every step of the process and on average wait a year longer than White patients to receive a kidney transplant; and

Whereas, Black patients are less likely to receive a transplant evaluation, have less access to the waitlist, spend longer on the transplant waitlist, are less likely to survive on the waitlist, and have lower rates of graft survival post-transplant; and

Whereas, despite being preferred by many patients, home dialysis is underutilized compared to dialysis delivered in a facility, particularly among communities of color; and

Whereas, Black and Hispanic patients are less likely to initiate home dialysis and are more likely to fail on the modality within the first 90 days, after which point disparities in home dialysis utilization widen; and

Whereas, this may be because common barriers to home dialysis such as unstable living situations, poor health literacy and lower socioeconomic status may be overrepresented among Black and Hispanic dialysis patients; and

Whereas, the National Kidney Foundation calls kidney disease ‘the under recognized public health crisis’; therefore be it

RESOLVED, that our American Medical Association declare kidney failure as a significant public health problem with disproportionate affects and harm to under-represented communities (New HOD Policy); and be it further

RESOLVED, that our AMA vigorously pursue potential solutions and partnerships to identify economic, cultural, clinical and technological solutions that increase equitable access to all modalities of care including home dialysis. (Directive to Take Action)

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

Received: 4/24/2024

RELEVANT AMA POLICY

Assuring Patient Access to Kidney Transplantation D-370.983
1. Our AMA will: (a) work with professional and patient-centered organizations to advance patient and physician-directed coordinated care for End Stage Renal Disease (ESRD) patients; (b) actively oppose any legislative or regulatory efforts to remove patient choice and physician involvement in ESRD care decisions; and (c) actively oppose any legislative or regulatory effort that would create financial incentives that would curtail the access to kidney transplantation.
2. Our AMA House of Delegates will be advised in a timely fashion regarding any legislative or regulatory efforts to abrogate patient and physician-advised decision-making regarding modality of care for ESRD.
3. Our AMA supports federal legislative and regulatory policies that improve kidney transplantation access by using evidence-based outcome measures which do not impede sound clinical judgment of physicians and surgeons.
Citation: Res. 201, A-19; Appended: Res. 210, I-19;

Medicaid Dialysis Policy for Undocumented Patients H-290.957
Our AMA will work with the Centers for Medicare and Medicaid Services and state Medicaid programs to cover scheduled outpatient maintenance dialysis for undocumented patients with end stage kidney disease under Emergency Medicaid.
Citation: Res. 121, A-21;

Advancing Quality Coordinated Care for Patients with End Stage Renal Disease H-370.957
Our AMA will work with Members of Congress and their staffs to ensure that any legislation which promotes integrated and patient-centered care for End Stage Renal Disease (ESRD) patients does not inappropriately impinge on the patient-physician relationship and is in the best interest of ESRD patients.
Citation: BOT Action in response to referred for decision: Res. 219, A-18;

UNOS Kidney Paired Donation Program H-370.960
Our AMA: (1) encourages the continued expansion of the United Network for Organ Sharing's (UNOS) Kidney Paired Donation program which provides a national registry of living donors, carries out ongoing data collection on key issues of concern in transplantation from living donors, and through its operational guidelines provides consistent, national standards for the transplant community; and (2) encourages voluntary coordination among private donor registries and UNOS to enhance the availability of organs for transplantation.
Citation: BOT Action in response to referred for decision Res. 2, A-13; Reaffirmation: I-19;

Cost-Saving Public Coverage for Renal Transplant Patients H-370.963
1. Our AMA supports private and public mechanisms that would extend insurance coverage for evidence-based treatment of renal transplant care for the life of the transplanted organ.
2. Our AMA will continue to offer technical assistance to individual state and specialty societies when those societies lobby state or federal legislative or executive bodies to implement evidence-based cost-saving policies within public health insurance programs.
Citation: Res. 104, A-13; Reaffirmation: I-19;

AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES

Resolution: 421
(A-24)

Introduced by: American Society for Metabolic and Bariatric Surgery, Obesity Medicine Association, Society of American Gastrointestinal and Endoscopic Surgeons

Subject: Annual Conference on the State of Obesity and its Impact on Disease in America (SODA)

Referred to: Reference Committee D

Whereas, the American Medical Association (AMA) recognizes the critical importance of addressing the impact of obesity on various chronic diseases, including hypertension, cardiovascular disease, type 2 diabetes, and metabolic dysfunction-associated hepatitis; and

Whereas, obesity significantly increases the risk of developing these chronic conditions, leading to substantial morbidity, mortality, and healthcare costs across the United States; and

Whereas, the AMA is committed to advancing evidence-based approaches to prevent and manage obesity-related chronic diseases, improve patient outcomes, and enhance healthcare delivery systems; and

Whereas, regular monitoring of epidemiological trends, development of effective disease progression algorithms, and coordination of efforts to improve access to care are essential components of addressing the multifaceted challenges posed by obesity-related chronic diseases; therefore be it

RESOLVED, that our American Medical Association convene an annual meeting of its Federation partners to comprehensively review the impact of obesity on hypertension, cardiovascular disease, type 2 diabetes, metabolic dysfunction-associated hepatitis (MASH) and other related comorbidities with a focus on monitoring epidemiology, developing algorithms to combat disease progression, and coordinating efforts to improve access to care (Directive to Take Action); and be it further

RESOLVED, that our AMA shall feature presentations, workshops, and panel discussions covering the latest research findings, clinical guidelines, and best practices related to the prevention, diagnosis, and management of obesity-related chronic diseases (Directive to Take Action); and be it further

RESOLVED, that our AMA shall invite renowned experts, researchers, clinicians, policymakers, and patient advocates to contribute their insights, experiences, and recommendations during the annual meeting (Directive to Take Action); and be it further

RESOLVED, that our AMA shall collaborate with relevant stakeholders, including government agencies, healthcare systems, insurers, community organizations, and industry partners, to develop and implement strategies for combating obesity-related chronic diseases (Directive to Take Action); and be it further

RESOLVED, that our AMA assist in the discussion of epidemiological trends, development of evidence-based algorithms for disease management, and coordination of efforts to improve access to care for patients affected by obesity-related chronic diseases (Directive to Take Action); and be it further

RESOLVED, that our AMA shall publish a comprehensive report summarizing the discussions, findings, and recommendations from each annual meeting and disseminate it to member organizations, policymakers, healthcare providers, and the public (Directive to Take Action); and be it further

RESOLVED, that the AMA shall convene the first annual meeting in 2025 and subsequent meetings annually thereafter. (Directive to Take Action)

Fiscal Note: $252,347 Annually: Convene an annual meeting of Federation partners on obesity

Received: 4/30/2024

REFERENCES

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2. Powell-Wiley TM, Poirier P, Burke LE, Després JP, Gordon-Larsen P, Lavie CJ, Lear SA, Ndumele CE, Neeland IJ, Sanders P, St-Onge MP; American Heart Association Council on Lifestyle and Cardiometabolic Health; Council on Cardiovascular and Stroke Nursing; Council on Clinical Cardiology; Council on Epidemiology and Prevention; and Stroke Council. Obesity and Cardiovascular Disease: A Scientific Statement From the American Heart Association. Circulation. 2021 May 25;143(21):e984-e1010. doi: 10.1161/CIR.0000000000000973. Epub 2021 Apr 22. PMID: 33882682; PMCID: PMC8493650.
3. Yanovski SZ, Yanovski JA. Approach to Obesity Treatment in Primary Care: A Review. JAMA Intern Med. Published online March 11, 2024. doi:10.1001/jamainternmed.2023.8526
4. Almuwaqqat Z, Hui Q, Liu C, et al. Long-Term Body Mass Index Variability and Adverse Cardiovascular Outcomes. JAMA Netw Open. 2024;7(3):e243062. doi:10.1001/jamanetworkopen.2024.3062

RELEVANT AMA POLICY

Recognition of Obesity as a Disease H-440.842
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.
Res. 420, A-13 Reaffirmed: CSAPH Rep. 08, A-23

AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES

Resolution: 422
(A-24)

Introduced by: Ohio

Subject: Immunization Registry

Referred to: Reference Committee D

Whereas, the critical role of vaccines in our public health infrastructure is well-established; and

Whereas, every state maintains an immunization registry; and

Whereas, pediatric vaccines are routinely reported electronically to the appropriate state registry; and

Whereas, immunization registry data is crucial for determining the effectiveness of a given vaccine; and

Whereas, an increasing number of adult vaccines are administered by pharmacies; and

Whereas, a significant number of adult vaccines provided by pharmacies are not recorded in the patient's primary medical records; and

Whereas, reporting vaccinations to government entities may require additional resources or time; therefore be it

RESOLVED, that our American Medical Association develop model legislation requiring all vaccine providers to participate in their statewide immunization information system (Directive to Take Action); and be it further

RESOLVED, that our AMA support mandating all vaccine providers to report all immunizations to their respective state immunization registry, for both adults and children (New HOD Policy); and be it further

RESOLVED, that our AMA support reimbursement for reporting immunizations to state registries by both public and private payers. (New HOD Policy)

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

Received: 4/26/2024

REFERENCES

1. Stolpe, S., & Choudhry, N. K. (2019). Effect of automated immunization registry-based telephonic interventions on adult vaccination rates in community pharmacies: a randomized controlled trial. Journal of Managed Care & Specialty Pharmacy, 25(9), 989-994.
2. Woods, L. O., Bridges, C. B., Graitcer, S. B., & Lamont, B. (2016). US Immunization program adult immunization activities and resources. Human Vaccines & Immunotherapeutics, 12(4), 1045-1050.
3. Placzek, H., & Madoff, L. C. (2011). The use of immunization registry-based data in vaccine effectiveness studies. Vaccine, 29(3), 399-411.

RELEVANT AMA POLICY

H-440.899 Immunization Registries
Our AMA encourages: (1) Physicians to participate in the development of immunization registries in their communities and use them in their practices for patients of all ages; (2) electronic health record (EHR) vendors to add features to automate the exchange of vaccination information in the patient EHR to state immunization registries to improve and help ensure completeness and accuracy of vaccination records. EHR vendors and registry administrators need to work with physicians and other health professionals to facilitate the exchange of needed vaccination information by establishing seamless, bidirectional communication capabilities for physicians, other vaccine providers, and immunization registries; and (3) all states to move rapidly to provide comprehensive lifespan immunization registries that are interfaced with other state registries. [Res. 415, A-99; Reaffirmed: 415, A-01; Reaffirmation A-09; Modified: CSAPH Rep. 4, I-14]

AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES

Resolution: 423
(A-24)

Introduced by: Senior Physicians Section

Subject: HPV Vaccination to Protect Healthcare Workers over Age 45

Referred to: Reference Committee D

Whereas, there has been an increase with human papilloma virus (HPV) associated with head and neck cancers[1]; and

Whereas, health care workers (HCW) may be exposed to these oncogenic HPV in the course of performance of their clinical tasks such as cauterization of cervical, vaginal, vulvar, penile and/or anal cancers[2]; and

Whereas, many HCWs are over age 45 and thus not deemed eligible for HPV vaccine insurance coverage or reimbursement according to Merck and Co., the current manufacturer, or Center for Disease Control and Prevention (CDC) guidelines[3,4]; and

Whereas, the cost of GARDASIL 9 without insurance coverage will cost a patient approximately $335 per dose with three doses required for maximum immunity attainment; and

Whereas, N-95 or equivalent masks are essential for significant protection during procedures; therefore be it

RESOLVED, that our American Medical Association support all health care workers (HCWs) who might be exposed to HPV in the course of their clinical duties and strongly encourage them to wear masks, preferably N-95 (New HOD Policy); and be it further

RESOLVED, that our AMA will work with appropriate stakeholders to ensure that the HPV vaccine should be offered to all HCWs with potential exposure to HPV oncogenic material at no or minimal cost to the HCW individual (Directive to Take Action); and be it further

RESOLVED, that our AMA work with relevant stakeholders, including the CDC, to recommend HPV vaccine to HCWs to prevent health care related transmission. (Directive to Take Action)

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

Received: 5/2/2024

REFERENCES

1. Forte, T., Niu, J., Lockwood, G. A., & Bryant, H. E. (2012). Incidence trends in head and neck cancers and human papillomavirus (HPV)-associated oropharyngeal cancer in Canada, 1992–2009. *Cancer Causes & Control*, *23*, 1343-1348.
2. Harrison R., Huh W. Occupational Exposure to Human Papillomavirus and Vaccination for Health Care Workers. Obstet Gynecol 2020; 136:663.
3. American Society for Colposcopy and Cervical Pathology. ASCCP Recommends HPV Vaccination for Providers. https://www.asccp.org/hpv-vaccination (Accessed on January 10, 2024).
4. Gupta, A. K., MacLeod, M. A., & Abramovits, W. (2016). GARDASIL 9 (Human Papillomavirus 9-Valent Vaccine, Recombinant). *Skinmed*, *14*(1), 33-37.

RELEVANT AMA POLICY

H-440.810 Availability of Personal Protective Equipment (PPE)
1. Our AMA affirms that the medical staff of each health care institution should be integrally involved in disaster planning, strategy and tactical management of ongoing crises.
2. Our AMA supports evidence-based standards and national guidelines for PPE use, reuse, and appropriate cleaning/decontamination during surge conditions.
3. Our AMA will advocate that it is the responsibility of health care facilities to provide sufficient personal protective equipment (PPE) for all employees and staff, as well as trainees and contractors working in such facilities, in the event of a pandemic, natural disaster, or other surge in patient volume or PPE need.
4. Our AMA supports physicians and health care professionals and other workers in health care facilities in being permitted to use their professional judgement and augment institution-provided PPE with additional, appropriately decontaminated, personally-provided personal protective equipment (PPE) without penalty.
5. Our AMA supports the rights of physicians and trainees to participate in public commentary addressing the adequacy of clinical resources and/or health and environmental safety conditions necessary to provide appropriate and safe care of patients and physicians during a pandemic or natural disaster.
6. Our AMA will work with the HHS Office of the Assistant Secretary for Preparedness and Response to gain an understanding of the PPE supply chain and ensure the adequacy of the Strategic National Stockpile for public health emergencies.
7. Our AMA encourages the diversification of personal protective equipment design to better fit all body types, cultural expressions and practices among healthcare personnel.
[Res. 412, I-20; Appended: Res. 414, A-21; Modified; Res. 410, I-21]

D-440.955 Insurance Coverage for HPV Vaccine
Our AMA:
(1) supports the use and administration of Human Papillomavirus vaccine as recommended by the Advisory Committee on Immunization Practices;
(2) encourages insurance carriers and other payers to appropriately cover and adequately reimburse the HPV vaccine as a standard policy benefit for medically eligible patients; and
(3) will advocate for the development of vaccine assistance programs to meet HPV vaccination needs of uninsured and underinsured populations.
[Res. 818 I-06; Reaffirmed: CMS Report 01, A-16]

H-440.872 HPV Associated Cancer Prevention
1. Our American Medical Association:
a. urges physicians and other health care professionals to educate themselves and their patients about HPV and associated diseases, HPV vaccination, as well as routine HPV related cancer screening; and
b. encourages the development and funding of programs targeted at HPV vaccine introduction and HPV related cancer screening in countries without organized HPV related cancer screening programs.
2. Our AMA will intensify efforts to improve awareness and understanding about HPV and associated diseases in all individuals, regardless of sex, such as, but not limited to, cervical cancer, head and neck cancer, anal cancer, and genital cancer, the availability and efficacy of HPV vaccinations, and the need for routine HPV related cancer screening in the general public.
3. Our AMA supports legislation and funding for research aimed towards discovering screening methodology and early detection methods for other non-cervical HPV associated cancers.
4. Our AMA:
a. encourages the integration of HPV vaccination and routine cervical cancer screening into all appropriate health care settings and visits,
b. supports the availability of the HPV vaccine and routine cervical cancer screening to appropriate patient groups that benefit most from preventive measures, including but not limited to low-income and pre-sexually active populations,
c. recommends HPV vaccination for all groups for whom the federal Advisory Committee on Immunization Practices recommends HPV vaccination.
5. Our AMA encourages appropriate parties to investigate means to increase HPV vaccination rates by facilitating administration of HPV vaccinations in community-based settings including school settings.
6. Our AMA will study requiring HPV vaccination for school attendance.
7. Our AMA encourages collaboration with interested parties to make available human papillomavirus

vaccination to people who are incarcerated for the prevention of HPV-associated cancers.
[Res. 503, A-07; Appended: Res. 6, A-12; Reaffirmed: CSAPH Rep. 1, A-22; Reaffirmation: A-22; Modified: Res. 916, I-22; BOT Action Sept 2023]

H-460.913 - Screening for HPV-Related Anal Cancer
Our AMA supports: (1) continued research on the diagnosis and treatment of anal cancer and its precursor lesions, including the evaluation of the anal pap smear as a screening tool for anal cancer; (2) advocacy efforts to implement screening for anal cancer for high-risk populations; and (3) national medical specialty organizations and other stakeholders in developing guidelines for interpretation, follow up, and management of anal cancer screening results.
[Res. 512, A-04; Reaffirmed: CSAPH Rep. 1, A-14; Appended: Res. 421, A-22]

AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES

Resolution: 424
(A-24)

Introduced by: Senior Physicians Section

Subject: LGBTQ+ Senior Health

Referred to: Reference Committee D

Whereas, an estimated 2.7 million older Americans who identify as part of the LGBTQ+ community face unique and challenging health issues due to a combination of factors including discrimination, social stigma, and lack of culturally competent healthcare[1]; and

Whereas, LBGTQ+ seniors are more likely than other seniors to report poor general health, mental health issues, social isolation and higher rates of multiple chronic co-morbidities[2]; and

Whereas, subsets of this community, in particular transgender seniors, face even higher rates when compared to their LGBTQ+ cohorts[3]; and

Whereas, addressing the unique health needs of LGBTQ+ seniors require a comprehensive approach that recognizes and respects their diverse identities and experiences; therefore be it

RESOLVED, that our American Medical Association create and disseminate educational initiatives to increase awareness and understanding of senior LGBTQ+ health aging issues among the general public, healthcare professionals, and policy makers (Directive to Take Action); and be it further

RESOLVED, that our AMA develop and promote cultural competency training for clinicians in caring for senior LGBTQ+ individuals (Directive to Take Action); and be it further

RESOLVED, that our AMA develop and promote policies and practices for implementation within all healthcare settings that are inclusive and affirming for LGBTQ+ seniors (Directive to Take Action); and be it further

RESOLVED, that our AMA advocate for increased funding and resources for research into health issues of LGBTQ+ seniors. (Directive to Take Action)

Fiscal Note: $122,712: Contract with third parties to develop educational content and training for physicians

Received: 5/2/2024

1. Movement Advancement Project and SAGE. May 2017. "Understanding Issues Facing LGBT Older Adults." https://www.lgbtmap.org/policy-and-issue-analysis/understanding-issues-facing-lgbt-older-adults. Accessed 19 February 2024.
2. Fredriksen Goldsen, K., Kim, H.-J., Jung, H. H., Davis, A. & Emlet, C.A. (2021). Oregon LGBTQ+ Older Adult Survey Report. Seattle, WA: Goldsen Institute.
3. Adan, M., Scribani, M., Tallman, N., Wolf-Gould, C., Campo-Engelstein, L., Gadomski, A. Worry and Wisdom: A Qualitative Study of Transgender Elders' Perspectives on Aging. Transgend Health. 2021 Dec 2;6(6):332-342. doi: 10.1089/trgh.2020.0098. PMID: 34993305; PMCID: PMC8664103.

REFERENCES

RELEVANT AMA POLICY

H-160.991 Health Care Needs of Lesbian, Gay, Bisexual, Transgender and Queer Populations
Our AMA: (a) believes that the physician's nonjudgmental recognition of patients' sexual orientations, sexual behaviors, and gender identities enhances the ability to render optimal patient care in health as well as in illness. In the case of lesbian, gay, bisexual, transgender, queer/questioning, and other (LGBTQ) patients, this recognition is especially important to address the specific health care needs of people who are or may be LGBTQ; (b) is committed to taking a leadership role in: (i) educating physicians on the current state of research in and knowledge of LGBTQ Health and the need to elicit relevant gender and sexuality information from our patients; these efforts should start in medical school, but must also be a part of continuing medical education; (ii) educating physicians to recognize the physical and psychological needs of LGBTQ patients; (iii) encouraging the development of educational programs in LGBTQ Health; (iv) encouraging physicians to seek out local or national experts in the health care needs of LGBTQ people so that all physicians will achieve a better understanding of the medical needs of these populations; and (v) working with LGBTQ communities to offer physicians the opportunity to better understand the medical needs of LGBTQ patients; and (c) opposes, the use of "reparative" or "conversion" therapy for sexual orientation or gender identity.

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. Our AMA will continue to work alongside our partner organizations, including GLMA, to increase physician competency on LGBTQ health issues.

4. Our AMA will continue to explore opportunities to collaborate with other organizations, focusing on issues of mutual concern in order to provide the most comprehensive and up-to-date education and information to enable the provision of high quality and culturally competent care to LGBTQ people.
[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]

H-295.878 Eliminating Health Disparities - Promoting Awareness and Education of Sexual Orientation and Gender Identity Health Issues in Medical Education
Our AMA: (1) supports the right of medical students and residents to form groups and meet on-site to further their medical education or enhance patient care without regard to their gender, gender identity, sexual orientation, race, religion, disability, ethnic origin, national origin or age; (2) supports students and residents who wish to conduct on-site educational seminars and workshops on health issues related to sexual orientation and gender identity; and (3) encourages medical education accreditation bodies to both continue to encourage and periodically reassess education on health issues related to sexual orientation and gender identity in the basic science, clinical care, and cultural competency curricula in undergraduate and graduate medical education.
[Res. 323, A-05; Modified in lieu of Res. 906, I-10; Reaffirmation A-11; Reaffirmation A-12; Reaffirmation A-16; Modified: Res. 16, A-18; Modified: Res. 302, I-19]

D-315.974 Promotion of LGBTQ-Friendly and Gender-Neutral Intake Forms
Our AMA will develop and implement a plan with input from the Advisory Committee on LGBTQ Issues and appropriate medical and community based organizations to distribute and promote the adoption of the recommendations pertaining to medical documentation and related forms in AMA policy H-315.967, "Promoting Inclusive Gender, Sex, and Sexual Orientation Options on Medical Documentation," to our membership.
[Res. 014, A-18]

G-635.125 AMA Membership Demographics
1. Stratified demographics of our AMA membership will be reported annually and include information regarding age, gender, race/ethnicity, education, life stage, present employment, and self-designated specialty.

2. Our AMA will immediately release to each state medical and specialty society, on request, the names, category and demographics of all AMA members of that state and specialty.

3. Our AMA will develop and implement a plan with input from the Advisory Committee on LGBTQ Issues to expand demographics collected about our members to include both sexual orientation and gender identity information, which may be given voluntarily by members and will be handled in a confidential manner.
[BOT Rep. 26, A-10; Reaffirmed: CCB/CLRPD Rep. 3, A-12; Appended: Res. 603, A-17]

AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES

Resolution: 425
(A-24)

Introduced by: Women Physicians Section

Subject: Perinatal Mental Health Disorders among Medical Students and Physicians

Referred to: Reference Committee D

Whereas, perinatal mental health disorders contribute to 23 percent of maternal deaths; and

Whereas, one in eight women experience postpartum depression, which is a common perinatal mental health disorder; and

Whereas, the DSM-V notes postpartum depression to be as a major depressive episode with onset of symptoms within 4 weeks of delivery; and

Whereas, clinical research shows postpartum depression may occur up to 12 months after delivery; and

Whereas, an estimated 80% of female physicians become mothers; and

Whereas, 6.5% to 20% of women in the general population develop postpartum depression; and

Whereas, resident physicians have reported a nearly four times greater rate of postpartum depression than the general population; and

Whereas, the rate of matriculation of female students into medical school in 2022 was 55.6% and has been increasing every year; and

Whereas, many physicians report lack of support during both pregnancy and the postpartum period by both colleagues and their workplace; and

Whereas, symptoms of postpartum depression are noted to be worse in jobs where women perceive a decreased sense of control over both work-life and family-life or jobs with less flexibility; and

Whereas, female physicians have reported feeling discriminated at the workplace based on their status as mothers; and

Whereas, untreated postpartum depression severely affects a woman’s ability to return to normal function and results in poorer outcomes for both the mother and infant; and

Whereas, 63% of physicians report symptoms or signs of burnout at least once per week in 2021; and

Whereas, suicide is a major cause of mortality for physicians relative to the general public; and

Whereas, untreated postpartum depression is a risk factor for suicide; and

Whereas, physicians are less likely to seek treatment for mental health conditions for fear of repercussions; and

Whereas, postpartum depression often goes untreated due to concern from the mother for stigma; and

Whereas, factors that help patients with postpartum depression include maternal-infant bonding, familial and societal support, and maternal rest; therefore be it

RESOLVED, that our American Medical Association work with relevant stakeholders to identify ways to increase screening for perinatal mental health conditions and reduce stigma surrounding the diagnosis and treatment of perinatal mental health conditions (Directive to Take Action); and be it further

RESOLVED, that our AMA advocate for reducing structural and systemic barriers to the diagnosis and treatment of perinatal mental health conditions in physicians and medical students. (Directive to Take Action)

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

Received: 5/3/2024

REFERENCES

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4. Chesak SS, Yngve KC, Taylor JM, Voth ER, Bhagra A. Challenges and solutions for physician mothers: a critical review of the literature. InMayo Clinic Proceedings 2021 Jun 1 (Vol. 96, No. 6, pp. 1578-1591). Elsevier.
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RELEVANT AMA POLICY

Improving Mental Health Services for Pregnant and Postpartum Mothers H-420.953
Our AMA will: (1) support improvements in current mental health services during pregnancy and postpartum periods; (2) 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) 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) 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; and (5) 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: Res. 227, A-23]

Study of Medical Student, Resident, and Physician Suicide D-345.983
Our AMA will: (1) explore the viability and cost-effectiveness of regularly collecting National Death Index (NDI) data and confidentially maintaining manner of death information for physicians, residents, and medical students listed as deceased in the AMA Physician Masterfile for long-term studies; (2) monitor progress by the Association of American Medical Colleges, the American Association of Colleges of Osteopathic Medicine, and the Accreditation Council for Graduate Medical Education (ACGME) to collect data on medical student and resident/fellow suicides to identify patterns that could predict such events; (3) support the education of faculty members, residents and medical students in the recognition of the signs and symptoms of burnout and depression and supports access to free, confidential, and immediately available stigma-free mental health and substance use disorder services; (4) collaborate with other stakeholders to study the incidence of and risk factors for depression, substance misuse and substance use disorders, and attempted and completed suicide among physicians, residents, and medical students; and (5) work with appropriate stakeholders to explore the viability of developing a standardized reporting mechanism for the collection of current wellness initiatives that institutions have in place to inform and promote meaningful mental health and wellness interventions in these populations. [CME Rep. 06, A-19; Modified: Res. 326, A-22]

Factors Causing Burnout H-405.948
Our AMA recognizes that medical students, resident physicians, and fellows face unique challenges that contribute to burnout during medical school and residency training, such as debt burden, inequitable compensation, discrimination, limited organizational or institutional support, stress, depression, suicide, childcare needs, mistreatment, long work and study hours, among others, and that such factors be included as metrics when measuring physician well-being, particularly for this population of physicians. [Res. 208, I-22]

AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES

Resolution: 426
(A-24)

Introduced by: New Jersey

Subject: Maternal Morbidity and Mortality: The Urgent Need to Help Raise Professional and Public Awareness and Optimize Maternal Health – A Call to Action

Referred to: Reference Committee D

Whereas, maternal mortality rate is considered an indirect indicator of the strength of an entire healthcare system; and

Whereas, despite the numerous efforts by various maternal health organizations, Maternal Morbidity and Mortality rates are continuing to increase; and

Whereas, over the course of the past 30 years, there has been a 261 % increase in rates of diabetes, 149 % increase in rates of hypertensive disorders of pregnancy (gestational hypertension, preeclampsia, eclampsia, HELLP syndrome), 182 % increase in rates of chronic hypertension; and

Whereas, obesity is a well-recognized key contributor to these increases; and

Whereas, there is also increasing and compelling evidence that maternal obesity may affect long-term outcomes of offspring and further highlights the major public health concern maternal obesity poses and the need for increased efforts to optimize maternal weight and health before achieving pregnancy; and

Whereas, despite published recommendations by the National Academies of Sciences, Engineering, and Medicine for gestational weight gain, conversation about weight during pregnancy has remained limited during prenatal care and 50 – 60% of women gain more than recommended; and

Whereas, interpregnancy periods are interrelated as the postpartum period may constitute the pregnancy period of a women's next pregnancy; and

Whereas, excess gestational weight gain, especially over multiple pregnancies, is also likely to be retained 20 years later resulting in higher risk of chronic disease and negatively impact a women's health in the long term; and

Whereas, social drivers of health, structural racism and various stressors have placed Black women at higher risks for obesity and its impact; and

Whereas, obesity is preventable if the resources to treat or prevent obesity are made available to those who need them the most; and

Whereas, personal responsibility is a part of dialogue, recognizing our societal responsibility to help prevent and treat obesity by reducing the various barriers to health such as access and

affordability to healthy food, safe spaces that favor an active lifestyle, and access to trained clinicians who can provide a full range of equitable obesity care especially to those who need it the most can no longer wait; therefore be it

RESOLVED, that our American Medical Association policy no. D-245.994 be amended to include the importance of all women achieving their healthiest weight before pregnancy, maintaining healthy gestational weight gain, and optimizing weight loss postpartum (Modify Current HOD Policy); and be it further

RESOLVED, that our AMA:

a) Advocate for access to effective obesity treatment (either medical or surgical) for patients.
b) Advocate for supporting physicians' ability to provide obstetrical and obesity care.
c) Advocate for additional funding for research on medical technology that influences human behavior to promote healthy living.
d) Reaffirm policy no. H-440.902 and report back at A-25 on research on the medical, psychological, and socioeconomic issues associated with obesity, including reimbursement for evaluation and management of patients with obesity, emphasizing pre-conception, gestational and postpartum obesity.
e) Provide medical recommendations on ways to eliminate barriers identified in prior obesity research by our AMA.
f) Recommend that approaches to obesity prevention and treatment be included as an element of medical education.

(Directive to Take Action)

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

Received: 5/3/2024

AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES

Resolution: 427
(A-24)

Introduced by: New England

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

Referred to: Reference Committee D

Whereas, as of February 1, 2022, there are 6,033 total male individuals, of whom 5,440 are criminally sentenced, 24 are pre-trial detainees, and 569 face civil commitments, and 199 total female individuals, of whom 155 are criminally sentenced, 40 are pre-trial detainees, and 4 face civil commitments, who are in the jurisdiction of the Massachusetts Department of Corrections;[1] and

Whereas, in 2021, the average male justice-involved individual was 44 years old, and the average female justice-involved individual was 42 years old in Massachusetts, with 951 individuals 60 years of age and over as of January 1, 2021,[2] and average age of individuals who are incarcerated rising concurrently with their health needs;[3] and

Whereas, in 2016, about 43% of federal justice-involved individuals reported ever having a chronic condition, 33% reported currently having a chronic condition, and 31% had medical visits outside of carceral facilities;[4] and

Whereas, people of color are overrepresented in prisons and jails in Massachusetts, with Whites accounting for 76% of the state population but 49% of prison or jail population, Blacks accounting for 7% of the state population but 26% of prison or jail population, and Latinos accounting for 10% of the state population but 24% of prison or jail population;[5] and

Whereas, US carceral facilities provide health care for justice-involved individuals in both on-site and off-site facilities depending on the type of service, with emergency, obstetrics, gynecology, and cardiology procedural services more commonly provided at non-carceral hospital facilities;[6] and

Whereas, universal shackling in a hospital refers to the placement of metal restraints around the legs, wrists, or waist of justice-involved patients, regardless of age, illness, mobility, or criminal record disposition,[7] with the recent exception of perinatal patients in Massachusetts; and

Whereas, Massachusetts enacted legislation in 2014 to prevent perinatal shackling, or the use of shackles for patients who are incarcerated and pregnant, in labor, or in postpartum recovery, by correction officers while the attending physician or nurse treating the perinatal patient may request immediate removal of restraints;[8] and

Whereas, our American Medical Association has model state legislation to prohibit the practice of shackling pregnant prisoners;[9] and

Whereas, US Senators Elizabeth Warren and Corey Booker introduced the Dignity for Incarcerated Women Act in 2017,[10] and the First Step Act of 2018 placed a federal prohibition

on the use of restraints on individuals who are pregnant and in the custody of the federal Bureau of Prisons or the US Marshals Service;[11,12] and Whereas, Thirty-two states have implemented some form of restriction on perinatal shackling, with 13 states banning shackling throughout pregnancy, labor, postpartum, and during transport between carceral and health care facilities;[13] and

Whereas, physicians and nurses in hospitals routinely assess the necessity of physical or pharmacological restraints on non-justice–involved patients who may harm themselves or others, as well as document their use in the electronic medical record with descriptions of the reason for restraint, form of restraint, and periodic re-evaluations of continued need for restraint and any consequence on patient health;[14,15] and

Whereas, the use of restraints on non-justice–involved patients in the hospital setting is regulated by the Centers for Medicare and Medicaid Services, which mandate that the least restrictive form of restraint that protects the safety of the patient, health care staff, and others is used;[16,17] and

Whereas, shackling patients under special circumstances including, but not limited to, old age, loss of consciousness, terminal illness, or limited mobility, is unnecessary and excessive restraint, thus cruel, inhuman, and degrading as defined by 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 [18,19,20] and in violation of the medical ethics principle of nonmaleficence; and

Whereas, physical restraint use on patients is associated with delays in necessary emergency operations, increased falls and deliriums, as well as elevated risks of in-hospital deaths and venous thrombosis;[21,22] and

Whereas, in psychiatric settings, restraints have led to inappropriate actions by staff, invoking a fear response in patients and a loss of trust in the psychiatric staff,[23] ultimately causing patients to be less likely to follow their treatment plan, use medical care, or consent to a surgical procedure;[24] and

Whereas, formerly justice-involved individuals of color who experienced discrimination in healthcare settings due to their criminal records are less likely to use primary care resources upon release,[25] report worse mental and physical health following their release,[26] and are more likely to report increased psychological distress;[27] and

Whereas, physicians have written about the moral injury and contribution to physician burnout due to practicing in hospitals that routinely shackle every justice-involved patient;[28,29] and

Whereas, violence against health care workers is of critical importance that should be addressed through effective hospital security protocols and staff training;[30] and

Whereas, current hospital policies for shackling in Massachusetts align with policies governing the shackling of non-justice-involved patients only in regard to justice-involved pregnant individuals, yet permit the universal shackling of all non-pregnant justice-involved patients, regardless of other special circumstances including, but not limited to, old age, loss of consciousness, terminal illness, or limited mobility; therefore be it

RESOLVED, that our American Medical Association condemns 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 (New HOD Policy); and be it further

RESOLVED, that our AMA 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 (Directive to Take Action); and be it further

RESOLVED, that our AMA advocate nationally for the end of universal shackling, to protect human and patient rights, improve patient health outcomes, and reduce moral injury among physicians. (Directive to Take Action)

Fiscal Note: Moderate - between $5,000 - $10,000

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RELEVANT AMA POLICY

Shackling of Pregnant Women in Labor H-420.957

1. Our AMA supports language recently adopted by the New Mexico legislature that "an adult or juvenile correctional facility, detention center or local jail shall use the least restrictive restraints necessary when the facility has actual or constructive knowledge that an inmate is in the 2nd or 3rd trimester of pregnancy. No restraints of any kind shall be used on an inmate who is in labor, delivering her baby or recuperating from the delivery unless there are compelling grounds to believe that the inmate presents:

- An immediate and serious threat of harm to herself, staff or others; or
- A substantial flight risk and cannot be reasonably contained by other means.

If an inmate who is in labor or who is delivering her baby is restrained, only the least restrictive restraints necessary to ensure safety and security shall be used."

2. Our AMA will develop model state legislation prohibiting the use of shackles on pregnant women unless flight or safety concerns exist.

AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES

Resolution: 428
(A-24)

Introduced by: New England

Subject: Advocating for Education and Action Regarding the Health Hazards of PFAS Chemicals

Referred to: Reference Committee D

Whereas, in 2019 the American Medical Association resolved to support research and policy to address the effects of PFAS exposure[1] and supported legislation and regulation seeking to address contamination, exposure, classification, and clean-up of per- and polyfluoroalkyl substances as follows:[2] "our AMA: (1) supports continued research on the impact of perfluoroalkyl and polyfluoroalkyl chemicals on human health; (2) supports legislation and regulation seeking to address contamination, exposure, classification, and clean-up of PFAS substances; and (3) will advocate for states, at minimum, to follow guidelines presented in the Environmental Protection Agency's Drinking Water Health Advisories for perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS), with consideration of the appropriate use of Minimal Risk Levels (MRLs) presented in the CDC/ATSDR Toxicological Profile for PFAS"; and

Whereas, per- and polyfluoroalkyl substances (PFAS), are a large class of chemicals with at least one aliphatic perfluorocarbon moiety; this carbon - fluorine bond is exceptionally strong and therefore highly resistant to degradation; thus the moniker "forever chemicals" because these chemicals persist, have the potential to bioaccumulate and become more concentrated in the environment with the passage of time;[3] and

Whereas, PFAS are ubiquitous: they are found in "non-stick" products that resist stains, oil, grease, and water including cookware,[4] artificial turf, clothing, leather, carpets, food packaging, firefighting foam, cosmetics, shampoos, sunscreens, pesticides; medical equipment such as PPE, masks, gowns, IV tubing, and medications;[5] and petroleum extraction ("fracking") fluids;[6] the latter are sometimes repurposed as road salt or as "biosolids" that are then spread on crops[7]; and

Whereas, the PFAS chemicals PFOA and PFOS have recently been designated by the US EPA as hazardous substances that can be responded to via Superfund;[8] and while the EPA has set health advisory levels at between 0.002 and 0.004 ng/L, health effects, according to the EPA, can occur at any level;[9] and

Whereas, PFAS exposure has been associated with endocrine disruption, immune suppression, impaired organogenesis, damage to reproductive organs, and hepatotoxicity; low infant birth weight, preeclampsia,[10] impaired fertility, obesity, Type 2 diabetes, harms to neurocognitive and behavioral development in children, and malignancies, including prostate, kidney, and testicular cancer;[11] and

Whereas, PFAS exposure occurs via food, air, and water, including drinking water and rain;[12] water can become contaminated when PFAS leaches into water supplies from plastic containers, landfills, industrial and agricultural runoff, or following pesticide spraying (PFOS has been detected in 6/10 tested pesticides at levels between 3.92 to 19.2 mg/kg);[13] other common

sources of exposure include: ingestion of contaminated dust (from carpets, upholstery, etc.) as well as migration into food or beverages from boxes/packaging/plastic bottles); in infants, toddlers, and children, hand-to-mouth behavior is a significant source of exposure; and

Whereas, PFAS has direct impacts on the practice of medicine since they are used extensively in medical products, including medications, IV tubing, and PPE;[14] pharmaceuticals often include a fluorine molecule to increase cell permeability to Increase uptake;[15] and persons with high PFAS levels may be less responsive to certain medications, like vaccines;[16] and

Whereas, like lead, exposure to PFAS is widespread, but like lead, mitigating exposure and focusing on children and adults who are highly exposed is helpful since these persons can then be identified and helped (ie, parents can be cautioned to use a different, PFAS-free water source to use to make up baby formula, etc); like lead, limiting length and extent of high exposure could potentially improve health outcomes; and

Whereas, PFAS chemicals disproportionately pose challenges to low income and minority communities: some of the highest levels found across the country exist in lower income communities, even when the exposure hazard is not disproportionate between low and high income communities, the ability to respond with adequate filtration and monitoring efforts is unequal; and

Whereas, the National Academy of Science, Engineering and Medicine has recommended[17] that individuals with significant exposure to PFAS (including those who live near commercial airports, military bases and farms where sewage sludge may have been used) be tested and receive ongoing medical monitoring; PFAS blood testing in the population based C8 Dupont study in 69,030 participants was essential in determining associated health conditions with PFAS chemicals;[18],[19] and PFAS blood tests are currently available through Quest and other providers;[20] and

Whereas, 99% of United States residents have various PFAS detectable in their blood[21]; and

Whereas, newly developed educational resources on PFAS are available and include a free CME course on PFAS and comprehensive medical information and guidance on PFAS-REACH project's website (funded by the NIH's National Institute of Environmental Health Sciences (NIEHS))[22] and the July 2022 National Academy of Science, Engineering and Medicine report on PFAS;[23] therefore be it

RESOLVED, that our American Medical Association improve physician and public education around the adverse health effects of PFAS and potential mitigation and prevention efforts. (Directive to Take Action)

Fiscal Note: $51,420 Development of continuing medical education module to be hosted on AMA EdHub

Received: 5/7/2024

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RELEVANT AMA POLICY

Per- and Polyfluoroalkyl Substances (PFAS) and Human Health H-135.916

Our AMA: (1) supports continued research on the impact of perfluoroalkyl and polyfluoroalkyl chemicals on human health; (2) supports legislation and regulation seeking to address contamination, exposure, classification, and clean-up of (PFAS) substances; and (3) will advocate for states, at minimum, to follow guidelines presented in the Environmental Protection Agencys Drinking Water Health Advisories for perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS), with consideration of the appropriate use of Minimal Risk Levels (MRLs) presented in the CDC/ATSDR Toxicological Profile for (PFAS).

AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES

Resolution: 429
(A-24)

Introduced by: New England

Subject: Assessing and Protecting Local Communities from the Health Risks of Decommissioning Nuclear Power Plants

Referred to: Reference Committee D

Whereas, decommissioning nuclear power plants has long been known to pose many risks to health to workers and to residents of nearby communities;[1] and

Whereas, over the coming years, the United States will be decommissioning many of its more than 90 aging nuclear power plants;[11] there is a need, therefore, to develop processes for decommissioning these facilities that are protective of health in Massachusetts and in other states; and

Whereas, while the company responsible for the decommissioning of the nuclear reactor in Plymouth had initially planned to release more than a million gallons of radioactive water into Cape Cod Bay, the permit to allow said discharges has been tentatively denied by the Massachusetts Department of Environmental Protection;[12] and

Whereas, according to Woods Hole Oceanographic Institute expert Dr. Ken Buesseler, tritium levels inside this reactor water exceed seawater levels for tritium by a factor of a million; Cesium-137 in the reactor water is 200 million times higher than seawater levels; and even if 99 percent of the cesium from the Pilgrim water is removed, the radioactive water will still contain Cesium-137 at levels 2 million times higher than the levels in Cape Cod Bay;[2] and

Whereas, according to Dr. Buesseler, since Cesium-137 levels are elevated, it can be assumed that strontium-90 is present in the water, along with other elements that are part of a group called transuranics, which include known carcinogens such as plutonium, uranium, americium; [2] and

Whereas, all of the radioactive elements known and suspected to be released from the Pilgrim Nuclear Power Station located in Plymouth can cause cancers in humans, including lung cancer, bone cancer, thyroid cancer, adult leukemia, and childhood leukemia; [4] and

Whereas, the scientific consensus is that every additional exposure to radiation adds to the total risk for genetic damage and thus for cancers like leukemia and increased radiation implies increased incidence of these diseases in exposed populations; for solid cancers, the risk for cancer from radiation is linearly proportional to cumulative exposure; [5] and

Whereas, Pilgrim Nuclear Power Station has specifically been associated with increased leukemia incidence in the local community; Dr. Richard Clapp, former Massachusetts state cancer epidemiologist and professor emeritus of the Boston University School of Public Health, found a fourfold excess of leukemia cases among those who lived or worked near the Plymouth nuclear power plant, in a dose-response relationship; [6] and

Whereas, Dr. Clapp's peer-reviewed case control study also showed increased infant mortality and thyroid cancer; [6] and

Whereas, while more exposure is always worse, even low-dose exposures to radiation increase cancer risk, according to the National Academy of Sciences BEIR VII report[3], especially among vulnerable populations such as pregnant women, infants in the womb, and young children; moreover, exposures to ionizing radiation in early life can cause lifelong damage and increase risk of cancer across the lifespan;[7] infants, children, and pregnant women are therefore particularly vulnerable to any radiation emitted from the Pilgrim Nuclear Power Station; and Whereas, recent studies suggest that proximity to ionizing radiation sources is also associated with an increased risk of dementia; [8] and

Whereas, radiation from nuclear power plants and the radioactive waste it generates pose disproportionate challenges to low income and minority communities; some of the highest levels of radiation found across the country from these energy sources exist in these communities;[9] in Massachusetts, Superfund sites and hazardous waste are more likely to be located in close proximity to these populations; [10] and

Whereas, there is cause for concern regarding potential future serious health sequelae among local communities due to radionuclide exposure from the decommissioning of the nuclear power plant in Plymouth; therefore be it

RESOLVED, that our American Medical Association advocate for strict limitations of aerosol, soil, and/or water radionuclide releases in the decommissioning of US nuclear power plants in order to protect health, particularly that of local vulnerable populations. (Directive to Take Action)

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

Received: 5/7/2024

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AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES

Resolution: 430
(A-24)

Introduced by: New England

Subject: Supporting the Inclusion of Information about Lung Cancer Screening within Cigarette Packages

Referred to: Reference Committee D

Whereas, lung cancer is the leading cause of cancer-related death in Massachusetts, causing more deaths than prostate cancer, breast cancer, and colorectal cancer combined;[1] and

Whereas, nearly three-fourths of people who smoke in the United States come from lower socioeconomic statuses, with those below the poverty line twice as likely to smoke as those above it;[2] and

Whereas, lung cancer incidence and lung cancer mortality are elevated among veterans and Black Americans;[3-6] and

Whereas, individuals who are lesbian, gay, or bisexual use tobacco at higher rates than those who are straight, and those who are transgender use tobacco at higher rates than cisgender individuals;[7] and

Whereas, the tobacco industry spends nearly $1,000,000 per hour on retail advertising and price discounts, and the number of tobacco retailers per square mile is about five times higher in the lowest-income neighborhoods than in the highest-income neighborhoods;[8] and

Whereas, discriminatory marketing directed towards LBGTQ+ individuals has benefited the tobacco industry while leading to higher smoking rates among LBGTQ+ individuals;[9] and

Whereas, lung cancer screening has been shown to save lives in both large-scale randomized trials and real-world settings,[10-12] but only 16.3 percent of individuals in Massachusetts who are eligible undergo lung cancer screening with low-dose computed tomography (CT) annually;[13] and

Whereas, 84 percent of individuals who meet the lung cancer screening eligibility criteria are not aware of lung cancer screening through the low-dose CT scan;[14] and

Whereas, 56 percent of individuals meeting lung cancer screening eligibility criteria in 2017 currently smoke and, therefore, frequently encounter health messaging displayed within cigarette packages;[15] and

Whereas, placing information about lung cancer screening effectiveness and eligibility along with instructions on how to access screening could improve early detection through lung cancer screening in populations at highest risk for lung cancer; and

Whereas, the combustible tobacco industry is expanding to include “non-combustible tobacco” nicotine delivery devices such as (but not limited to) vaping and cheek pouches (e.g., Zyn); and

Whereas, use of some of these devices produces known carcinogens such as aerosolized heavy metals and hydrocarbons;[16,17] and

Whereas these devices have not been in use long enough to provide sufficient data on the incidence of cancer associated with their use; therefore be it

RESOLVED, that our American Medical Association advocate for information about lung cancer screening to be included within all combustible tobacco product packaging (Directive to Take Action); and be it further

RESOLVED, that our AMA will work with appropriate public health organizations and governmental agencies to monitor the impact of “non-combustible tobacco” nicotine delivery devices on cancer epidemiology and promote appropriate cancer screening should the suspected link be proven. (Directive to Take Action)

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

Received: 5/7/2024

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RELEVANT AMA POLICY

H-495.989 Tobacco Product Labeling
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: 431
(A-24)

Introduced by: Massachusetts

Subject: Combatting the Public Health Crisis of Gun Violence

Referred to: Reference Committee D

Whereas, gun violence remains a national crisis; and

Whereas, gun violence is now the leading cause of death in US children and teens; and

Whereas, effective means of addressing this scourge have been woefully lacking and data demonstrate that gun deaths among US children and teens increased 50% between 2019 and 2021; and

Whereas, gun violence is not a crisis of our second amendment but rather a crisis of public health; therefore be it

RESOLVED, that our American Medical Association advocate for and strongly support legislation, regulation, and reform that seeks to address the public health crisis posed by gun violence. (Directive to Take Action)

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

Received: 5/7/2024

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RELEVANT AMA POLICY

D-145.992 Further Action to Respond to the Gun Violence Public Health Crisis
Our AMA will (a) make readily accessible on the AMA website the comprehensive summary of AMA policies, plans, current activities, and progress regarding the public health crisis of firearm violence; (b) establish a task force to focus on gun violence prevention including gun-involved suicide; (c) support and consider providing grants to evidence-based firearm violence interruption programs in communities, schools, hospitals, and clinics; (d) collaborate with interested state and specialty societies to increase engagement in litigation related to firearm safety; and (e) report annually to the House of Delegates on our AMA's efforts relating to legislation, regulation, and litigation at the federal, state, and local levels to prevent gun violence. BOT Rep. 2, I-22

D-145.995 Gun Violence as a Public Health Crisis
Our AMA: (1) will immediately make a public statement that gun violence represents a public health crisis which requires a comprehensive public health response and solution; and (2) will actively lobby Congress

to lift the gun violence research ban. Res. 1011, A-16Reaffirmation: A-18Reaffirmation: I-18Reaffirmed: Res. 921, I-22

H-145.997Firearms as a Public Health Problem in the United States - Injuries and Death
1. Our AMA recognizes that uncontrolled ownership and use of firearms, especially handguns, is a serious threat to the public's health inasmuch as the weapons are one of the main causes of intentional and unintentional injuries and deaths.
Therefore, the AMA:
(A) encourages and endorses the development and presentation of safety education programs that will engender more responsible use and storage of firearms;
(B) urges that government agencies, the CDC in particular, enlarge their efforts in the study of firearm-related injuries and in the development of ways and means of reducing such injuries and deaths;
(C) urges Congress to enact needed legislation to regulate more effectively the importation and interstate traffic of all handguns;
(D) urges the Congress to support recent legislative efforts to ban the manufacture and importation of nonmetallic, not readily detectable weapons, which also resemble toy guns; (5) encourages the improvement or modification of firearms so as to make them as safe as humanly possible;
(E) encourages nongovernmental organizations to develop and test new, less hazardous designs for firearms;
(F) urges that a significant portion of any funds recovered from firearms manufacturers and dealers through legal proceedings be used for gun safety education and gun-violence prevention; and
(G) strongly urges US legislators to fund further research into the epidemiology of risks related to gun violence on a national level.
2. Our AMA will advocate for firearm safety features, including but not limited to mechanical or smart technology, to reduce accidental discharge of a firearm or misappropriation of the weapon by a non-registered user; and support legislation and regulation to standardize the use of these firearm safety features on weapons sold for non-military and non-peace officer use within the U.S.; with the aim of establishing manufacturer liability for the absence of safety features on newly manufactured firearms.
3. Our AMA will support research examining the major sources of illegally possessed firearms, as well as possible methods of decreasing their proliferation in the United States.
4. Our AMA will work with key stakeholders including, but not limited to, firearm manufacturers, firearm advocacy groups, law enforcement agencies, public health agencies, firearm injury victims advocacy groups, healthcare providers, and state and federal government agencies to develop evidence-informed public health recommendations to mitigate the effects of violence committed with firearms.
5. Our AMA will collaborate with key stakeholders and advocate for national public forums including, but not limited to, online venues, national radio, and televised/streamed in-person town halls, that bring together key stakeholders and members of the general public to focus on finding common ground, non-partisan measures to mitigate the effects of firearms in our firearm injury public health crisis. CSA Rep. A, I-87Reaffirmed: BOT Rep. I-93-50 Appended: Res. 403, I-99 Reaffirmation A-07 Reaffirmation A-13 Appended: Res. 921, I-13 Reaffirmed: CSAPH Rep. 04, A-18 Reaffirmation: A-18 Reaffirmation: I-18 Appended: Res. 405, A-19 Appended: Res. 907, I-22 Reaffirmed: Res. 921, I-22 Reaffirmation: A-23

D-440.912 AMA Public Health Strategy
1. Our AMA will distribute evidence-based information on the relationship between climate change and human health through existing platforms and communications channels, identify advocacy and leadership opportunities to elevate the voices of physicians on the public health crisis of climate change, and centralize our AMA's efforts towards environmental justice and an equitable transition to a net-zero carbon society by 2050.

2. Our AMA Board of Trustees will provide an update on loss of coverage and uninsurance rates following the return to regular Medicaid redeterminations and the end of the COVID-19 Public Health Emergency, the ensuing financial and administrative challenges experienced by physicians, physician practices, hospitals, and the healthcare system; and a report of actions taken by the AMA and recommendation for further action to address these issues at I-2023.

3. Our AMA Board of Trustees will provide a strategic plan or outline for the AMA's plan to address and combat the health effects of climate change at I-2023.

4. Our AMA Board of Trustees will provide an update on the efforts and initiatives of the AMA's gun violence task force at I-2023.
5. Our AMA will continue to support increased funding for public health infrastructure and workforce, which should include funding for preventative medicine related residency programs, to increase public health leadership in this country. BOT Rep. 17, A-23 Modified: BOT Rep. 05, I-23

AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES

Resolution:432
(A-24)

Introduced by: American College of Preventive Medicine

Subject: Resolution to Decrease Lead Exposure in Urban Areas

Referred to: Reference Committee D

Whereas, lead is a toxic metal that can cause serious health problems, especially in children and pregnant women[1,2,3]; and

Whereas, the American Medical Association (AMA) supports efforts and advocacy to reduce lead exposures[4]; and

Whereas, the Safe Drinking Water Act (amended 2020) prohibits the use of pipes, solder or flux that were not “lead free” in the installation or repair of any public water system or any plumbing in a residential or nonresidential facility providing water for human consumption[5]; and

Whereas, the AMA recognizes the importance of preventive health measures and the role of environmental factors in public health[6]; therefore be it

RESOLVED, that our American Medical Association reaffirm the following policy H-135.928, “Safe Drinking Water” in support of EPA’s Lead and Copper Rule and evidence-based research demonstrating there is no safe level of lead for humans and therefore warrants immediate Federal, State, and municipal action (Reaffirm HOD Policy); and be it further

RESOLVED, that our AMA advocates for accessible testing of domestic water supplies, prioritizing testing for lead in potable water used by pregnant women, newborns and young children, with the provision of accessible water filters in homes found to have elevated lead levels in potable water (Directive to Take Action); and be it further

RESOLVED, that our AMA supports increased funding for lead pipe replacement and other steps to eliminate lead from public and private drinking water supplies (New HOD Policy); and be it further

RESOLVED, that our AMA promotes community awareness and education campaigns on the causes and risks of lead and drinking water and steps that can be taken to eliminate these risks (Directive to Take Action); and be it further

RESOLVED, that our AMA supports the development and use of searchable registries of housing units known to have unresolved lead in the drinking water due to lead connectors to water mains or other sources of lead in the drinking water in cities with significant public lead exposure (Directive to Take Action); and be it further

RESOLVED, that our AMA urges healthcare providers to increase screening for lead exposure, particularly in areas known to have lead pipes, and particularly in underserved areas (Directive to Take Action); and be it further

RESOLVED, that our AMA calls for research into innovative and cost-effective methods for elimination of lead in public and private water supplies and lead from lead pipe connectors to such water supplies (Directive to Take Action).

Fiscal Note: Moderate - between $5,000 - $10,000

Received: 5/8/2024

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RELEVANT AMA POLICY

Environmental Health and Safety in Schools H-135.918
Our AMA: (1) supports the adoption of standards in schools that limit harmful substances from school facility environments, ensure safe drinking water, and indoor air quality, and promote childhood environmental health and safety in an equitable manner; (2) encourages the establishment of a system of governmental oversight, charged with ensuring the regular inspection of schools and identifying shortcomings that might, if left untreated, negatively impact the health of those learning and working in school buildings; (3) supports policies that increase funding for such remediations to take place, especially in vulnerable, resource-limited neighborhoods; and (4) supports continued data collection and reporting on the negative health effects of substandard conditions in schools. [BOT Rep. 29, A-19]

Safe Drinking Water H-135.928
Our AMA supports updates to the U.S. Environmental Protection Agency’s Lead and Copper Rule as well as other state and federal laws to eliminate exposure to lead through drinking water by: (1) Removing, in a timely manner, lead service lines and other leaded plumbing materials that come into contact with drinking water; (2) Requiring public water systems to establish a mechanism for consumers to access information on lead service line locations; (3) Informing consumers about the health-risks of partial lead service line replacement; (4) Requiring the inclusion of schools, licensed daycare, and health care settings among the sites routinely tested by municipal water quality assurance systems; (5) Creating and implementing standardized protocols and regulations pertaining to water quality testing, reporting and remediation to ensure the safety of water in schools and child care centers; (6) Improving public access to testing data on water lead levels by requiring testing results from public water systems to be posted on a publicly available website in a reasonable timeframe thereby allowing consumers to take precautions to protect their health; (7) Establishing more robust and frequent public education efforts and outreach to consumers that have lead service lines, including vulnerable populations; (8) Requiring public water

systems to notify public health agencies and health care providers when local water samples test above the action level for lead; (9) Seeking to shorten and streamline the compliance deadline requirements in the Safe Drinking Water Act; and (10) Actively pursuing changes to the federal lead and copper rules consistent with this policy. [Res. 409, A-16; Modified: Res. 422, A-18; Reaffirmed: BOT Rep. 29, A-19]

Reducing Lead Poisoning H-60.924
1. Our AMA: (a) supports regulations and policies designed to protect young children from exposure to lead; (b) urges the Centers for Disease Control and Prevention to give priority to examining the current weight of scientific evidence regarding the range of adverse health effects associated with blood lead concentrations below the current "level of concern" in order to provide appropriate guidance for physicians and public health policy, and encourage the identification of exposure pathways for children who have low blood lead concentrations, as well as effective and innovative strategies to reduce overall childhood lead exposure; (c) encourages physicians and public health departments to screen children based on current recommendations and guidelines and to report all children with elevated blood levels to the appropriate health department in their state or community in order to fully assess the burden of lead exposure in children. In some cases this will be done by the physician, and in other communities by the laboratories; (d) promotes community awareness of the hazard of lead-based paints; and (e) urges paint removal product manufacturers to print precautions about the removal of lead paint to be included with their products where and when sold.
2. Our AMA will call on the United States government to establish national goals to: (a) ensure that no child has a blood lead level >5 µg/dL (>50 ppb) by 2021, and (b) eliminate lead exposures to pregnant women and children, so that by 2030, no child would have a blood lead level >1 µg/dL (10 ppb).
3. Our AMA will call on the United States government in all its agencies to pursue the following strategies to achieve these goals: (a) adopt health-based standards and action levels for lead that rely on the most up-to-date scientific knowledge to prevent and reduce human exposure to lead, and assure prompt implementation of the strongest available measures to protect pregnant women and children from lead toxicity and neurodevelopmental impairment; (b) identify and remediate current and potential new sources of lead exposure (in dust, air, soil, water and consumer products) to protect children before they are exposed; (c) continue targeted screening of children to identify those who already have elevated blood lead levels for case management, as well as educational and other services; (d) eliminate new sources of lead introduced or released into the environment, which may entail banning or phasing out all remaining uses of lead in products (aviation gas, cosmetics, wheel weights, industrial paints, batteries, lubricants, and other sources), and the export of products containing lead, and setting more protective limits on emissions from battery recyclers and other sources of lead emissions; (e) provide a dedicated funding stream to enhance the resources available to identify and eliminate sources of lead exposure, and provide educational, social and clinical services to mitigate the harms of lead toxicity, particularly to protect and improve the lives of children in communities that are disproportionately exposed to lead; and (f) establish an independent expert advisory committee to develop a long-term national strategy, including recommendations for funding and implementation, to achieve the national goal of eliminating lead toxicity in pregnant women and children, defined as blood lead levels above 1 µg/dL (10 ppb).
4. Our AMA supports requiring an environmental assessment of dwellings, residential buildings, or child care facilities following the notification that a child occupant or frequent inhabitant has a confirmed elevated blood lead level, to determine the potential source of lead poisoning, including testing the water supply. [CCB/CLRPD Rep. 3, A-14; Appended: Res. 926, I-16; Appended: Res. 412, A-17]

Lead Contamination in Municipal Water Systems as Exemplified by Flint, Michigan H-60.918
1. Our AMA will advocate for biologic (including hematological) and neurodevelopmental monitoring at established intervals for children exposed to lead contaminated water with resulting elevated blood lead levels (EBLL) so that they do not suffer delay in diagnosis of adverse consequences of their lead exposure.
2. Our AMA will urge existing federal and state-funded programs to evaluate at-risk children to expand services to provide automatic entry into early-intervention screening programs to assist in the neurodevelopmental monitoring of exposed children with EBLL.
3. Our AMA will advocate for appropriate nutritional support for all people exposed to lead contaminated water with resulting elevated blood lead levels, but especially exposed pregnant women, lactating mothers and exposed children. Support should include Vitamin C, green leafy vegetables and other

calcium resources so that their bodies will not be forced to substitute lead for missing calcium as the children grow.
4. Our AMA promotes screening, diagnosis and acceptable treatment of lead exposure and iron deficiency in all people exposed to lead contaminated water. [Res. 428, A-16]

Universal Access for Essential Public Health Services D-440.924
Our AMA: (1) supports equitable access to the 10 Essential Public Health Services and the Foundational Public Health Services to protect and promote the health of all people in all communities; (2) encourages state, local, tribal, and territorial public health departments to pursue accreditation through the Public Health Accreditation Board (PHAB); (3) will work with appropriate stakeholders to develop a comprehensive list of minimum necessary programs and services to protect the public health of citizens in all state and local jurisdictions and ensure adequate provisions of public health, including, but not limited to clean water, functional sewage systems, access to vaccines, and other public health standards; and (4) will work with the National Association of City and County Health Officials (NACCHO), the Association of State and Territorial Health Officials (ASTHO), the Big Cities Health Coalition, the Centers for Disease Control and Prevention (CDC), and other related entities that are working to assess and assure appropriate funding levels, service capacity, and adequate infrastructure of the nation's public health system, including for rural jurisdictions. [Res. 419, A-19; Modified: CSAPH Rep. 2, A-22]

AMERICAN MEDICAL ASSOCIATION HOUSE OF DELEGATES

Resolution:433
(A-24)

Introduced by: Minority Affairs Section

Subject: Improving Healthcare of Rural Minority Populations

Referred to: Reference Committee D

Whereas, our American Medical Association recognizes that the health of rural communities and their access to care are pressing concerns to our membership; and

Whereas, our AMA also recognizes that the health of minority communities and their access to care are pressing concerns to our membership; and

Whereas, rural minorities are a unique population that are challenged by both minority and rural concerns; and

Whereas, the U.S. Census Bureau reported that 97% of our country's total landmass is considered rural with a total population of nearly 60 million people;[1] and

Whereas, the most recent census reported a significant increase in rural minorities, which now account for 24% of all rural Americans;[2] and

Whereas, Black, Hispanic/Latino and American Indian & Alaska Native each comprise a significant number of rural Americans;[2] and

Whereas, rural minorities have some of the lowest levels of income, educational attainment, and life expectancy of all Americans;[3] and

Whereas, the unique challenges of treating rural patients has led to a higher disease burden and worse overall patient outcomes;[3] and

Whereas, rural health providers currently experience profound physician vacancy rates and staffing issues, particularly for agencies like the Indian Health Service;[4] and

Whereas, Native Americans who live on tribal reservations carry the lowest life expectancy of any racial group in the country and face unique challenges as a predominantly rural population;[5] and

Whereas, our AMA membership has few rural minorities, which has potentially played a role in this population not being adequately represented in our organization; and

Whereas, our AMA could benefit greatly from learning more about rural minorities, their health care challenges, their perspectives, and their resourcefulness; therefore be it

RESOLVED, that our American Medical Association encourage health promotion, access to care, and disease prevention through educational efforts and publications specifically tailored to rural minorities (Directive to Take Action); and be it further

RESOLVED, that our AMA encourage federal, state and local governments of the unique health and health-related needs of rural minorities in an effort to improve their quality of life (New HOD Policy); and be it further

RESOLVED, that our AMA encourage the collection of vital statistics and other relevant demographic data of rural minorities (New HOD Policy); and be it further

RESOLVED, that our AMA encourage organizations of the importance of rural minority health (New HOD Policy); and be it further

RESOLVED, that our AMA research and study health issues unique to rural minorities, such as access to care difficulties (Directive to Take Action); and be it further

RESOLVED, that our AMA channel existing policy for telehealth to support rural minority communities (Directive to Take Action); and be it further

RESOLVED, that our AMA will encourage our Center for Health Equity to support rural minority health through programming, equity initiatives, and other representation efforts. (New HOD Policy)

Fiscal Note: To Be Determined

Received: 5/8/2024

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2. Mapping rural America's diversity and demographic change. Accessed March 31, 2024. https://www.brookings.edu/articles/mapping-rural-americas-diversity-and-demographic-change/
3. Thomas, K.L., Dobis, E.A., & McGranahan, D.A. (2024). The nature of the rural-urban mortality gap (Report No. EIB-265). U.S. Department of Agriculture, Economic Research Service. https://www.ers.usda.gov/webdocs/publications/108702/eib-265.pdf?v=4077.9
4. Agency Faces Ongoing Challenges Filling Provider Vacancies. U.S. Government Accountability Office. Published August 2018. Accessed March 31, 2022. https://www.gao.gov/assets/gao-18-580.pdf
5. United States Life Tables 2021, National Vital Statistics Reports. National Center for Health Statistics. November 2023. https://www.cdc.gov/nchs/data/nvsr/nvsr72/nvsr72-12.pdf

RELEVANT AMA POLICY

Improving Rural Health H-465.994
1. Our AMA (a) supports continued and intensified efforts to develop and implement proposals for improving rural health care and public health, (b) urges physicians practicing in rural areas to be actively involved in these efforts, and (c) advocates widely publicizing AMA's policies and proposals for improving rural health care and public health to the profession, other concerned groups, and the public.

2. Our AMA will work with other entities and organizations interested in public health to:
- Encourage more research to identify the unique needs and models for delivering public health and health care services in rural communities.
- Identify and disseminate concrete examples of administrative leadership and funding structures that support and optimize local, community-based rural public health.
- Develop an actionable advocacy plan to positively impact local, community-based rural public health including but not limited to the development of rural public health networks, training of current and future rural physicians and public health professionals in core public health techniques and novel funding mechanisms to support public health initiatives that are led and managed by local public health authorities.
- Advocate for adequate and sustained funding for public health staffing and programs.

[Sub. Res. 72, I-88; Reaffirmed: Sunset Report, I-98; Reaffirmed: CLRPD Rep. 1, A-08; Reaffirmed: CEJA Rep. 06, A-18; Appended: Res. 433, A-19; Modified: CSAPH Rep. 2, A-22; Reaffirmed: CMS Rep. 09, A-23; Reaffirmed: Res. 724, A-23]

Improving Health Care of American Indians H-350.976
Our AMA recommends that: (1) All individuals, special interest groups, and levels of government recognize the American Indian people as full citizens of the U.S., entitled to the same equal rights and privileges as other U.S. citizens.
(2) The federal government provide sufficient funds to support needed health services for American Indians.
(3) State and local governments give special attention to the health and health-related needs of nonreservation American Indians in an effort to improve their quality of life.
(4) American Indian religions and cultural beliefs be recognized and respected by those responsible for planning and providing services in Indian health programs.
(5) Our AMA recognize the "medicine man" as an integral and culturally necessary individual in delivering health care to American Indians.
(6) Strong emphasis be given to mental health programs for American Indians in an effort to reduce the high incidence of alcoholism, homicide, suicide, and accidents.
(7) A team approach drawing from traditional health providers supplemented by psychiatric social workers, health aides, visiting nurses, and health educators be utilized in solving these problems.
(8) Our AMA continue its liaison with the Indian Health Service and the National Indian Health Board and establish a liaison with the Association of American Indian Physicians.
(9) State and county medical associations establish liaisons with intertribal health councils in those states where American Indians reside.
(10) Our AMA supports and encourages further development and use of innovative delivery systems and staffing configurations to meet American Indian health needs but opposes overemphasis on research for the sake of research, particularly if needed federal funds are diverted from direct services for American Indians.
(11) Our AMA strongly supports those bills before Congressional committees that aim to improve the health of and health-related services provided to American Indians and further recommends that members of appropriate AMA councils and committees provide testimony in favor of effective legislation and proposed regulations. [CLRPD Rep. 3, I-98; Reaffirmed: Res. 221, A-07; Reaffirmation A-12; Reaffirmed: Res. 233, A-13; Reaffirmed: BOT Rep. 09, A-23]

Improving Healthcare of Hispanic Populations in the United States H-350.975
It is the policy of our AMA to: (1) Encourage health promotion and disease prevention through educational efforts and health publications specifically tailored to the Hispanic community.
(2) Promote the development of substance abuse treatment centers and HIV/AIDS education and prevention programs that reach out to the Hispanic community.
(3) Encourage the standardized collection of consistent vital statistics on Hispanics by appropriate state and federal agencies.
(4) Urge federal and local governments, as well as private institutions, to consider including Hispanic representation on their health policy development organization.
(5) Support organizations concerned with Hispanic health through research and public acknowledgment of the importance of national efforts to decrease the disproportionately high rates of mortality and morbidity among Hispanics.
(6) Promote research into effectiveness of Hispanic health education methods.
(7) Continue to study the health issues unique to Hispanics, including the health problems associated with the United States/Mexican border. [CLRPD Rep. 3, I-98; Reaffirmed: CLRPD Rep. 1, A-08; Reaffirmed: CEJA Rep. 01, A-20]

Improving Healthcare of Black and Minority Populations H-350.972
Our AMA supports:
(1) A greater emphasis on minority access to health care and increased health promotion and disease prevention activities designed to reduce the occurrence of illnesses that are highly prevalent among disadvantaged minorities.
(2) Authorization for the Office of Minority Health to coordinate federal efforts to better understand and reduce the incidence of illness among U.S. minority Americans as recommended in the 1985 Report to

the Secretary's Task Force on Black and Minority Health.
(3) Advising our AMA representatives to the LCME to request data collection on medical school curricula concerning the health needs of minorities.
(4) The promotion of health education through schools and community organizations aimed at teaching skills of health care system access, health promotion, disease prevention, and early diagnosis. [CLRPD Rep. 3, I-98; Reaffirmation A-01; Modified: CSAPH Rep. 1, A-11; Reaffirmed: CEJA Rep. 1, A-21]

Educational Strategies for Meeting Rural Health Physician Shortage H-465.988
1. In light of the data available from the current literature as well as ongoing studies being conducted by staff, the AMA recommends that:
A. Our AMA encourage medical schools and residency programs to develop educationally sound rural clinical preceptorships and rotations consistent with educational and training requirements, and to provide early and continuing exposure to those programs for medical students and residents.
B. Our AMA encourage medical schools to develop educationally sound primary care residencies in smaller communities with the goal of educating and recruiting more rural physicians.
C. Our AMA encourage state and county medical societies to support state legislative efforts toward developing scholarship and loan programs for future rural physicians.
D. Our AMA encourage state and county medical societies and local medical schools to develop outreach and recruitment programs in rural counties to attract promising high school and college students to medicine and the other health professions.
E. Our AMA urge continued federal and state legislative support for funding of Area Health Education Centers (AHECs) for rural and other underserved areas.
F. Our AMA continue to support full appropriation for the National Health Service Corps Scholarship Program, with the proviso that medical schools serving states with large rural underserved populations have a priority and significant voice in the selection of recipients for those scholarships.
G. Our AMA support full funding of the new federal National Health Service Corps loan repayment program.
H. Our AMA encourage continued legislative support of the research studies being conducted by the Rural Health Research Centers funded by the National Office of Rural Health in the Department of Health and Human Services.
I. Our AMA continue its research investigation into the impact of educational programs on the supply of rural physicians.
J. Our AMA continue to conduct research and monitor other progress in development of educational strategies for alleviating rural physician shortages.
K. Our AMA reaffirm its support for legislation making interest payments on student debt tax deductible.
L. Our AMA encourage state and county medical societies to develop programs to enhance work opportunities and social support systems for spouses of rural practitioners.
2. Our AMA will work with state and specialty societies, medical schools, teaching hospitals, the Accreditation Council for Graduate Medical Education (ACGME), the Centers for Medicare and Medicaid Services (CMS) and other interested stakeholders to identify, encourage and incentivize qualified rural physicians to serve as preceptors and volunteer faculty for rural rotations in residency.
3. Our AMA will: (a) work with interested stakeholders to identify strategies to increase residency training opportunities in rural areas with a report back to the House of Delegates; and (b) work with interested stakeholders to formulate an actionable plan of advocacy with the goal of increasing residency training in rural areas.
4. Our AMA will encourage ACGME review committees to consider adding exposure to rural medicine as appropriate, to encourage the development of rural program tracks in training programs and increase physician awareness of the conditions that pose challenges and lack of resources in rural areas.
5. Our AMA will encourage adding educational webinars, workshops and other didactics via remote learning formats to enhance the educational needs of smaller training programs.
[CME Rep. C, I-90; Reaffirmation A-00Reaffirmation A-01; Reaffirmation I-01; Reaffirmed: CME Rep. 1, I-08; Reaffirmed: CEJA Rep. 06, A-18; Appended: Res. 956, I-18; Appended: Res. 318, A-19; Modified: CME Rep. 3, I-21; Reaffirmation: I-22; Reaffirmed: BOT Rep. 11, A-23]

Access to Physician Services in Rural Health Clinics H-465.984
Our AMA strongly encourages CMS and appropriate state departments of health to review the Rural Health Clinic Program eligibility and certification requirements to ensure that independent (e.g., physician) and provider-based (e.g., hospital) facilities are certified as Rural Health Clinics only in those areas that

truly do not have appropriate access to physician services. [Sub. Res. 717, I-91; Reaffirmed: Sunset Report, I-01; Reaffirmed: CMS Rep. 7, A-11; Reaffirmed: CMS Rep. 1, A-21]

Rural Health Physician Workforce Disparities D-465.997
Our AMA will monitor the status and outcomes of the 2020 Census to assess the impact of physician supply and patient demand in rural communities. [CME Rep. 3, I-21]