REPORTS OF THE COUNCIL ON SCIENCE AND PUBLIC HEALTH

The following reports were presented by Kira A. Geraci-Ciardullo, MD, MPH, Chair:

1. COUNCIL ON SCIENCE AND PUBLIC HEALTH SUNSET REVIEW OF 2011 HOUSE POLICIES

Reference committee hearing: see report of Reference Committee D.

HOUSE ACTION: RECOMMENDATIONS ADOPTED
REMAINDER OF REPORT FILED

Policy G-600.110, "Sunset Mechanism for AMA Policy," calls for the decennial review of American Medical Association policies to ensure that our AMA's policy database is current, coherent, and relevant. This policy reads as follows, laying out the parameters for review and specifying the needed procedures:

1. As the House of Delegates adopts policies, a maximum ten-year time horizon shall exist. A policy will typically sunset after ten years unless action is taken by the House of Delegates to retain it. Any action of our AMA House that reaffirms or amends an existing policy position shall reset the sunset "clock," making the reaffirmed or amended policy viable for another 10 years.

2. In the implementation and ongoing operation of our AMA policy sunset mechanism, the following procedures shall be followed: (a) Each year, the Speakers shall provide a list of policies that are subject to review under the policy sunset mechanism; (b) Such policies shall be assigned to the appropriate AMA councils for review; (c) Each AMA council that has been asked to review policies shall develop and submit a report to the House of Delegates identifying policies that are scheduled to sunset; (d) For each policy under review, the reviewing council can recommend one of the following actions: (i) retain the policy; (ii) sunset the policy; (iii) retain part of the policy; or (iv) reconcile the policy with more recent and like policy; (e) For each recommendation that it makes to retain a policy in any fashion, the reviewing council shall provide a succinct, but cogent justification (f) The Speakers shall determine the best way for the House of Delegates to handle the sunset reports.

3. Nothing in this policy shall prohibit a report to the HOD or resolution to sunset a policy earlier than its 10-year horizon if it is no longer relevant, has been superseded by a more current policy, or has been accomplished.

4. The AMA councils and the House of Delegates should conform to the following guidelines for sunset: (a) when a policy is no longer relevant or necessary; (b) when a policy or directive has been accomplished; or (c) when the policy or directive is part of an established AMA practice that is transparent to the House and codified elsewhere such as the AMA Bylaws or the AMA House of Delegates Reference Manual: Procedures, Policies and Practices.

5. The most recent policy shall be deemed to supersede contradictory past AMA policies.

6. Sunset policies will be retained in the AMA historical archives.

RECOMMENDATION

The Council on Science and Public Health recommends that the House of Delegates policies listed in the appendix to this report be acted upon in the manner indicated and the remainder of this report be filed.

APPENDIX - Recommended Actions

Policy Number	Title	Text	Recommendation
D-100.977	Pharmaceutical Quality Control for Foreign Medications	Our AMA will call upon Congress to provide the US Food and Drug Administration with the necessary authority and resources to ensure that imported drugs are safe for American consumers and patients. Citation: Res. 508, A-08;	Retain; still relevant

D-100.978	FDA Drug Safety Policies	Our AMA will monitor and respond, as appropriate, to the implementation of the drug safety provisions of the Food and Drug Administration Amendments Act of 2007 (FDAAA; P.L. 110-85) so that the Food and Drug Administration can more effectively ensure the safety of drug products for our patients. Citation: Sub. Res. 505, A-08;	Retain; still relevant.
D-115.989	Consumer Friendly Medication Identification	Our AMA: 1) strongly recommends to drug manufacturers worldwide that they put a consumer-friendly, unique identifier on the solid dosage form itself; and 2) recommends to the publishers of comprehensive lists of medications (such as PDR, Epocrates) that they include in their publications a list of these abbreviations. Citation: Res. 519, A-11;	Retain; still relevant.
D-120.952	Measuring Medication Dosages	Our AMA supports the development of guidelines to eliminate medication dosing inconsistencies. Citation: Res. 505, A-11;	Retain; remains relevant and in alignment with AMA's work as a founding member of the National Coordinating Council for Medication Error Prevention (NCCMERP).
D-120.984	Streamlining the Process for Prescription Refills	Our AMA will work with the American Pharmacists Association, the National Community Pharmacists Association, and the National Association of Chain Drug Stores to streamline the process for prescription refills in order to reduce administrative burdens on physicians and pharmacists and to improve patient safety. Citation: (Sub Res. 522, A-03; Reaffirmed: BOT Rep. 8, A-11)	Retain; still relevant.
D-135.979	Prevalence of Nickel Sensitization in the USA	Our AMA: 1) recognizes ~~encourages appropriate federal agencies to issue an advisory on~~ the ~~growing~~ prevalence of nickel sensitization, and need to ~~promote measures which~~ protect patients, consumers, and workers from the health risks of nickel sensitization; and 2) encourages the appropriate organization ~~Consumer Product Safety Commission~~ to issue guidelines ~~a directive~~ limiting maximum allowable release of nickel from products with prolonged skin contact. Citation: (Res. 522, A-11)	Retain in part as amended; change to H-policy. The Nickel Institute has developed myriad resources about nickel, safe use, risks, and sensitization and the issue is well-documented in literature. However, no organization has issued guidelines for maximum allowable nickel release.
D-135.989	NAAQS Standard for Ozone	1. Our AMA ~~will sign on or endorse comments submitted by the ATS and American Lung Association~~ supports~~ing~~ a tightening of the NAAQS for ozone to include an ozone NAAQS of 0.060 ppm for the 8-hour standard. ~~2. Our AMA will submit comments to President Obama expressing opposition to his decision to delay updating the EPA ozone standard and send a letter to President Obama noting that delayed setting and enforcement of a stricter ozone standard will result in more adverse health effects including asthma and COPD exacerbations, emergency room visits, hospitalizations and death.~~ Citation: (BOT Action in response to referred for decision Res. 416, A-07 and Res. 438, A-07; Reaffirmed in lieu of Res. 507, A-09; Reaffirmation I-09; Appended: Res. 929, I-11)	Retain in part as amended; change to H-policy. On October 1, 2015, EPA strengthened the ground-level ozone standard to 0.070 ppm (from 0.075 ppm), averaged over an 8-hour period.
D-150.977	Encouraging Healthy Eating Behaviors in Children Through	Our AMA: 1) will work with appropriate agencies, organizations, and corporations to educate health professionals and the public about healthy food choices in fast food restaurants; and 2) supports personal and parental	Retain; still relevant.

	Corporate Responsibility	responsibility to encourage healthy childhood behaviors, including the consumption of healthy food. Citation: (Sub. Res. 402, A-11)	
D-20.988	HIV Education in Minority Populations	Our AMA will: 1) increase its efforts to educate minority populations regarding the risk of HIV infection across all age groups, socioeconomic class, and sexual orientation thereby preventing the spread of infection, increase early testing, and decrease the spread of this epidemic; and 2) partner with public and private organizations dedicated to public health education and preventive medicine to decrease the incidence of HIV infection and increase early intervention efforts. Citation: (Res. 405, A-11)	Retain; still relevant.
D-20.995	Universal, Routine Screening of Pregnant Women for HIV Infection	Our AMA will support the recommendations of the Institute of Medicine's report on perinatal HIV transmission, "Reducing the Odds: Preventing Perinatal Transmission of HIV in the United States." Citation: (CSA Rep. 1, I-01; Reaffirmed: CSAPH Rep. 1, A-11)	Rescind. Addressed by Policy H-20.918, "Maternal HIV Screening and Treatment to Reduce the Risk of Perinatal HIV Transmission"
D-30.998	Prevention of Repeat Driving Under the Influence (DUI) Offenses: The Issues of Diversion and Treatment and Vehicle Incapacitation	Our AMA encourages: (1) physicians and their state medical societies to work to create statutes that are designed to treat patients, protect the community and families, and grant immunity to physicians for good faith reporting of drug or alcohol impaired drivers for both permitted or mandated reporting; and (2) further research into and professional discussion about the issues of reporting medical information that could result in punishment or criminal prosecution. Citation: (BOT Rep. 17, A-01; Reaffirmed: CSAPH Rep. 1, A-11)	Retain; still relevant.
D-425.996	Implementing the Guidelines to Community Preventive Services	Our AMA will : (1) commend the Centers for Disease Control and Prevention (CDC) and the Task Force on Community Preventive Services for their work in developing the Guides to Community Preventive Services; (2) review the recommendations and conclusions of the Task Force on Community Preventive Services and recommend to the House of Delegates the appropriate actions as per AMA policy; ~~(3) express to the Director of CDC AMA's interest in having a liaison and alternate on the Task Force on Community Preventive Services; and~~ (43) promote the visibility of the recommendations of the Guides to Community Preventive Services as they become available, provided those recommendations comport with AMA policies and standards. Citation: (CSA Rep. 6, I-01; Modified: CSAPH Rep. 1, A-11)	Retain in part. The AMA is engaged with the Community Preventive Services Task Force and has a primary and alternate liaison.
D-440.956	Expanding the Vaccines for Children Program	Our AMA will work with its immunization partners to examine methods to improve financing mechanisms for vaccines, including the expansion of the Vaccine for Children program. Citation: (Res. 534, A-06; Reaffirmation A-07; Reaffirmation I-10; Reaffirmed in lieu of Res. 422, A-11: BOT action in response to referred for decision Res. 422, A-11)	Retain; still relevant.
D-490.976	Tobacco Settlement Fund	Our AMA supports state and local medical societies in their efforts to formally request that local and state lawmakers allocate at least the Centers for Disease Control and Prevention-recommended minimum amount of the state's Tobacco Settlement Fund award annually to smoking cessation and health care related programs, and encourages	Rescind. Covered by H-495.983, "Tobacco Litigation Settlements," which reads: Our AMA:(1) strongly supports the position that all monies paid to the

		society members and the public to demand this of their elected officials. Citation: (Res. 431, A-07; Reaffirmation I-11)	states in the Master Settlement Agreement and other agreements be utilized for research, education, prevention and treatment of nicotine addiction, especially in children and adolescents, and for treatment of diseases related to nicotine addiction and tobacco use; (2) supports efforts to ensure that a substantial portion of any local, state or national tobacco litigation settlement proceeds be directed towards preventing children from using tobacco in any form, helping current tobacco users quit, and protecting nonsmokers from environmental tobacco smoke, and that any tobacco settlement funds not supplant but augment health program funding; (3) strongly supports efforts to direct tobacco settlement monies that are not directed to other specific tobacco control activities to enhance patient access to medical services; (4) strongly supports legislation codifying the position that all monies paid to the states through the various tobacco settlements remain with the states; and that none be reimbursed to the Federal government on the basis of each individual state's Federal Medicaid match; and (5) opposes any provision of tort reform legislation that would grant exclusion from liability or special protection to tobacco companies or tobacco products. Citation: (CSA Rep. 3, A-04; Reaffirmation I-11)
D-490.978	Tobacco Usage	Our AMA will: (1) advocate for the use of the tobacco settlement funds for informational public service campaigns related to smoking cessation, especially as related to young people; and (2) send a formal letter to the appropriate authority in each state and territory that was party to the tobacco settlement for an accounting of past and projected	Rescind. Covered by H-495.983, "Tobacco Litigation Settlements" (see above)

		future expenditures related to smoking cessation, especially as related to young people. Citation: (Res. 408, A-06; Reaffirmation I-11)	
D-490.984	AMA Opposition to Securitization of Tobacco Settlement Payments	Our AMA will work in concert with state medical societies to protect the settlement funds, including issuing statements condemning the use of settlement funds as a way to remedy state budget crises. Citation: (BOT Rep. 3, I-03; Reaffirmation I-11)	Retain; still relevant.
D-490.997	Continued Action on States' Allocation of Tobacco Settlement Monies for Smoking Prevention, Cessation and Health Services	Our AMA will: (1) translate that commitment into action through aggressive lobbying activities to encourage and work with state and specialty societies to vigorously lobby state legislatures to: (a) assure that a significant percentage (depending on the objectively determined needs of the state) of the tobacco settlement monies be set aside first for tobacco control, nicotine addiction prevention, cessation and disease treatment for tobacco control and related public health purposes and medical services; (b) assemble an appointed state level task force, when needed, that includes experts in public health, smoking cessation and tobacco prevention programs to ensure that funds are spent on activities supported by the Centers for Disease Control and Prevention guidelines. Citation: (Res. 428, A-99; Modified and Reaffirmed: CSAPH Rep. 1, A-09; Reaffirmation I-11)	Rescind. Covered by H-495.983, "Tobacco Litigation Settlements" (see above)
D-60.994	Sexually Transmitted Infections Among Adolescents, Including Incarcerated Juveniles	Our AMA will increase its efforts to work with the National Commission on Correctional Health Care to ensure that juveniles in correctional facilities receive comprehensive screening and treatment for sexually transmitted infections and sexual abuse. Citation: (Res. 401, A-01; Modified: CSAPH Rep. 1, A-11)	Retain; still relevant.
D-95.979	Banning Synthetic Drugs Referred to as "Bath Salts"	Our AMA supports national legislation banning synthetic drugs referred to as "bath salts," containing methylenedioxypyrovalerone (MDPV), mephedrone, and related substances. Citation: (Res. 507, A-11; Reaffirmation I-11)	Rescind. Remains relevant, but because bath salts are new psychoactive substances, the issue is addressed in Policy H-95.940, "Addressing Emerging Trends in Illicit Drug Use," which reads: Our AMA: (1) recognizes that emerging drugs of abuse, especially new psychoactive substances (NPS), are a public health threat; (2) supports ongoing efforts of the National Institute on Drug Abuse, the Drug Enforcement Administration, the Centers for Disease Control and Prevention, the Department of Justice, the Department of Homeland Security, state departments of health, and poison control centers to assess and monitor emerging trends in illicit drug use, and to develop and disseminate fact sheets, other educational materials, and public awareness

			campaigns; (3) supports a collaborative, multiagency approach to addressing emerging drugs of abuse, including information and data sharing, increased epidemiological surveillance, early warning systems informed by laboratories and epidemiologic surveillance tools, and population driven real-time social media resulting in actionable information to reach stakeholders; (4) encourages adequate federal and state funding of agencies tasked with addressing the emerging drugs of abuse health threat; (5) encourages the development of continuing medical education on emerging trends in illicit drug use; and (6) supports efforts by federal, state, and local government agencies to identify new drugs of abuse and to institute the necessary administrative or legislative actions to deem such drugs illegal in an expedited manner.
H-10.983	Swimming Safety	Our AMA (1) strongly supports barrier fencing and pool covers for residential pools, early water safety, and water awareness programs and (2) encourages swimming pool manufacturers and pool chemical suppliers to distribute educational materials that promote swimming and water safety. Citation: (Res. 72, A-91; Reaffirmed: Sunset Report, I-01; Reaffirmed: CSAPH Rep. 1, A-11)	Retain; still relevant.
H-10.984	Farm-Related Injuries	Our AMA (1) emphasizes the need for more complete data on farm-related and other types of traumatic and occupational injuries; (2) reaffirms its support of regional medical facilities and programs having well-trained medical personnel and emergency care facilities capable of responding effectively to farm-related and other types of injuries. Physicians in rural areas should assume leadership roles in developing these facilities; (3) advises manufacturers to improve machinery and farm implements so they are less likely to injure operators and others. Safety instructions should accompany each sale of a machine such as a power auger or tractor. Hazard warnings should be part of each power implement; (4) encourages parents, teachers, physicians, agricultural	Retain; still relevant.

		extension agencies, voluntary farm groups, manufacturers, and other sectors of society to inform children and others about the risks of agricultural injuries and about approaches to their prevention; (5) endorses the concept of making injury surveillance and prevention programs ongoing activities of state and local departments of public health; and (6) encourages the inclusion of farm-related injury issues as part of the training program for medical students and residents involved in a rural health experience. Citation: (BOT Rep. U, A-91; Reaffirmed: Sunset Report, I-01; Reaffirmed: CSAPH Rep. 1, A-11)	
H-115.968	Decreasing Epinephrine Auto-Injector Accidents and Misuse	Our AMA: 1) encourages physicians to review standard epinephrine auto-injector administration protocol with patients upon initial prescription and on follow-up visits; and 2) encourages improved product design and labeling of epinephrine auto-injectors. Citation: (Res. 513, A-11)	Retain; still relevant.
H-115.969	Consumer Medication Information	Our AMA supports the following basic principles for supplying written prescription drug information to patients: That (1) our AMA supports the pursuit of a single document for the provision of written consumer medication information (CMI), replacing the current framework of patient package inserts, pharmacy generated prescription drug leaflets, and Medication Guides; (2) the FDA collaboratively develop, test, and implement a single-document CMI process based on rigorously defined, essential information needed by patients to safely and effectively use medications; (3) the FDA validate CMI prototypes in actual use studies; (4) CMI should be provided in electronic formats on a publicly accessible Web site so that prescribers have access to these tools for improving patient adherence; and (5) CMI should stand on its own and not be an integral component of pharmacy marketing activities. Citation: (CSAPH Rep. 3, A-11)	Retain; still relevant.
H-115.979	Policy to Reduce Waste from Pharmaceutical Sample Packaging	Our AMA: (1) supports reducing waste from pharmaceutical sample packaging by making sample containers as small as possible and by using biodegradable and recycled materials whenever possible; and (2) supports the modification of any federal rules or regulations that may be in conflict with this policy. Citation: (Res. 508, I-91; Modified: Sunset Report, I-01; Modified: CSAPH Rep. 1, A-11)	Retain; still relevant.
H-115.984	Product Identification of Solid Dosage Forms	Our AMA supports working with the appropriate organizations to: (1) develop a coding system for the identification of all solid medication forms; (2) encourage imprinting each tablet, capsule or other solid dosage form of a prescription drug with its unique code and the name or other distinctive mark identifying the manufacturer; and (3) encourage compilation of this coding system into a reference and disseminate it to physicians, pharmacists and law enforcement agencies in an appropriate manner. Citation: (Res. 44, A-87; Reaffirmed: Sunset Report, I-97; Reaffirmed: CSAPH Rep. 3, A-07; Modified: Res. 519, A-11)	Rescind. CFR Title 21, Volume 4 requires that "a code imprint that, in conjunction with the product's size, shape, and color, permits the unique identification of the drug product and the manufacturer or distributor of the product." Many compilations of the coding system exist on the Internet, free to access.
H-120.940	Mail Order Pharmacies and	Our AMA will: (1) work with mail order pharmacies to make sure that such pharmacies adopt interfaces with current pharmacy hubs and physician electronic prescribing systems	Retain; still relevant.

	Interface with Current Pharmacy Hubs	at no cost to physicians; and (2) advocate for penalties and/or incentives for mail order pharmacies to encourage the adoption of a functional system to automate the prescribing process through interfaces with physicians electronic prescribing systems. Citation: (Res. 708, A-10; Reaffirmed: BOT Rep. 8, A-11)	
H-120.967	Dispensing of ~~Computer-Generated~~ Drug Information	1. Our AMA continues to cooperate with ~~the National Council on Patient Information and Education (NCPIE),~~ USP, the FDA and others to establish standards for patient information. 2.~~ Our AMA continues to participate on the NCPIE to foster better medication use through improved communication between physicians and their patients, and the AMA encourages state and specialty medical societies to become members of NCPIE.~~ ~~3.~~ Our AMA will monitor the ongoing re-evaluation of how consumer medication information is designed and provided in the US and provide input to ensure that such documents are clinically useful, written at the appropriate literacy level, and promote patient adherence. Citation: (Res. 512, A-95; Appended: Sub. Res. 508, A-10; Reaffirmed: CSAPH Rep. 3, A-11)	Retain in part. AMA is no longer a member of NCPIE, as they merged with a new organization and are funded, in part, by pharmaceutical companies.
H-120.987	American Pharmacists Association	The AMA advocates (1) continued surveillance of mail-order prescriptions; (2) notification by the American Pharmacists Association (APhA) of its members that prescriptions should be refilled only on the physician's order; and (3) that the APhA advise its members to discontinue the practice of assuming a prescription may be refilled unless a form is returned stating that the prescription may not be refilled. Citation: (Res. 147, A-88; Reaffirmed: Sunset Report, I-98; Modified and Reaffirmed: CSAPH Rep. 2, A-08; Reaffirmed: BOT Rep. 8, A-11)	Retain; still relevant.
H-120.989	Mail Service Pharmacy	The AMA believes that: (1) MSP is an established alternative method of distributing drugs in the United States. (2) Controlled studies in the 1970s support the fact that MSPs are less vulnerable to drug diversion than retail pharmacies. Although numerous concerns about lack of safety and drug diversion have been expressed in trade publications and newsletters, documented controlled data regarding these concerns are minimal. There is no evidence of lack of safety in the peer-reviewed controlled-study literature. Presently, the practice of obtaining drugs from mail service pharmacies appears to be relatively safe. (3) Mail service pharmacy for prescription drugs is probably most appropriate for patients who have a well-established diagnosis, who have long-term chronic illnesses, whose disease is relatively stable and in whom the dose and dosage schedule is well regulated, who are isolated because of geographic or personal reasons, who have a drug history profile on record, who have been adequately informed about their medication, and who continue to see their physician regularly. Certainly, MSP is not best utilized for medications that are to be used acutely. Further, there must be assurance that generic substitution occur only by order of the prescribing physician. (4) Any purported price savings from the use of MSP is difficult to assess, since studies are generally limited to regional and limited patient populations. (5) Physicians have the responsibility to prescribe reasonable amounts of prescription medications based on the diagnosis and needs of their patients. Physicians must not be influenced by purely economic reasons, but they must take into account the patient's ability to pay and be aware of the	Retain; still relevant.

		guidelines recommended by particular health benefit programs for drugs. Citation: (BOT Rep. I, I-87; Reaffirmed: Sunset Report, I-97; Reaffirmed: CSAPH Rep. 3, A-07; Reaffirmed: BOT Rep. 8, A-11)	
H-130.956	Screening for Alcohol and Other Drug Use in Trauma Patients	Our AMA (1) encourages hospital medical staffs to promote the performance of blood alcohol concentration (BAC) tests and urine drug screens on hospitalized trauma patients; and (2) urges physicians responsible for the care of hospitalized trauma patients to implement appropriate evaluation and treatment when there is a positive BAC, other positive drug screen result, or other source of suspicion of ~~a~~ potential substance misuse or substance use disorder. Citation: (BOT Rep. J, I-91; Reaffirmed: Sunset Report, I-01; Modified: CSAPH Rep. 1, A-11)	Retain in part to eliminate stigmatizing language. Remains relevant
H-130.987	Emergency Medical Identification Aids	Our AMA (1) urges worldwide use of the Emergency Medical Identification Symbol (Symbol); (2) urges that persons with special health problems wear a readily evident durable metal or plastic alerting device and that all persons carry a universal medical information card identifying family, friends and personal physicians; (3) urges that the Symbol be imprinted on alerting devices, on medical identification cards, and on emergency medical care educational material; (4) encourages physicians to work individually with their patients in selecting an appropriate signal device and identification card; and (5) recognizes the need for patients to have the option to enroll in portable medical identification alert systems that current technologies support, such as virtual medical identification alert systems and smart cards which can offer emergency responders immediate access to pertinent health information and family contact information. Citation: (BOT Rep. U, A-84; Reaffirmed by CLRPD Rep. 3 - I-94; Reaffirmed by CSA Rep. 10, A-97; Reaffirmed: CSAPH Rep. 3, A-07; Appended: Res. 815, I-11)	Retain; still relevant.
H-135.933	Bisphenol A	Our AMA: 1) supports a ~~shift to~~ a ~~more~~ robust, science-based, and transparent federal regulatory framework for oversight of bisphenol A (BPA); and 2) ~~encourages ongoing industry actions to stop producing BPA-containing baby bottles and infant feeding cups, support bans on the sale of such products, and urge the development and use of safe, nonharmful alternatives to BPA for the linings of infant formula cans and other food can linings; and 3)~~ recognizes BPA as an endocrine-disrupting agent and urges that BPA-containing products with the potential to increase human exposure to BPA be clearly identified. Citation: (CSAPH Rep. 5, A-11)	Retain in part. In July 2012, FDA amended its regulations to no longer provide for the use of BPA-based resins in baby bottles, sippy cups, and packaging coatings for infant formula because these specified uses have been permanently and completely abandoned.
H-135.947	Guidance for Worldwide Conservation of Potable Water	Our AMA favors scientific and cultural development of a plan for worldwide potable water conservation, especially in countries affected by natural disasters or other events that disrupt the potable water supply. Citation: (Res. 406, A-04; Modified in lieu of Res. 906, I-11)	Retain; still relevant.
H-135.950	Support the Health Based Provisions of the Clean Air Act	Our AMA ~~(1) opposes changes to the New Source Review program of the Clean Air Act; (2) urges the Administration, through the Environmental Protection Agency, to withdraw the proposed New Source Review regulations promulgated on December 31, 2002; and (3)~~ opposes ~~further~~ legislation to weaken the existing provisions of the Clean Air Act. Citation: (Res. 417, A-03; Reaffirmation A-05; Reaffirmation I-11)	Retain in part. The New Source Review (NSR) program is complex, has a long history of rulemakings, guidance, applicability determinations and litigation that have NSR applicability. Given the many changes over the years, it is not clear what

			specifically this policy supports.
H-135.963	Recyclable and Reusable Utensils	Our AMA makes a commitment to use only reusable and recyclable utensils to the extent possible and encourages its constituent societies to do likewise. Citation: (Res. 608, I-91; Reaffirmed: Sunset Report, I-01; Reaffirmed: CSAPH Rep. 1, A-11)	Retain; still relevant.
H-135.966	Low-Level Radioactive Wastes	Our AMA (1) reiterates its endorsement of the process now in place for dealing with the disposal of low-level radioactive wastes, which involves the formation of compacts among the 50 states and the construction of regional facilities, and (2) encourages physicians to support and assist state agencies and others responsible for planning the safe disposal of low-level radioactive wastes. Citation: (BOT Rep. O, A-91; Reaffirmed: Sunset Report, I-01; Reaffirmed: CSAPH Rep. 1, A-11)	Rescind; superseded by H-135.989, "Low Level Radioactive Waste Disposal," which reads: "The AMA (1) believes that each state should be responsible for providing capacity within or outside the state for disposal of commercial, non-military low level radioactive waste generated within its border; and (2) urges Environmental Protection Agency action to ensure capacity for disposal of low-level radioactive waste.
H-135.992	Acid Precipitation	Our AMA encourages further scientific studies to determine the effects of acid precipitation on the population of the U.S. and Canada in order that the maximum impact of health professionals may be brought to bear toward the solution of this problem. Citation: (Res. 66, I-81; Reaffirmed: CLRPD Rep. F, I-91; Reaffirmed: Sunset Report, I-01; Reaffirmed: CSAPH Rep. 1, A-11)	Retain; still relevant.
H-145.989	Safety of Nonpowder (Gas-Loaded/Spring-Loaded) Guns	It is the policy of the AMA to encourage the development of appropriate educational materials designed to enhance physician and general public awareness of the safe use of as well as the dangers inherent in the unsafe use of nonpowder (gas-loaded/spring-loaded) guns. Citation: (Res. 423, I-91; Modified: Sunset Report, I-01; Modified: CSAPH Rep. 1, A-11)	Retain; still relevant.
H-15.962	Air Bags and Preventing Crash Injuries	Our AMA (1) encourages the U.S. Department of Transportation to expand efforts to determine the efficacy of air bags in preventing serious injuries and the efficacy and safety of the air bag combined with the lap-shoulder belt in preventing such injuries; (2) encourages motor vehicle manufacturers to continue efforts to improve the safety of vehicles, focusing especially on active and passive restraints and strengthening passenger compartments; and (3) encourages physicians to take an active role in encouraging the use of automobile active and passive restraints among the general public, including infants and children. Citation: (BOT Rep. H, I-92; Reaffirmation I-01; Modified: CSAPH Rep. 1, A-11)	Retain; still relevant.
H-15.967	Injuries Resulting from Pickup Trucks	Our AMA supports prohibiting any person from riding in the back of a pickup truck without the use of appropriate restraint devices and protection when the pickup truck is traveling on public roads. Citation: (Sub. Res. 15, A-91; Reaffirmed: Sunset Report, I-01; Modified: CSAPH Rep. 1, A-11)	Rescind; superseded by Policy H-15.961, "Safety for Passengers in the Back of Pickup Trucks," which states that the AMA supports legislation

			that would prohibit passengers from riding in the cargo bed of a pickup truck.
H-15.968	School Bus Safety and Braking and Steering Systems	Our AMA encourages (1) manufacturers of school buses to exceed the braking and steering system requirements of the U.S. Department of Transportation, making these systems as safe and easy to use as possible; (2) school bus manufacturers and federal agencies to continue their efforts to improve the safety of school buses and of school bus transportation programs, including driver education programs; and (3) physicians with an interest in children's problems, primary and secondary school education programs, or public health to evaluate pupil transportation systems in their own communities. Citation: (BOT Rep. N, A-91; Modified: Sunset Report, I-01; Reaffirmed: CSAPH Rep. 1, A-11)	Retain; still relevant.
H-15.992	Motor Vehicle Accidents	Our AMA (1) recognizes motor vehicle-related trauma as a major public health problem, the resolution of which requires a leadership role by physicians in concert with safety experts; and (2) strongly encourages other medical and health care organizations, as well as departments of health and transportation, to endorse the concept of motor vehicle related trauma as a public health problem, thereby lending its treatment to traditional public health measures. Citation: (BOT Rep. LL, I-81; Reaffirmed: CLRPD Rep. F, I-91; Reaffirmed: Sunset Report, I-01; Reaffirmed: CSAPH Rep. 1, A-11)	Retain; still relevant.
H-15.993	Child Passenger Safety	Our AMA (1) urges all physicians and health care professionals to consider ways to encourage the protection of children in motor vehicles through the use of appropriate child passenger restraining devices and safety belts and (2) endorses and supports the efforts of other appropriate organizations to motivate and assist physicians and health care professionals and hospitals to inform parents of the importance of protecting children in motor vehicles with appropriate restraining systems. Citation: (Res. 27, A-81; Reaffirmed: CLRPD Rep. F, I-91; Reaffirmation and Modified: Sunset Report, I-01; Modified: CSAPH Rep. 1, A-11)	Retain; still relevant.
H-150.934	Competitive Eating	Our AMA recognizes competitive speed eating as an unhealthy eating practice with potential adverse consequences. Citation: (Res. 418, A-11)	Retain; still relevant.
H-150.967	Food Safety - Federal Inspection Programs	Our AMA encourages the FDA and the U.S. Department of Agriculture to continue their efforts to assure the safety of the food supply. Inspection of meat, poultry, and seafood should be viewed as one component of an overall program for improving food safety. Citation: (CSA Rep. L, I-91; Reaffirmed: Sunset Report, I-01; Reaffirmed: CSAPH Rep. 1, A-11)	Retain; still relevant.
H-150.969	Commercial Weight-Loss Systems and Programs	It is the policy of the AMA to (1) continue to cooperate with appropriate state and/or federal agencies in their investigation and regulation of weight-loss systems and programs that are engaged in the illegal practice of medicine and/or that pose a health hazard to persons to whom they sell their services; (2) continue to provide scientific information to physicians and the public to assist them in evaluating weight-reduction practices and/or programs; and (3) encourage review of hospital-based weight-loss programs by medical staff. Citation: (CSA Rep. A, A-91; Reaffirmed: Sunset Report, I-01; Reaffirmed: CSAPH Rep. 1, A-11)	Retain; still relevant.

H-150.990	Sodium in Processed Foods	Our AMA (1) encourages physicians to reinforce the profession's public education programs when counseling their patients; and (2) supports the efforts of food industries to achieve useful reductions in the sodium content of processed food, without compromising their safety or nutritive values. Citation: (CSA Rep. G, A-82; Amended: CLRPD Rep. A, I-92; Reaffirmed: Res. 408, A-01; Reaffirmed: CSAPH Rep. 1, A-11)	Rescind. While still relevant, this policy is superseded by Policy H-150.929, "Promotion of Healthy Lifestyles I: Reducing the Population Burden of Cardiovascular Disease by Reducing Sodium Intake," which states: Our AMA will: (1) Call for a step-wise, minimum 50% reduction in sodium in processed foods, fast food products, and restaurant meals to be achieved over the next decade. Food manufacturers and restaurants should review their product lines and reduce sodium levels to the greatest extent possible (without increasing levels of other unhealthy ingredients). Gradual but steady reductions over several years may be the most effective way to minimize sodium levels. (2) To assist in achieving the Healthy People 2010 goal for sodium consumption, will work with the FDA, the National Heart Lung Blood Institute, the Centers for Disease Control and Prevention, the American Heart Association, and other interested partners to educate consumers about the benefits of long-term, moderate reductions in sodium intake. (3) Recommend that the FDA consider all options to promote reductions in the sodium content of processed foods.
H-150.997	Excess Sodium in the Diet	Our AMA supports continued use of its publications to inform the public of foods containing high sodium levels, and the relationship of sodium intake to the potential development and control of hypertension. Citation: (Sub. Res. 22, A-77; Reaffirmed: CLRPD Rep. C, A-89; Reaffirmed: Sunset Report, A-00; Reaffirmed: Res. 408, A-01; Reaffirmed: CSAPH Rep. 1, A-11)	Rescind. While still relevant, this policy is superseded by Policy H-150.929, "Promotion of Healthy Lifestyles I: Reducing the Population Burden of Cardiovascular Disease by Reducing Sodium Intake" (see above)
H-160.963	Community-Based Treatment Centers	Our AMA supports the use of community-based treatment centers for substance ~~ab~~use disorders, ~~emotional~~ mental health disorders and developmental disabilities.	Retain in part to eliminate stigmatizing

		Citation: (BOT Rep. F, I-91; Reaffirmed: Sunset Report, I-01; Modified: CSAPH Rep. 1, A-11)	language. Remains relevant.
H-170.992	Alcohol and Drug ~~Abuse~~ Use and Addiction Education	Our AMA: (1) supports continued encouragement for increased educational programs relating to use of and addiction involving ~~abuse of~~ alcohol, cannabis ~~marijuana~~ and controlled substances; (2) supports the implementation of alcohol and ~~marijuana~~ cannabis education in comprehensive health education curricula, kindergarten through grade twelve; and (3) encourages state medical societies to work with the appropriate agencies to develop a state-funded educational campaign to counteract pressures on young people to use alcohol, cannabis products, and controlled substances. Citation: (Sub. Res. 63, I-80; Reaffirmed: CLRPD Rep. B, I-90; Reaffirmation and Reaffirmed: Sunset Report, I-00; Appended: Res. 415, I-01; Reaffirmed: CSAPH Rep. 1, A-11)	Retain in part to eliminate stigmatizing language. Remains relevant.
H-175.998	Evaluation of Iridology	Our AMA believes that iridology, the study of the iris of the human eye, has not yet been established as having any merit as a diagnostic technique. Citation: (CSA Rep. F, A-81; Reaffirmed: CLRPD Rep. F, I-91; Reaffirmed: Sunset Report, I-01; Reaffirmed: CSAPH Rep. 1, A-11)	Retain; still relevant.
H-185.969	Insurance Coverage for Immunizations	Our AMA endorses laws requiring insurance companies to provide coverage for immunization schedules endorsed by the Advisory Committee on Immunization Practices, American Academy of Family Physicians, and American Academy of Pediatrics, with no co-pays or deductibles. Citation: (Res. 430, A-97; Reaffirmation A-01; Reaffirmation A-08; Reaffirmation A-11)	Retain, still relevant.
H-210.995	Home Health Care	The AMA (1) supports the concept of home health care as an alternative to hospital, nursing home, or other institutional care and as part of a total medical care plan; and (2) believes that home health care is an effective benefit to many patients. Citation: (BOT Rep. HH, I-86; Reaffirmed: Sunset Report, I-96; Reaffirmed: CSAPH Rep. 3, A-06; Reaffirmation A-11)\	Retain, still relevant.
H-30.960	Physician Ingestion of Alcohol and Patient Care	Our AMA, believing that the possibility, or even the perception, of any alcohol-induced impairment of patient care activities is inconsistent with the professional image of the physician, (1) urges that physicians engaging in patient care have no significant body content of alcohol and (2) urges that all physicians, prior to being available for patient care, refrain from ingesting an amount of alcohol that has the potential to cause impairment of performance or create a "hangover" effect. Citation: (BOT Rep. Y, A-91; Reaffirmed: Sunset Report, I-01; Reaffirmed: CSAPH Rep. 1, A-11)	Retain, still relevant.
H-30.961	Student Life Styles	Our AMA (1) supports educational programs for students that deal with t~~he problem of~~ alcoholism and drugs, and (2) encourages educational institutions to continue or institute efforts to eliminate the illegal and inappropriate use of alcohol and other drugs on their premises or at their functions. Citation: (Res. 159, A-91; Reaffirmed: Sunset Report, I-01; Reaffirmed: CSAPH Rep. 1, A-11)	Retain in part to eliminate stigmatizing phrasing. Remains relevant.
H-345.996	Physicians, Psychotherapy and Mental Health Care	Our AMA supports efforts to inform physicians, the public and third party payers that physicians in the private sector are at the forefront of mental health care in their office practices and provide significant amounts of direct and preventive mental health services to the public. Citation: (Res. 17, I-81; Reaffirmed: CLRPD Rep. F, I-91; Reaffirmed: Sunset Report, I-01; Reaffirmed: CSAPH Rep. 1, A-11)	Retain, still relevant.

H-370.989	State Regulation and Licensing of Human Tissue Banks	Our AMA encourages states to require licensing of human tissue banks in a manner consistent with the Food and Drug Administration's federal regulatory requirements. Citation: (Res. 68, I-87; Reaffirmed: Sunset Report, I-97; Modified: CSA Rep. 5, I-01; Reaffirmed: CSAPH Rep. 1, A-11)	Rescind. While still relevant, superseded by Policy H-370.988, "Regulation of Tissue Banking," which states: Our AMA: (1) supports the Food and Drug Administration's (FDA) proposed regulatory agenda for tissue banking organizations, and urges the FDA to continue working with nationally-recognized tissue banking organizations and other appropriate groups to implement the proposed oversight system; (2) promotes the adoption of the standards for tissue retrieval and processing established by nationally recognized tissue banking organizations that would mandate adherence to specific standards as a condition of licensure and certification for tissues banks; (3) supports FDA registration of all tissue banks; and (4) supports the continued involvement of the medical community in the further effort to ensure the safety and efficacy of the nation's supply of tissues.
H-420.955	Nutrition Counseling for Pregnant and Recent Post-Partum Patients	Our AMA: 1) supports physician referrals of pregnant and post-partum patients for nutrition counseling, and 2) will advocate for the extension of health insurance coverage for nutrition counseling for all pregnant and recent post-partum patients. Citation: (Res. 409, A-11)	Retain; still relevant.
H-420.964	Fetal Alcohol Syndrome Educational Program	Our AMA supports informing physicians about Fetal Alcohol Syndrome and the referral and treatment of alcohol abuse by pregnant women or women at risk of becoming pregnant. Citation: (Res. 122, A-91; Reaffirmed: Sunset Report, I-01; Modified: CSAPH Rep. 1, A-11)	Retain; still relevant.
H-420.965	Carrier Screening for Cystic Fibrosis	Our AMA: (1) supports the concept that participation in pilot studies or in any subsequent population screening program for cystic fibrosis (CF) be on a voluntary basis, with informed consent for all who wish to be tested; (2) encourages physicians to become more knowledgeable regarding genetic tests such as the one for CF, the interpretation of these tests, and genetic counseling; and (3) encourages physicians to become involved in educating the public about the nature of carrier screening for CF. Citation: (CSA Rep. C, A-91; Modified: Sunset Report, I-01; Modified: CSAPH Rep. 1, A-11)	Retain as amended for clarity.

H-420.972	Prenatal Services to Prevent Low Birthweight Infants	Our AMA encourages all state medical associations and specialty societies to become involved in the promotion of public and private programs that provide education, outreach services, and funding directed at prenatal services for pregnant women, particularly women at risk for delivering low birthweight infants. Citation: (Res. 231, A-90; Reaffirmed: Sunset Report, I-00; Reaffirmation A-07; Reaffirmation I-07; Reaffirmed: Res. 227, A-11)	Retain, still relevant.
H-420.992	Genetic Counseling and Prevention of Birth Defects	Our AMA believes that: (1) Adequate genetic counseling must be incorporated into any prenatal screening program established for the detection of birth defects and should be available both before and after the test is performed. (2) States should enhance their laboratory capability through broader utilization of those laboratories performing genetic screening~~, perhaps through regionalization of facilities so that karotyping of amniotic fluid cell cultures and their biochemical analysis can be more widely available~~. (3) Specialty societies should enhance their efforts to train physicians in the newer techniques of ante-natal diagnosis. ~~(4) Although the case for widespread carrier screening for common heterozygous abnormalities is far from established, pilot studies should be encouraged which will explore the cost-effective level of pre-natal testing in each locality.~~ Citation: (CSA Rep. B, I-81; Reaffirmed: CLRPD Rep. F, I-91; Reaffirmed: Sunset Report, I-01; Modified: CSAPH Rep. 1, A-11)	Retain as amended for clarity.
H-440.882	Secure National Vaccine Policy	Our AMA advocates for and supports programs that ensure the production, quality assurance and timely distribution of sufficient quantities of those vaccines recommended by the Centers for Disease Control and Prevention to the US population at risk. Citation: (Res. 709, I-04; Reaffirmation A-05; Reaffirmed in lieu of Res. 422, A-11: BOT action in response to referred for decision Res. 422, A-11)	Retain, still relevant.
H-440.891	Support of ~~a~~ the n~~N~~ational Laboratory Response Network	Our AMA supports ~~the efforts of~~ the Centers for Disease Control and Prevention's ~~in establishing a~~ national l~~L~~aboratory Response N~~n~~etwork for communicating, coordinating, and collaborating with physicians and laboratory professionals on public health concerns. Citation: (Res. 516, I-01; Reaffirmed: CSAPH Rep. 1, A-11)	Retain as amended for clarity.
H-440.894	Support of Four Principles of Hand Awareness	Our AMA: (1) endorses the Four Principles of Hand Awareness: (a) Wash your hands when they are dirty and before eating, (b) Do not cough into your hands, (c) Do not sneeze into your hands, and (d) Above all, do not put your fingers into your eyes, nose or mouth; and (2) encourages physicians to "adopt a school" in their communities and promote the Four Principles of Hand Awareness. Citation: (Res. 404, I-01; Reaffirmed: CSAPH Rep. 1, A-11)	Retain; still relevant.
H-440.950	Premarital Testing	Our AMA encourages individual states to review and reassess the need for mandatory premarital testing for infectious diseases for their respective populations and to determine whether there is a favorable cost/benefit ratio for the specific disease in question. In the absence of a favorable ratio, states should consider abandoning mandatory premarital testing for an infectious disease. Citation: (BOT Rep. Z, A-91; Reaffirmed: Sunset Report, I-01; Reaffirmed: CSAPH Rep. 1, A-11)	Retain; still relevant.
H-440.972	Water Fluoridation	Our AMA: (1) urges state health departments to consider the value of requiring statewide fluoridation (preferably a comprehensive program of fluoridation of all public water supplies, where these are fluoride deficient), and to initiate	Retain; still relevant.

		such action as deemed appropriate; and (2) supports the 2011 proposed fluoridation standards as promulgated by the US Department of Health and Human Services and the Environmental Protection Agency. Citation: (Sub. Res. 9, I-86; Reaffirmed: Sunset Report, I-96; Reaffirmed: CSAPH Rep. 3, A-06; Appended: Res 406, A-11)	
H-440.989	Continuation of the Commissioned Corps	Our AMA strongly supports the continuation of the Commissioned Corps of the US Public Health Service. Citation: (Res. 5, A-81; Reaffirmed: CLRPD Rep. F, I-91; Reaffirmed: Sunset Report, I-01; Reaffirmed: CSAPH Rep. 1, A-11)	Retain; still relevant.
H-455.988	Public Education on the Danger of Radiation Exposure	~~1. Our AMA encourages the appropriate federal agency to develop a nationwide public education program on the effects of radiation exposure.~~ ~~2.~~ Our AMA supports public initiatives, such as the "Image Wisely" and "Image Gently" campaigns, which aim to increase awareness of radiation in the medical setting and reduce exposure. Citation: (Res. 121, A-86; Reaffirmed: Sunset Report, I-96; Reaffirmed: CSAPH Rep. 3, A-06; Appended: Res. 921, I-11)\	Retain in part. The Health Resources and Services Administration (HRSA) developed the Radiation Exposure Screening & Education Program (RESEP).
H-455.993	Treatment of Radiation Accident Victims	Our AMA (1) encourages all acute care facilities, through their medical staffs, to review and become familiar with radiation accident contingency plans required by the JCAHO, particularly those facilities in areas where major radiation-emitting equipment is located; and (2) supports the development of guidelines for training and preparedness of medical staffs, proper treatment regimens and the maintenance and use of decontamination equipment for use at the time of radiation accidents. Citation: (Res. 36, I-81; Reaffirmed: CLRPD Rep. F, I-91; Reaffirmed: Sunset Report, I-01; Reaffirmed: CSAPH Rep. 1, A-11)	Retain; still relevant.
H-460.907	Encouraging Research Into the Impact of Long-Term Administration of Hormone Replacement Therapy in Transgender Patients	Our AMA encourages research into the impact of long-term administration of hormone replacement therapy in transgender patients. Citation: (Res. 512, A-11)	Retain; still relevant.
H-470.985	Goalie Face Masks in Hockey	Our AMA endorses the mandatory use of an adequate cage-type face mask for goalies in all amateur, high school and college hockey programs in the nation. Citation: (Res. 4, I-81; Reaffirmed: CLRPD Rep. F, I-91; Reaffirmed: Sunset Report, I-01; Reaffirmed: CSAPH Rep. 1, A-11)	Retain; still relevant.
H-470.986	Helmets for Hockey Referees	Our AMA endorses the use of hockey helmets for all referees in amateur, high school and college hockey programs in the US. Citation: (Res. 123, A-81; Reaffirmed: CLRPD Rep. F, I-91; Reaffirmed: Sunset Report, I-01; Reaffirmed: CSAPH Rep. 1, A-11)	Retain; still relevant.
H-470.991	Promotion of Exercise	1. Our AMA: (A) supports the promotion of exercise, particularly exercise of significant cardiovascular benefit; and (B) encourages physicians to prescribe exercise to their patients and to shape programs to meet each patient's capabilities and level of interest. 2. Our AMA supports National Bike to Work Day and encourages active transportation whenever possible.	Retain; still relevant.

		Citation: (Res. 83, parts 1 and 2, I-77; Reaffirmed: CLRPD Rep. C, A-89; Reaffirmed: Sunset Report, A-00; Reaffirmed: CSAPH Rep. 1, A-10; Appended: Res. 604, A-11)	
H-480.951	Fingerstick And Single-Use Point-of-Care Blood Testing Devices Should Not Be Used For More Than One Person	Our AMA encourages improved labeling of fingerstick and point-of-care blood testing devices such that it is clear that multiple-use fingerstick devices made for single patients are intended for use only on single patients. Citation: (Res. 515, A-11)	Retain; still relevant.
H-480.981	Cryotherapy, Therapeutic Ultrasound and Diathermy	Our AMA recognizes that the application of heat or cold is a therapeutic modality used by a variety of practitioners. When these modalities are used and are expected to cause tissue destruction, the AMA recommends that those using the modality be appropriately trained, licensed physicians or be individuals appropriately trained and under the supervision of a physician. Citation: (BOT Rep. P, I-91; Reaffirmed: Sunset Report, I-01; Reaffirmed: CSAPH Rep. 1, A-11)	Retain; still relevant.
H-490.916	Health Insurance and Reimbursement for Tobacco Cessation and Counseling	Our AMA: (1) (a) continues to support development of an infrastructure for tobacco dependence treatment; (b) will work with the U.S. Public Health Service, particularly the Agency for Health Research and Quality, health insurers, and others to develop recommendations for third party payment for the treatment of nicotine addiction; (c) urges third party payers and governmental agencies involved in medical care to regard and treat nicotine addiction counseling and/or treatment by physicians as an important and legitimate medical service; and (d) supports the ready availability of health insurance coverage and reimbursement for pharmacologic and behavioral treatment of nicotine dependence and smoking cessation efforts; (2) (a) requests Congress to provide matching funds for Medicaid coverage for evidence-based programs and Food and Drug Administration (FDA)-approved products that lead to smoking cessation; and (b) seeks the requirement that state Medicaid programs, prepaid health plans, and insurance companies provide evidence-based approaches for smoking cessation and nicotine withdrawal, including FDA-approved pharmacotherapy, as part of their standard benefit packages. Citation: (CSA Rep. 3, A-04; Reaffirmed: BOT Rep. 8, A-08; Reaffirmation A-11)	Retain, still relevant.
H-495.983	Tobacco Litigation Settlements	Our AMA: (1) strongly supports the position that all monies paid to the states in the Master Settlement Agreement and other agreements be utilized for research, education, prevention and treatment of nicotine addiction, especially in children and adolescents, and for treatment of diseases related to nicotine addiction and tobacco use; (2) supports efforts to ensure that a substantial portion of any local, state or national tobacco litigation settlement proceeds be directed towards preventing children from using tobacco in any form, helping current tobacco users quit, and protecting nonsmokers from environmental tobacco smoke, and that any tobacco settlement funds not supplant but augment health program funding; (3) strongly supports efforts to direct tobacco settlement monies that are not directed to other specific tobacco control	Retain, still relevant.

		activities to enhance patient access to medical services; (4) strongly supports legislation codifying the position that all monies paid to the states through the various tobacco settlements remain with the states; and that none be reimbursed to the Federal government on the basis of each individual state's Federal Medicaid match; and (5) opposes any provision of tort reform legislation that would grant exclusion from liability or special protection to tobacco companies or tobacco products. Citation: (CSA Rep. 3, A-04; Reaffirmation I-11)	
H-50.995	Voluntary Donations of Blood and Blood Banking	Our AMA reaffirms its policy on voluntary blood donations (C-63); and directs attention to the need for adequate donor selection and post-transfusion follow-up procedures. Our AMA (1) endorses the FDA's existing blood policy as the best approach to assure the safety and adequacy of the nation's blood supply; (2) supports current federal regulations and legislation governing the safety of all blood and blood products provided they are based on sound science; (3) encourages the FDA to continue aggressive surveillance and inspection of foreign establishments seeking or possessing United States licensure for the importation of blood and blood products into the United States; and (4) urges regulatory agencies and collection agencies to balance the implementation of new safety efforts with the need to maintain adequate quantities of blood to meet transfusion needs in this country. Citation: (BOT Rep. V, A-71; Reaffirmed: CLRPD Rep. C, A-89; Appended: Res. 507, A-98; Appended: CSA Rep. 4, I-98; Reaffirmed: CSA Rep. 1, A-99; Amended & Appended: Res. 519, A-01; Modified: CSAPH Rep. 1, A-11)	Retain; still relevant.
H-525.985	Safety and Performance Standards for Mammography	Our AMA actively encourages the development of new activities, and supports the coordination of ongoing activities, to ensure the following: (1) that the techniques used in performing mammograms and in interpreting mammograms meet high quality standards of performance, including evidence of appropriate training and competence for professionals carrying out these tasks; (2) that the equipment used in mammography is specifically designed and dedicated. The performance of mammography imaging systems is assessed on a regular basis by trained professionals; (3) that the American College of Radiology Breast Imaging Reporting and Database System is widely used throughout the United States and that mammography outcome data in this database are used to regularly assess the effectiveness of mammography screening and diagnostic services as they are provided for women in the United States; and (4) regular breast physical examination by a physician and regular breast self-examination should be performed in addition to screening mammography. Citation: (BOT Rep. JJ, A-91; Reaffirmed: Sunset Report, I-01; Reaffirmed: CSAPH Rep. 1, A-11)	Retain; still relevant.
H-525.986	Guidelines and Medicare Coverage for Screening Mammography	Our AMA: (1) supports continuing to work with interested groups to facilitate the participation of all women eligible under Medicare in regular screening mammography; (2) supports the coordination of ongoing programs and encourages the development of new activities in quality assurance for mammography; and (3) supports monitoring studies addressing the issue of the appropriate interval for screening mammography in women over 64 years of age.	Retain, still relevant.

		Citation: (BOT Rep. CC, A-91; Modified: Sunset Report, I-01; Reaffirmed: CSAPH Rep. 1, A-11)	
H-60.928	Body Image and Advertising to Youth	Our AMA encourages advertising associations to work with public and private sector organizations concerned with child and adolescent health to develop guidelines for advertisements, especially those appearing in teen-oriented publications, that would discourage the altering of photographs in a manner that could promote unrealistic expectations of appropriate body image. Citation: (Res. 413, A-11)	Retain; still relevant.
H-60.929	National Child Traumatic Stress Network	Our AMA: 1) recognizes the importance of and support the widespread integration of evidence-based pediatric trauma services with appropriate post-traumatic mental and physical care, such as those developed and implemented by the National Child Traumatic Stress Initiative; and 2) will work with mental health organizations and relevant health care organizations to support full funding of the National Child Traumatic Stress Initiative ~~at FY 2011 levels at minimum and to maintain the full mission of the National Child Traumatic Stress Network~~. Citation: (Res. 419, A-11)	Retain in part, the FY 2011 level mentioned is outdated and should be deleted.
H-60.955	Screening Pediatric and Adolescent Injury Victims for Drugs and Alcohol	Our AMA: (1) supports drug and alcohol screening as an appropriate component of a comprehensive medical evaluation for pediatric and adolescent injury victims when clinically indicated; and (2) encourages physicians to actively pursue appropriate referral and treatment when clinically indicated for all pediatric and adolescent injury patients who test positive for the presence of drugs or alcohol. Citation: (Res. 408, I-94; Reaffirmation I-01; Reaffirmed: CSAPH Rep. 1, A-11)	Retain; still relevant.
H-60.971	Removal of High Alcohol Content from Medications Targeted for Use by Children and Youth	Our AMA encourages pharmaceutical companies to limit the alcohol content of their medications to the minimum amount necessary as determined solely by the physical and chemical characteristics of the medication. Citation: (Sub. Res. 507, I-91; Reaffirmed: Sunset Report, I-01; Modified: CSAPH Rep. 1, A-11)	Retain; still relevant.
H-60.974	Children and Youth With Disabilities	It is the policy of the AMA: (1) to inform physicians of the special health care needs of children and youth with disabilities; (2) to encourage physicians to pay special attention during the preschool physical examination to identify physical, emotional, or developmental disabilities that have not been previously noted; (3) to encourage physicians to provide services to children and youth with disabilities that are family-centered, community-based, and coordinated among the various individual providers and programs serving the child; (4) to encourage physicians to provide schools with medical information to ensure that children and youth with disabilities receive appropriate school health services; (5) to encourage physicians to establish formal transition programs or activities that help adolescents with disabilities and their families to plan and make the transition to the adult medical care system; (6) to inform physicians of available educational and other local resources, as well as various manuals that would help prepare them to provide family-centered health care; and (7) to encourage physicians to make their offices accessible to patients with disabilities, especially when doing office construction and renovations. Citation: (CSA Rep. J, I-91; Modified: Sunset Report, I-01; Modified: CSAPH Rep. 1, A-11)	Retain; still relevant.

H-60.976	Genetic and Medical History of the Adopted	It is the policy of the AMA (1) to assist the appropriate bodies to develop a medical and genetic history form which would become, and remain, protected information and part of an adopted individual's permanent record on their entry into the fostercare/adoption system; and (2) to draft model state legislation which clearly mandates all appropriate agencies to furnish to the adoptive parents, when possible, the appropriate medical and genetic family history furnished by birth parents, with a mechanism to protect the confidentiality of all parties. Citation: (Res. 512, I-91; Reaffirmed: Sunset Report, I-01; Reaffirmed: CSAPH Rep. 1, A-11)	Rescind. Medical and genetic history forms exist and are now readily available on many websites discussing adoption, including the CDC website. Additionally, the AMA developed model state legislation "To Require the Provision of the Genetic and Medical History of The Adopted to Adoptive Parents."
H-75.990	Development and Approval of New Contraceptives	Our AMA (1) supports ~~congressional~~ efforts to increase public funding of contraception and fertility research; (2) urges the FDA to consider the special health care needs of Americans who are not adequately served by existing contraceptive products when considering the safety, effectiveness, risk and benefits of new contraception drugs and devices; and (3) encourages contraceptive manufacturers to conduct post-marketing surveillance studies of contraceptive products to document the latter's long-term safety, effectiveness and acceptance, and to share that information with the FDA. Citation: (BOT Rep. O, I-91; Reaffirmed: Sunset Report, I-01; Modified: CSAPH Rep. 1, A-11)	Retain in part.
H-75.992	Family Planning Clinic Funds	Our AMA supports the concept of adequate funding for family planning programs. Citation: (Res. 102, A-90; Reaffirmed: Sunset Report, I-00; Reaffirmed: CSAPH Rep. 1, A-10; Reaffirmed: Res. 227, A-11)	Retain; still relevant.
H-90.996	Education of Children with Disabilities ~~Handicapped Children~~	Our AMA supports efforts to ensure an appropriate role for physicians in the development of special education programs for ~~handicapped~~ children with disabilities. Citation: (BOT Rep. I, A-81; Reaffirmed: CLRPD Rep. F, I-91; Reaffirmed: Sunset Report, I-01; Reaffirmed: CSAPH Rep. 1, A-11)	Retain as amended to eliminate stigmatizing term.
H-95.963	Standardization of Collection and Custody Procedures of Body Fluid Specimens	~~It is the policy of tThe~~ Our AMA ~~to seek to have~~ supports the use of standardized procedures, containers and forms ~~developed that will~~ to satisfy the requirements of all requesting entities ~~which will reduce the hassle which currently exists in~~ for processing specimens of body fluids for drug testing ~~screens~~ and for insurance applications. Citation: (Res. 501, I-91; Reaffirmed: Sunset Report, I-01; Reaffirmed: CSAPH Rep. 1, A-11)	Retain as amended as standardized procedures have been outlined.
H-95.965	Residential Treatment for ~~Drug-Addicted~~ Women with Substance Use Disorder	Our AMA encourages state medical societies to support an exemption in public aid rules that would allow for the coverage of residential drug treatment programs for women with child-bearing potential. Citation: (Res. 405, I-91; Reaffirmed: Sunset Report, I-01; Reaffirmed: CSAPH Rep. 1, A-11)	Retain as amended to eliminate stigmatizing term.
H-95.978	Harmful Drug ~~Abuse~~ Use in the United States - Strategies for Prevention	Our AMA: (1) Urges the Substance Abuse and Mental Health Administration to support research into special risks and vulnerabilities, behavioral and biochemical assessments and intervention methodologies most useful in identifying persons at special risk and the behavioral and biochemical strategies that are most effective in ameliorating risk factors. (2) Urges the Center for Substance Abuse Prevention to continue to support community-based prevention strategies which include: (a) Special attention to children and adolescents, particularly in schools, beginning at the pre-	Retain in part to eliminate stigmatizing language. Remains relevant.

		kindergarten level. (b) Changes in the social climate (i.e., attitudes of community leaders and the public), to reflect support of harmful drug and alcohol ~~ab~~use prevention and treatment, eliminating past imbalances in allocation of resources to supply and demand reduction. (c) Development of innovative programs that train and involve parents, educators, physicians, and other community leaders in "state of the art" prevention approaches and skills. (3) Urges major media programming and advertising agencies to encourage the development of more accurate and prevention-oriented messages about the effects of harmful drug and alcohol ~~ab~~use. (4) Supports the development of advanced educational programs to produce qualified prevention specialists, particularly those who relate well to the needs of economically disadvantaged, ethnic, racial, and other special populations. (5) Supports investigating the feasibility of developing a knowledge base of comprehensive, timely and accurate concepts and information as the "core curriculum" in support of prevention activities. (6) Urges federal, state, and local government agencies and private sector organizations to accelerate their collaborative efforts to develop a national consensus on prevention and eradication of harmful alcohol and drug ~~ab~~use. Citation: (BOT Rep. H, A-89; Reaffirmed: CSA Rep. 12, A-99; Reaffirmation I-01; Reaffirmed: CSAPH Rep. 1, A-11)	

2. USE OF DRUGS TO CHEMICALLY RESTRAIN AGITATED INDIVIDUALS OUTSIDE OF HOSPITAL SETTINGS

Reference committee hearing: see report of Reference Committee E.

HOUSE ACTION: RECOMMENDATIONS ADOPTED AS FOLLOWS
REMAINDER OF REPORT FILED
See Policies H-65.954, H-130.932 and H-345.972

BACKGROUND

Recent media reports refer to "excited delirium" in discussions about police brutality and the use of conducted electrical devices (CED).[1-4] The term "excited delirium" is controversial and lacks a defined set of behavioral signs and symptoms used to identify a person perceived as in distress and in need of urgent medical or psychiatric help. Additionally, several media reports have recently highlighted the use of ketamine and other sedative/hypnotic agents by non-medical professionals to chemically incapacitate a person for a law enforcement purpose and not for a legitimate medical reason.[4-6] In many cases, "excited delirium" is listed as the reason for the use of a sedative/hypnotic agent. The AMA Board of Trustees has requested that the AMA Council on Science and Public Health study the use of ketamine and chemical restraints in the context of "excited delirium" and report back to the AMA House of Delegates.

METHODS

English-language reports were selected from a PubMed and Google Scholar search using the text terms "excited delirium," "delirium," "fatalities excited delirium," "excited delirium restraint," "excited delirium sedatives," "excited delirium ketamine," "police ketamine," "EMS ketamine," and "crisis response team." Articles were filtered based on relevance. Additional articles were identified by manual review of the references cited in these publications. Searches

of selected medical specialty society and international, national, and local government agency websites were conducted to identify clinical guidelines, position statements, and reports.

AMA POLICY

No current AMA policy exists related specifically to excited delirium or the use of chemical restraints by law enforcement. AMA Policy H-515.968, "Informing the Public & Physicians about Health Risks of Sedative Hypnotics, Especially Rohypnol," emphasizes that Rohypnol (a benzodiazepine), other benzodiazepines, and other sedatives and hypnotics carry the risk of misuse, morbidity and mortality. Policy H-345.979, "Evaluation of Delirium," supports efforts to educate physicians regarding the importance of evaluation of delirium for high-risk patients and patients who are symptomatic.

AMA has several polices related to law enforcement that are applicable to the topic of this report. Policy H-65.954, "Policing Reform," recognizes police brutality as a manifestation of structural racism which disproportionately impacts Black, Indigenous, and other people of color, notes AMA's willingness to work with interested national, state, and local medical societies in a public health effort to support the elimination of excessive use of force by law enforcement officers, states that AMA will advocate against the utilization of racial and discriminatory profiling by law enforcement through appropriate anti-bias training, individual monitoring, and other measures, and will advocate for legislation and regulations which promote trauma-informed, community-based safety practices. Policy H-345.972, "Mental Health Crisis Interventions," supports jail diversion and community based treatment options for mental illness, implementation of law enforcement-based crisis intervention training programs for assisting those individuals with a mental illness, such as the Crisis Intervention Team model programs, federal funding to encourage increased community and law enforcement participation in crisis intervention training programs, and legislation and federal funding for evidence-based training programs by qualified mental health professionals aimed at educating corrections officers in effectively interacting with people with mental health and other behavioral issues in all detention and correction facilities. Policy H-145.977, "Use of Conducted Electrical Devices by Law Enforcement Agencies," recommends that law enforcement departments and agencies should have in place specific guidelines, rigorous training, and an accountability system for the use of CEDs that is modeled after available national guidelines, encourages additional independent research involving actual field deployment of CEDs to better understand the risks and benefits under conditions of actual use, and urges law enforcement departments and agencies have a standardized protocol developed with the input of the medical community for the evaluation, management and post-exposure monitoring of subjects exposed to CEDs.

AMA has policy related to Emergency Medical Services (EMS) and prehospital patient care. Policy H-130.976, "On-Site Emergency Care" reaffirms endorsement of the concept of appropriate medical direction of all prehospital emergency medical services and notes that trauma management differs markedly between locales, settings, and types of patients receiving care and for these reasons, physician supervision of prehospital services is essential to ensure that the critical decision to resuscitate in the field or to transfer the patient rapidly is made swiftly and correctly. Policy H-160.949, "Practicing Medicine by Non-Physicians" opposes allowing non-physician groups to engage in the practice of medicine without physician (MD, DO) training or appropriate physician (MD, DO) supervision and supports the requirement of appropriate physician supervision of non-physician clinical staff in all areas of medicine. Policy H-130.937, "Delivery of Health Care by Good Samaritans" notes that bystander physicians should recognize that prehospital EMS systems operate under the authority and direction of a licensed EMS physician, who has both ultimate medical and legal responsibility for the system.

Ethical Opinion 1.2.7, "Use of Restraints," states that all individuals have a fundamental right to be free from unreasonable bodily restraint. At times, however, health conditions may result in behavior that puts patients at risk of harming themselves. In such situations, it may be ethically justifiable for physicians to order the use of chemical or physical restraint to protect the patient. Except in emergencies, patients should be restrained only on a physician's explicit order. Patients should never be restrained punitively, for convenience, or as an alternate to reasonable staffing. Physicians who order chemical or physical restraints should: (a) Use best professional judgment to determine whether restraint is clinically indicated for the individual patient. (b) Obtain the patient's informed consent to the use of restraint, or the consent of the patient's surrogate when the patient lacks decision-making capacity. Physicians should explain to the patient or surrogate: (i) why restraint is recommended; (ii) what type of restraint will be used; (iii) length of time for which restraint is intended to be used. (c) Regularly review the need for restraint and document the review and resulting decision in the patient's medical record. In certain limited situations, when a patient poses a significant

danger to self or others, it may be appropriate to restrain the patient involuntarily. In such situations, the least restrictive restraint reasonable should be implemented and the restraint should be removed promptly when no longer needed.

EXCITED DELIRIUM

Delirium is a well-defined clinical entity with both hypoactive and hyperactive manifestations, commonly caused by an underlying medical condition and not associated with sudden death. The term "excited delirium" (ExD) has been used since the 1980s to refer to a subcategory of delirium that has primarily been described in forensic literature and the term "excited delirium syndrome" (ExDS) was originally used in the forensic literature to describe findings in a subgroup of patients with ExD who suffered lethal consequences from untreated severe agitation. Currently, ExD and ExDS are used interchangeably in literature and media.

History

In 1849, the lead psychiatrist at McLane Asylum for the Insane introduced a condition synonymous to ExD into medical literature as "Bell Mania."[7] The term "excited delirium" first emerged in 1985 from two University of Miami professors who set out to explain a new phenomenon of sudden deaths, mostly in police custody, of otherwise healthy men under the influence of a non-lethal amount of cocaine.[8,9] Soon after, the term gained academic traction, as the United States saw a dramatic rise in use of cocaine and other sympathomimetic substances along with increased efforts to deinstitutionalize patients with chronic mental illness.[10] Currently, ExD and ExDS are referred to as conditions of illness marked by a combination of autonomic hyperadrenergic dysfunction, agitation, and delirium. The purported root of ExD, involving psychiatric, neurologic, and metabolic imbalance, is highly variable and linked to a complicated array of co-morbid and severe health issues.[11]

Historically, the concept of ExD was synonymous with death, but over time the term has made its way into the emergency medicine, psychiatric, law enforcement, prehospital, and medicolegal literature to generally describe patients displaying altered mental status with severe agitation and perceived combative or assaultive behavior that has eluded a unifying, prospective clinical definition. Studies have failed to define ExD as one specific clinical entity, and it remains without a plausible biological pathway to sudden death. Multiple published series highlight that when CEDs and/or police restraints are used, ExD most often becomes fatal.[12-17] CSAPH Report 6-A-09, *Use of Tasers® by Law Enforcement Agencies*, included a very brief paragraph on ExD and notes that ExD is not a validated diagnostic entity in either the World Health Organization's International Classification of Diseases or the *Diagnostic and Statistical Manual of Mental Disorder*s, but is widely accepted in forensic pathology and is cited by medical examiners to explain the sudden in-custody deaths of individuals who are combative and highly agitated.[18]

Pathophysiology

Although it is extensively used in academic and medical literature, considerable debate exists in medicine about how to characterize ExD and ExDS, if they even exist, and how ExD contributes to sudden death. The pathophysiologic mechanisms of ExD have not been elucidated and ExD does not currently have a known etiology.[10,19-21] However, ExD has been characterized in the literature by delirium, agitation, acidosis, and hyperadrenergic autonomic dysfunction, typically in the setting of drug use or serious mental illness or a combination of both.[11] Currently, a general function of the sympathetic nervous system is associated with the listed clinical manifestations of ExD, with possible nervous system dysfunction in some way inciting symptoms. While some authors correlate elevated synaptic dopamine levels to ExD, its causes are yet to be discovered and the absence of a unique pathophysiologic cause or specific diagnostic test remains.[22-24]

No consistent anatomical features define ExD. Due to the biological ambiguity in diagnosing ExD, postmortem findings from autopsy and forensic evidence collection to identify or support ExD are unlikely, and a postmortem diagnosis of ExD is one of exclusion.[8,17,25,26] Because ExD does not currently have a known specific etiology or a consistent anatomic feature, it can only be explained by its epidemiology and described clinical presentation.[20]

Epidemiology

Studies have shown that delirium occurs in between 11 and 42 percent of general medical inpatients and 50 percent of elderly hospitalized patients. This figure is even greater for those with pre-existing cognitive impairments, terminal

illness, or in need of intensive care.[27] Patients diagnosed with delirium are found to have extended stays in the hospital by five to ten additional days, and are more likely to be transferred to a long-term care facility post-release.[28]

Those who are most likely to be identified as having ExD are men, with 83 to 95 percent of ExD cases occurring in this population.[24] Otherwise healthy males in their mid-30s who are seen as "aggressive, impervious to pain, and display bizarre behavior" have the highest rate of mortality from ExD/ExDS.[10] Despite similar rates of drug use across race and ethnicity in the United States,[29] epidemiological studies show that it is specifically and disproportionately younger Black men who use cocaine and other psychostimulants and are in police custody that are at highest risk for death from ExD/ExDS.[24,30,31] Mortality rates associated with ExD/ExDS have been reported to be between 8 to 16.5 percent.[11,24,32]

LAW ENFORCEMENT, EMS, AND EXCITED DELIRIUM

Because of its reference in forensic literature, law enforcement groups and EMS have started training staff to identify ExD as a potentially deadly medical condition, despite the absence of a unique pathophysiologic cause or specific diagnostic test.[33,34] ExD often presents itself as a behavioral issue initially evaluated by law enforcement with subsequent EMS involvement.[11,35] Additionally, the identification of ExD/ExDS has been frequently used in defense cases of police violence.[9,36] Some of the cases in which ExD has been invoked in defending the deaths of people, all Black, in police custody include Natasha McKenna,[14] Manuel Ellis,[2] Elijah McCain,[5] George Floyd,[3] and Daniel Prude.[1]

The prevalence of ExD appears to vary widely, both because of varying definitions and context. Reports estimate that ExD is in question in more than 3 percent of police interventions that use force and more than 10 percent of the deaths that occur within law enforcement custody are associated with ExD.[24] Reports also note that between 38 and 86 percent of all fatal ExD cases occur in police custody[24] and that law enforcement officers encounter one person with ExD in every 58 use of force incidents.[25] In cases of suspected ExD, law enforcement officers are encouraged to contact EMS personnel; the combined effort of EMS and law enforcement to provide effective care to those with ExDS has been termed the "dual response."[33,34] Training for EMS personnel states that treatment of ExDS must be focused on rapidly, safely, and effectively sedating the patient and providing intensive, supportive care.[37]

Since ExD lacks a consensus clinical definition and few pathophysiological findings exist about the condition, wrongly characterizing symptoms as ExD, especially by law enforcement with little medical knowledge, frequently leads to additional and potentially fatal medical complications including hypoxia.[17,38-40] The profile of a death attributed to ExD is usually a sudden, unexpected one that occurs most frequently in the summer.[41] It usually occurs immediately following chemical or physical restraint to control ExD and occurs most frequently when the patient is in the prone position; both chemical restraints and CEDs have been cited to result in sudden death due to ExD.[15,17,42] An *FBI Law Enforcement Bulletin* article discussing ExD describes it as "a serious and potentially deadly medical condition involving psychotic behavior, elevated temperature and an extreme flight-or fight response," and notes that "these patients often die within 1 hour of police involvement."[33]

Studies have evaluated the factors associated with death attributed to ExD in police custody and the confounding effect that restraint has on the risk of death. Results have indicated that a diagnosis of ExD and potentially fatal restraint are "inextricably interwoven."[43,44] Some form of restraint was described in 90 percent of all ExD deaths, making it the most common factor that is a plausible cause or contributing cause of the death. Authors note that there is no evidence to support ExD as a cause of death in the absence of restraint.[44] The reported autopsy results for the individuals referenced above, in which law enforcement officers cited ExD as the cause of death provide examples of this: in the death of Natasha McKenna, "excited delirium," was noted although a stun gun was utilized 4 times resulting in loss of consciousness;[14] the death of Elijah McClain was "undetermined," although carotid hold and excessive restraint were utilized;[5] the death of Manuel Ellis was reported as "hypoxia due to physical restraint;"[2] George Floyd died from "asphyxia due to neck and back compression;"[3] and Daniel Prude's death was due to "complications of asphyxia in the setting of physical restraint."[1]

While the mortality rate associated with ExD is estimated to be between 8 and 16.5 percent,[11,24,32] in the past three decades, a significant decrease in restraint-related deaths of those with ExD has been noted. The period from 2004 to 2011 shows a 33 percent reduction in fatalities from ExD compared to the period 1988 to 1995; authors comment that the decrease is likely due to an increase in warnings and repeated recommendations concerning the association

between restraint, especially in a prone position and fatal ExD.[24] However, little information related to the specific details of law enforcement or EMS training related to ExD could be located.

CHEMICAL RESTRAINT

A chemical restraint is when a drug is used to restrict the movement of a patient or in some cases to sedate a patient. Chemical restraint is used in emergency, acute, and psychiatric medical settings to reduce agitation, aggression, or violent behaviors. Drugs that are often used as chemical restraints include benzodiazepines, antipsychotics, and dissociative anesthetics. However, no drugs are U.S. Food and Drug Administration (FDA) approved for use as chemical restraints. The long history of restraint and associated controversies of the use of restraints (physical, mechanical, and chemical) in patients is outside of the scope of this report.

Drugs Used as Chemical Restraints

Medications that are typically used for chemical restraint include the dissociative ketamine, benzodiazepine sedatives such as midazolam, and antipsychotic medications including olanzapine or haloperidol, both alone or in combination.

Studies over the last several years have evaluated and compared the efficacy of sedation for several medications used for chemical restraint, as well as adverse effects associated with them.[45-49] A recent systematic review summarizes available evidence on the effectiveness and safety of chemical restraint from 21 randomized controlled trials conducted in pre-hospital, hospital emergency department, or ward settings and notes limited comparability between studies in drug choice, combination, dose, method of, or timing of repeat administrations. Drugs used in chemical restraint and included in the review include olanzapine, haloperidol, droperidol, risperidol, flunitrazepam, midazolam, promethazine, ziprasidone, sodium valproate, or lorazepam. The review notes little clarity about the superiority of any of the drugs and recommends additional research on the topic.[50]

Because sedation with slower-onset chemical restraints, such as haloperidol and some benzodiazepines present a risk of delay to adequate sedation, ketamine has emerged as a potentially preferred drug for the control of patient agitation in a pre-hospital context and for a law enforcement purpose.[35,37,39,40,51-54] Although little literature exists directly reporting the frequency of EMS use, authors note that this medication could easily be implemented into out-of-hospital protocols and that ketamine offers a "safe and effective method of controlling the severely agitated patient."[35,37]

Ketamine

Ketamine is FDA approved for use as an anesthetic agent for diagnostic and surgical procedures and esketamine (a pure ketamine stereoisomer) is FDA approved for treatment-resistant depression. Ketamine and esketamine are classified as Schedule III controlled substances.

Ketamine is commonly used off-label in medical settings as an analgesic, antidepressant, and anti-inflammatory medication. No FDA-approved indication for use to treat ExD exists, which is understandable given that there is no medical consensus on definitions of or diagnostic criteria for ExD. Therefore, no standard dosing regimen has been established and there has been no consideration of co-morbid medical conditions for ketamine use for ExD. A rapidly growing movement calls for expanded use of ketamine for several applications, both in and out of the hospital, including for sedation of agitated patients in non-clinical situations and for restraint in custody.[35,55]

Ketamine Use as a Chemical Restraint by Law Enforcement and EMS

Police officers and EMS professionals are the most likely first responders to encounter agitated patients exhibiting what they might consider to be symptoms of ExD. While law enforcement usually evaluates this syndrome, it is usually EMS personnel who provide the sedation, in the "dual response" model. While several chemical restraints are used to sedate those purportedly experiencing ExD within law enforcement custody and in EMS contexts, most commonly the sedative is ketamine. Authors report that the use of ketamine for restraint of an agitated patient induces rapid, predictable sedation within three to four minutes when given by intramuscular injection.[37,54,56]

A recent national survey assessed ketamine training, use, and perceptions among paramedics in civilian prehospital settings. The survey noted that training related to ketamine use was commonly reported among paramedics, however, few are authorized to administer the drug according to their agency protocol. Of those paramedics authorized to use

ketamine, most had limited experience administering the drug, but have the perception that the use of ketamine for sedation is safe and effective.[52] Dosing guidelines, safety profile, and efficacy have been described in only a limited fashion for the use of ketamine to chemically restrain a patient in a pre-hospital scenario.[51]

Many police departments have seen a dramatic rise in ketamine administration over the past several years. As an example, a 2018 City of Minneapolis report "MPD Involvement in Pre-Hospital Sedation" documented an average of 4 cases of ketamine use per year prior to 2015, 14 uses in 2015, and 62 instances in 2017.[57] From January 2018 through April 2018, 11 instances of ketamine use were documented in police reports, exceeding the annual use in each year from 2010-2014.[57] Additionally, the report from Minneapolis presented 8 cases that occurred between 2016 and 2018 in which EMS professionals and Minneapolis Police Department (MPD) officers cooperated in order to administer ketamine. These cases involved instances in which the police officers, with limited medical training, directed EMS professionals to use ketamine.[57] A recent investigation of the death of Elijah McCain in Colorado determined that the use of ketamine contributed to his death.[58]

Little information related to the specific details of law enforcement or EMS training related to the use of ketamine or other chemical restraints could be located. Reviews of law enforcement agencies and EMS have been called for to evaluate the prevalence of ketamine use in the field in unmonitored individuals and to assess that training and guidelines have been established by supervising medical and behavioral health specialists, are appropriate, include de-escalation training, and personnel are conducting themselves according to guidelines and training to ensure patient safety.[35,57,58] Additionally, agencies currently using ketamine for sedation of agitation are encouraged to report their outcomes and protocols to increase the body of evidence and determine best safe practices for this indication.[35]

Ketamine Pharmacology in Pre-hospital Contexts

Ketamine dose dependently exerts broad influences on consciousness and perception, with some patients reporting dissociative and extracorporeal sensations. The most common psychoactive effects reported after a single subanesthetic intravenous administration of ketamine include dissociation, positive psychotomimetic effects (conceptual disorganization, hallucinations, suspiciousness, unusual thought content, and frank paranoia), and negative psychotomimetic effects (blunted affect, emotional withdrawal, and psychomotor retardation). In addition, studies have identified unfavorable effects of administration of ketamine on cognition (including amnesia), vestibular perturbations, nausea/vomiting, tachycardia, hypertension, palpitations, hypersalivation, and respiratory depression. Ketamine has also been found to have negative interactions with alcohol in intoxicated individuals and those taking MAO inhibitors, which is of concern because when ketamine is used by EMS in out-of-hospital settings, individuals may be under the influence of alcohol, cannabis, sedative-hypnotics, or other psychoactive drugs or under medical treatment with a pharmaceutical with potential adverse drug-drug interactions with ketamine.[48,59-62]

Because of the ketamine dose-response and side effects, careful administration and medical expertise is necessary, especially in non-medical and non-hospital contexts.[17,38-40] In general, the duration of sedation should only be long enough to allow for patient assessment, initial treatment, and transfer to a medical facility; restraint beyond this timeframe may induce additional medical complications. Ketamine dosing is dependent on a person's body weight, with a reported standard dosing of 5mg per kilogram of bodyweight starting at 250 mg for pre-hospital treatment.[44,51,63,64] Because of this weight dosing requirement, incorrect dosing of ketamine by law enforcement or EMS can and has led to serious adverse events or death.[58] A recent investigation of the death of Elijah McClain in Aurora, Colorado found that an incorrect estimation of weight for a weight-based dose calculation contributed to his death.[58] Additionally, several studies have reported that while ketamine provides rapid sedation for agitated patients, its use in a pre-hospital setting is associated with higher intubation and hospital admission rates when used by EMS.[35,38,48,51,54,60,62,65,66] Studies have also linked the use of ketamine to death from metabolic acidosis.[67-69]

CRISIS INTERVENTION TEAM PROGRAMS

Crisis Intervention Team programs (CITs) are community partnerships of law enforcement, behavioral health providers, people with mental and substance use disorders, along with their families and others. CITs have become a globally recognized model for safely and effectively assisting people who experience crises in the community. The Substance Abuse and Mental Health Services Administration (SAMHSA) notes that the need for CIT programs is urgent, as communities are challenged with insufficient mental health funding and services.[70] Advocates of CITs, including the National Alliance on Mental Illness (NAMI), note that the programs can reduce police encounters and arrests of people with mental illness while simultaneously increasing the likelihood that individuals will receive mental

health services.[71-73] Additional goals of CITs include improving police responses to people in crisis; diverting individuals from the criminal justice system when appropriate; and developing more robust community-based crisis-response systems that minimize both the role of law enforcement and the need to utilize emergency departments.[74] A foundational aspect of successful CITs is a strong and ongoing community partnership.[74]

CITs promote both law enforcement officer safety and the safety of the individual in crisis. NAMI notes that CITs give law enforcement officers more tools to do their job safely and effectively and promotes the expansion of CITs nationwide, providing resources and working with stakeholders to establish standards and promote innovation for CITs.[73] While law enforcement agencies have a central role in program development and ongoing operations, a continuum of crisis services available to citizens prior to police involvement is core to the model. SAMHSA notes that for safety and optimal engagement, two person CIT teams should be put in place to support communities and EMS should be aware of the teams and partner as warranted. SAMHSA guides also note minimum expectations for CITs, including the involvement of a licensed and/or credentialed behavioral health clinician, response to where the person in need is located, and connecting the individual to appropriate care, with a warm hand-off and coordinated transportation. SAMHSA guides and CIT International, the leading national organization promoting successful CIT models, detail best practices for CIT services[75,76] and experts have documented and noted challenges for rural communities.[77]

The Denver Support Team Assisted Response program (STAR), which has been operational for six months, is an example of a CIT. STAR pairs a mental health clinician and a paramedic to address low-level incidents, such as trespassing and mental health episodes, that would have otherwise fallen to uniformed law enforcement officers carrying firearms. In its first six months, STAR has responded to 748 incidents, none of which required police or led to arrests or jail time.[78,79]

Officials note that "STAR represents a more empathetic approach to policing that keeps people out of an often-cyclical criminal justice system by connecting people with services like shelter, food aid, counseling, and medication. The program also deliberately cuts down on encounters between uniformed officers and civilians." The STAR policing alternative empowers behavioral health experts to dictate patient interactions, even when police officers are around, and has been hailed as a success in local Denver communities.[78,79] Many communities around the United States are exploring alternatives to incarceration and law enforcement response to minor incidents.

NATIONAL ASSOCIATION POSITIONS

The American Psychiatric Association (APA) released a position statement in 2020 related to ExD and the use of ketamine. APA does not recognize ExD as a mental disorder and states that the term should not be used until a clear set of diagnostic criteria are validated. APA notes that persons being detained by the police and described as having ExD have frequently received medication from EMS personnel intended to chemically sedate them, without a medical condition warranting the use of the drug. The APA statement further cautions that chemical sedation medications, including ketamine, used outside of hospital contexts have significant risks, including respiratory suppression. APA also states that an investigation should be undertaken of cases labeled as ExD, that all relevant data be analyzed for disproportionate application of the term, and that all jurisdictions should develop, implement, and routinely update evidence-based protocols for the administration of chemical restraint medications.[80]

The American College of Emergency Physicians (ACEP) recognizes ExD as a medical condition and notes that the exact pathophysiology of ExD remains unidentified.[11,32,81] In articles on the topic, ACEP representatives note that a large component of treating patients is helping law enforcement and EMS recognize possible ExDS patients, and that prehospital ExDS should be presumed if a patient is disoriented or not making sense, constantly physically active, impervious to pain, has superhuman strength, is sweating and breathing rapidly, has tactile hyperthermia, and fails to respond to a police presence. ACEP experts have also advocated that chemical sedation, with ketamine or benzodiazepines, is a first-line treatment.[32,81]

In a 2020 statement, ACEP and the American Society of Anesthesiologists (ASA) discussed the safe use of ketamine in the emergency department and in prehospital care for effective pain management, sedation, the control of delirium in acute psychotic emergencies and drug intoxications. ACEP and ASA noted the dependence on an appropriate medical assessment by a paramedic with medical direction. The statement notes firm opposition to the use of ketamine or any other sedative/hypnotic agent to chemically incapacitate someone solely for a law enforcement purpose and not for a legitimate medical reason.[82]

The American College of Medical Toxicologists (ACMT) hosts educational information related to ExD and ExDS, including definitions, signs and symptoms, and treatment with chemical support/sedation.[83] In a statement released in 2020, ACMT recognized ExD as a condition that warrants consideration of the decision to administer sedating medications. Based on current evidence, ACMT supports the use of sedative and dissociative medications by appropriately trained prehospital paramedical professionals for treatment of severe agitation when other measures have failed, but ACMT does not support the use of these medications solely for the purpose of behavior control on behalf of law enforcement.[84]

In 2020, ACMT, the American Society of Addiction Medicine (ASAM), and the Opioid Response Network (ORN) co-hosted an Addiction Toxicology Case Conference on the topic of intoxication and ExD.[85] The webinar, for continuing medical education credit, featured "discussion of drug-induced agitated delirium with experts dissecting the mechanism and common course of events that occur in the most severe type of agitated delirium, often referred to as Excited Delirium Syndrome. Myths and misperceptions in care of patients with agitation and delirium [were] addressed, as [was] discussion of the appropriate use of sedation..."[83]

The National Association of EMS Physicians (NAEMSP) recognizes that EMS personnel often encounter agitated and combative patients, and these patients frequently require clinical treatment and transportation. A 2016 statement details the NAEMSP position on a several issues related to patient restraint. Notably, NAEMSP believes that EMS agencies should develop scientific protocols for dealing with violent or combative patients, that EMS agencies must assure that all personnel are knowledgeable about the clinical conditions that are associated with agitated or combative behavior and are trained to apply the principles of the system's restraint protocol during patient care. The NAEMSP position statement provides significant details about restraint protocols, notes the use of chemical restraint for ExD, and that chemical restraint, usually with a butyrophenone, a benzodiazepine, ketamine or other dissociative agents, or a combination of these agents, is an effective and safe method of protecting the violent or combative patient from self-injury. Importantly, the NAEMSP notes that local law enforcement restraint policies/practices may differ from EMS-based restraint protocols, but both agencies should recognize their roles and work cooperatively and proactively to ensure the safe care of patients when application of restraint(s) is necessary.[86]

CONCLUSION

The assessment, diagnosis, and treatment of ExD remains controversial. Despite a lack of scientific evidence, a universally recognized definition, a clear understanding of pathophysiologic mechanisms, or a specific diagnostic test, law enforcement and EMS personnel are taught that ExD is a potentially deadly medical condition – including at time, by physicians. Even deaths attributed to ExD have no consistent anatomical findings, resulting in ExD diagnosis being one of exclusion, defined by epidemiology and the subjective description of a clinical presentation. The individuals most likely to be disproportionately identified as experiencing ExD, and to die from resulting first responder actions, or as a consequence of administration of chemical sedation for a presumed case of ExD, are otherwise healthy Black males in their mid-30s who are viewed as aggressive, impervious to pain, displaying bizarre behavior, and using substances – characterizations that may be based less on evidence and more on generalizations, misconceptions, bias, and racism. Additionally, the identification of ExD has frequently been used in defense cases of law enforcement violence, despite reported autopsy results listing asphyxiation as the cause of death.

While chemical restraint is used in emergency, acute, and psychiatric medical settings to reduce agitation, aggression, or violent behaviors, a rapidly growing movement calls for expanded use of chemical restraint, specifically using ketamine, for several applications, both in and out of the hospital, including for sedation of agitated patients in non-clinical situations and for chemical restraint of persons in law enforcement custody. Police officers and EMS professionals are the most likely first responders to encounter patients perceived to be exhibiting purported ExD. While law enforcement usually evaluates this syndrome, it is usually EMS personnel who provide the sedation, in the "dual response" model.

Reviews of law enforcement agencies and EMS have been called for to evaluate the prevalence of ketamine use in the field in unmonitored individuals and to assess that training and guidelines have been established by supervising medical and behavioral health specialists. Such reviews are appropriate. It is important to assure that de-escalation training be widely implemented, and that personnel are conducting themselves according to guidelines and training to ensure patient safety. New CIT models in which medical and behavioral health specialists, not police, are those first deployed to respond to behavioral emergencies in the community should be encouraged. These models can help assure that decision makers in medical and mental health emergencies who are most appropriate to the circumstances are

present with first responders, and that administration of any pharmacological treatments in a non-hospital setting is done equitably, in an evidence-based, stigma-free way.

RECOMMENDATION

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

1. That the following new AMA policy be adopted:

   Pharmacological Intervention for Agitated Individuals in the Out-of-Hospital Setting

   Our American Medical Association:
   1. Believes that current evidence does not support "excited delirium" or "excited delirium syndrome" as a medical diagnosis and opposes the use of the terms until a clear set of diagnostic criteria are validated;

   2. Recognizes that the treatment of medical emergency conditions outside of a hospital is usually done by a subset of healthcare practitioners who are trained and have expertise as emergency medical service (EMS) practitioners. It is vital that EMS practitioners and systems are overseen by physicians who have specific experience and expertise in providing EMS medical direction;

   3. Is concerned about law enforcement officer use of force accompanying "excited delirium" that leads to disproportionately high mortality among communities of color, particularly among Black men, and denounces "excited delirium" solely as a justification for the use of force by law enforcement officers;

   4. Opposes the use of sedative/hypnotic and dissociative agents, including ketamine, as a pharmacological intervention for agitated individuals in the out-of-hospital setting, when done solely for a law enforcement purpose and not for a legitimate medical reason;

   5. Recognizes that sedative/hypnotic and dissociative pharmacological interventions for agitated individuals used outside of a hospital setting by non-physicians have significant risks intrinsically, in the context of age, underlying medical conditions, and also related to potential drug-drug interactions with agents the individual may have taken;

   6. Calls for comprehensive reviews, performed by independent investigators including appropriate medical and behavioral health professionals, of law enforcement agencies and emergency medical service agencies to:
      a. Investigate any cases labeled as "excited delirium" for disproportionate application of the term, including prevalence of its use by race, ethnicity, gender, age, and other demographic factors;
      b. Evaluate the prevalence of ketamine use in the field in unmonitored individuals;
      c. Assess that comprehensive training and guidelines, including continuous quality improvement processes, have been properly established by supervising EMS medical directors and behavioral health specialists, to:
         i. Require appropriate monitoring of any patient who receives sedative/hypnotic and dissociative pharmacological interventions for treatment in the out-of-hospital setting;
         ii. Ensure proper use of ketamine and other sedative/hypnotic and dissociative pharmacological interventions under defined protocols/guidelines after appropriate education on indications, usage and complications;
         iii. Include an appropriate stepwise approach to the treatment of patients in the out-of-hospital setting, including de-escalation training, that provides safety to the patient and providers
      d. Ensure that appropriate financial support by local and/or state agencies for training and reporting is available; and
      e. Assess, on an ongoing basis, that personnel are conducting themselves according to guidelines and training;

   7. Urges law enforcement and frontline emergency medical service personnel, who are a part of the "dual response" in emergency situations, to participate in appropriate training overseen by EMS medical directors.

The training should minimally include de-escalation techniques and the appropriate use of pharmacological intervention for agitated individuals in the out-of-hospital setting; and

8. Urges medical and behavioral health specialists, not law enforcement, to serve as first responders and decision makers in medical and mental health emergencies in local communities and that administration of any pharmacological treatments in the out-of-hospital setting be done equitably, in an evidence-based, anti-racist, and stigma-free way.

2. That Policy H-65.954, "Policing Reform," which recognizes police brutality as a manifestation of structural racism which disproportionately impacts Black, Indigenous, and other people of color, notes AMA's willingness to work with interested national, state, and local medical societies in a public health effort to support the elimination of excessive use of force by law enforcement officers, states that AMA will advocate against the utilization of racial and discriminatory profiling by law enforcement through appropriate anti-bias training, individual monitoring, and other measures, and will advocate for legislation and regulations which promote trauma-informed, community-based safety practices, be reaffirmed.

3. That Policy H-345.972, "Mental Health Crisis Interventions," which supports jail diversion and community based treatment options for mental illness, implementation of law enforcement-based crisis intervention training programs for assisting those individuals with a mental illness, such as the Crisis Intervention Team model programs, federal funding to encourage increased community and law enforcement participation in crisis intervention training programs, and legislation and federal funding for evidence-based training programs by qualified mental health professionals aimed at educating corrections officers in effectively interacting with people with mental health and other behavioral issues in all detention and correction facilities, be reaffirmed.

REFERENCES

1. Ashley P. What to Know About Daniel Prude's Death. The New York Times. https://www.nytimes.com/2020/09/04/nyregion/rochester-daniel-prude.html. Published September 4, 2020. Updated Oct 9, 1010. Accessed January 4, 2021.
2. Q13 Fox Seattle. Video shows officer take Manuel Ellis to the ground in a chokehold during struggle with police. https://www.q13fox.com/news/video-shows-officer-take-manuel-ellis-to-the-ground-in-a-chokehold-during-struggle-with-police. Published June 17, 2020. Accessed January 4, 2021.
3. Santo A. As George Floyd Died, Officer Wondered About "Excited Delirium". The Marshall Project. https://www.themarshallproject.org/2020/06/04/as-george-floyd-died-officer-wondered-about-excited-delirium. Published June 4, 2020. Accessed January 4, 2021.
4. O'Hare M, Budhu J, Saadi A. Police keep using 'excited delirium' to justify brutality. It's junk science. https://www.washingtonpost.com/outlook/chokehold-police-excited-delirium/2020/07/17/fe907ec8-c6bc-11ea-b037-f9711f89ee46_story.html. Published July 17, 2020. Accessed January 4, 2021.
5. Elijah McClain case: Death after arrest by Colorado police receiving renewed attention. ABC 7 Eyewitness News Colorado. https://abc7.com/elijah-mcclain-mccain-colorado-police-death-aurora/6266195/. Published June 25, 2020. Accessed January 4, 2021.
6. Mannix A. At urging of Minneapolis police, Hennepin EMS workers subdued dozens with a powerful sedative. https://www.startribune.com/at-urging-of-police-hennepin-emts-subdued-dozens-with-powerful-sedative/485607381/. Published June 15, 2018. Accessed February 18, 2021.
7. Bell L. On a form of disease resembling some advanced stages of mania and fever, but so contradistinguished from any ordinary observed or described combination of symptoms as to render it probable that it may be overlooked and hitherto unrecorded malady *Am J Insanity.* 1849(6):97-127.
8. Wetli CV, Fishbain DA. Cocaine-induced psychosis and sudden death in recreational cocaine users. *J Forensic Sci.* 1985;30(3):873-880.
9. Meyer M. Police Call it "Excited Delirium." Civil Rights Groups Call It a Sham. Harvard Civil Rights - Civil Liberties Law Review. https://harvardcrcl.org/police-call-it-excited-delirium-civil-rights-groups-call-it-a-sham/. Published November 15, 2019. Accessed January 4, 2021.
10. Sekhon S, Fischer M, Marwaha R. Excited Delirium. StatPearls. https://www.ncbi.nlm.nih.gov/books/NBK546674/. Published Novermber 29, 2020. Accessed January 4, 2021.
11. Vilke GM, DeBard ML, Chan TC, et al. Excited Delirium Syndrome (ExDS): defining based on a review of the literature. *The Journal of emergency medicine.* 2012;43(5):897-905.
12. Balaban E. How officials use a dubious medical condition to explain stun gun deaths. The Guardian. https://www.theguardian.com/commentisfree/2015/sep/17/dubious-medical-condition-stun-gun-deaths. Published September 17, 2015. Accessed January 4, 2021.
13. Balaban E. Cops and Guards Getting Away With Murder (Taser Edition). ACLU Blog. https://www.aclu.org/blog/prisoners-rights/cops-and-guards-getting-away-murder-taser-edition. Published September 17, 2015. Accessed January 4, 2021.

14. Bidgood J. Virginia Sheriff Releases Video of Effort to Subdue Inmate Who Died. The New York Times. https://www.nytimes.com/2015/09/11/us/virginia-sheriff-releases-video-of-effort-to-subdue-inmate-who-died.html. Published September 10, 2015. Accessed January 4, 2021.
15. Grant JR, Southall PE, Mealey J, Scott SR, Fowler DR. Excited delirium deaths in custody: past and present. *Am J Forensic Med Pathol.* 2009;30(1):1-5.
16. O'Halloran RL, Lewman LV. Restraint asphyxiation in excited delirium. *Am J Forensic Med Pathol.* 1993;14(4):289-295.
17. Pollanen MS, Chiasson DA, Cairns JT, Young JG. Unexpected death related to restraint for excited delirium: a retrospective study of deaths in police custody and in the community. *CMAJ : Canadian Medical Association journal = journal de l'Association medicale canadienne.* 1998;158(12):1603-1607.
18. Council on Science and Public Health. *Use of Tasers by Law Enforcement Agencies.* American Medical Association; June 2009. 6-A-09.
19. Paquette M. Excited delirium: does it exist? *Perspect Psychiatr Care.* 2003;39(3):93-94.
20. Holstege C. Emerging Illicit Drug Trends and Appropriate EMS Management. https://www.vdh.virginia.gov/content/uploads/sites/23/2016/05/MED-1220.pdf. Published 2015. Accessed January 4, 2021.
21. Takeuchi A, Ahern TL, Henderson SO. Excited delirium. *West J Emerg Med.* 2011;12(1):77-83.
22. Byard RW. Ongoing issues with the diagnosis of excited delirium. *Forensic Sci Med Pathol.* 2018;14(2):149-151.
23. Mash DC. Excited Delirium and Sudden Death: A Syndromal Disorder at the Extreme End of the Neuropsychiatric Continuum. *Front Physiol.* 2016;7:435.
24. Gonin P, Beysard N, Yersin B, Carron PN. Excited Delirium: A Systematic Review. *Academic emergency medicine : official journal of the Society for Academic Emergency Medicine.* 2018;25(5):552-565.
25. Baldwin S, Hall C, Blaskovits B, Bennell C, Lawrence C, Semple T. Excited delirium syndrome (ExDS): Situational factors and risks to officer safety in non-fatal use of force encounters. *Int J Law Psychiatry.* 2018;60:26-34.
26. Gill JR. The syndrome of excited delirium. *Forensic Sci Med Pathol.* 2014;10(2):223-228.
27. Siddiqi N, House AO, Holmes JD. Occurrence and outcome of delirium in medical in-patients: a systematic literature review. *Age Ageing.* 2006;35(4):350-364.
28. Fong TG, Tulebaev SR, Inouye SK. Delirium in elderly adults: diagnosis, prevention and treatment. *Nat Rev Neurol.* 2009;5(4):210-220.
29. Substance Abuse and Mental Health Service Administration. Results from the 2018 National Survey on Drug Use and Health: Detailed Tables. Center for Behavioral Health Statistics and Quality. https://www.samhsa.gov/data/sites/default/files/cbhsq-reports/NSDUHDetailedTabs2018R2/NSDUHDetailedTabs2018.pdf. Published June 2020. Accessed January 4, 2021.
30. Ruttenber AJ, Lawler-Heavner J, Yin M, Wetli CV, Hearn WL, Mash DC. Fatal excited delirium following cocaine use: epidemiologic findings provide new evidence for mechanisms of cocaine toxicity. *J Forensic Sci.* 1997;42(1):25-31.
31. Ruttenber AJ, McAnally HB, Wetli CV. Cocaine-associated rhabdomyolysis and excited delirium: different stages of the same syndrome. *Am J Forensic Med Pathol.* 1999;20(2):120-127.
32. Hoffman L. ACEP Recognizes Excited Delirium Syndrome. *Emergency Medicine News.* 2009;31(10).
33. Roach B, Echols K, Burnett A. Excited Delirium and the Dual Response. Law Enforcement Bulletin Provided by FBI Training Division, United States Department of Justice. https://leb.fbi.gov/articles/featured-articles/excited-delirium-and-the-dual-response-preventing-in-custody-deaths. Published July 8, 2014. Accessed January 4, 2021.
34. Ordoobadi A, Kivlehan SM. CE Article: Excited Delirium. EMS World. https://www.emsworld.com/216063/ce-article-excited-delirium. Published 2017. Accessed March 16, 2021.
35. Kitch BB. Out-of-hospital ketamine: review of a growing trend in patient care. *J Am Coll Emerg Physicians Open.* 2020;1(3):183-189.
36. Budhu J, O'Hare M, Saadi A. How "excited delirium" is misused to justify police brutality. Brookings Blog Web site. https://www.brookings.edu/blog/how-we-rise/2020/08/10/how-excited-delirium-is-misused-to-justify-police-brutality/. Published August 10, 2020. Accessed March 15, 2021.
37. Scaggs TR, Glass DM, Hutchcraft MG, Weir WB. Prehospital Ketamine is a Safe and Effective Treatment for Excited Delirium in a Community Hospital Based EMS System. *Prehosp Disaster Med.* 2016;31(5):563-569.
38. Burnett AM, Peterson BK, Stellpflug SJ, et al. The association between ketamine given for prehospital chemical restraint with intubation and hospital admission. *Am J Emerg Med.* 2015;33(1):76-79.
39. Linder LM, Ross CA, Weant KA. Ketamine for the Acute Management of Excited Delirium and Agitation in the Prehospital Setting. *Pharmacotherapy.* 2018;38(1):139-151.
40. Scheppke KA, Braghiroli J, Shalaby M, Chait R. Prehospital use of i.m. ketamine for sedation of violent and agitated patients. *West J Emerg Med.* 2014;15(7):736-741.
41. Grant JR, Southall PE, Fowler DR, Mealey J, Thomas EJ, Kinlock TW. Death in custody: a historical analysis. *J Forensic Sci.* 2007;52(5):1177-1181.
42. Hall CA, Kader AS, Danielle McHale AM, Stewart L, Fick GH, Vilke GM. Frequency of signs of excited delirium syndrome in subjects undergoing police use of force: Descriptive evaluation of a prospective, consecutive cohort. *J Forensic Leg Med.* 2013;20(2):102-107.
43. Ross DL. Factors associated with excited delirium deaths in police custody. *Mod Pathol.* 1998;11(11):1127-1137.
44. Strömmer EMF, Leith W, Zeegers MP, Freeman MD. The role of restraint in fatal excited delirium: a research synthesis and pooled analysis. *Forensic Sci Med Pathol.* 2020;16(4):680-692.

45. Isbister GK, Calver LA, Page CB, Stokes B, Bryant JL, Downes MA. Randomized controlled trial of intramuscular droperidol versus midazolam for violence and acute behavioral disturbance: the DORM study. *Annals of emergency medicine.* 2010;56(4):392-401.e391.
46. Macht M, Mull AC, McVaney KE, et al. Comparison of droperidol and haloperidol for use by paramedics: assessment of safety and effectiveness. *Prehosp Emerg Care.* 2014;18(3):375-380.
47. Martel M, Sterzinger A, Miner J, Clinton J, Biros M. Management of acute undifferentiated agitation in the emergency department: a randomized double-blind trial of droperidol, ziprasidone, and midazolam. *Academic emergency medicine : official journal of the Society for Academic Emergency Medicine.* 2005;12(12):1167-1172.
48. Cole JB, Moore JC, Nystrom PC, et al. A prospective study of ketamine versus haloperidol for severe prehospital agitation. *Clinical toxicology (Philadelphia, Pa).* 2016;54(7):556-562.
49. Wilson MP, MacDonald K, Vilke GM, Feifel D. A comparison of the safety of olanzapine and haloperidol in combination with benzodiazepines in emergency department patients with acute agitation. *The Journal of emergency medicine.* 2012;43(5):790-797.
50. Muir-Cochrane E, Oster C, Gerace A, Dawson S, Damarell R, Grimmer K. The effectiveness of chemical restraint in managing acute agitation and aggression: A systematic review of randomized controlled trials. *Int J Ment Health Nurs.* 2020;29(2):110-126.
51. Olives TD, Nystrom PC, Cole JB, Dodd KW, Ho JD. Intubation of Profoundly Agitated Patients Treated with Prehospital Ketamine. *Prehosp Disaster Med.* 2016;31(6):593-602.
52. Buckland DM, Crowe RP, Cash RE, et al. Ketamine in the Prehospital Environment: A National Survey of Paramedics in the United States. *Prehosp Disaster Med.* 2018;33(1):23-28.
53. Ho JD, Smith SW, Nystrom PC, et al. Successful management of excited delirium syndrome with prehospital ketamine: two case examples. *Prehosp Emerg Care.* 2013;17(2):274-279.
54. Mankowitz SL, Regenberg P, Kaldan J, Cole JB. Ketamine for Rapid Sedation of Agitated Patients in the Prehospital and Emergency Department Settings: A Systematic Review and Proportional Meta-Analysis. *The Journal of emergency medicine.* 2018;55(5):670-681.
55. Mo H, Campbell MJ, Fertel BS, et al. Ketamine Safety and Use in the Emergency Department for Pain and Agitation/Delirium: A Health System Experience. *West J Emerg Med.* 2020;21(2):272-281.
56. Hopper AB, Vilke GM, Castillo EM, Campillo A, Davie T, Wilson MP. Ketamine use for acute agitation in the emergency department. *The Journal of emergency medicine.* 2015;48(6):712-719.
57. City of Minneapolis. MPD Involvement in Pre-Hospital Sedation. http://www2.minneapolismn.gov/www/groups/public/@civilrights/documents/webcontent/wcmsp-212775.pdf. Published July 26, 2018. Accessed January 4, 2021.
58. Smith J, Costello M, Villasenor R. Investigation Report and Recommendations: City of Aurora Colorado, Pursuant to a City Council Resolution Approved July 20, 2020. https://www.auroragov.org/UserFiles/Servers/Server_1881137/File/News%20Items/Investigation%20Report%20and%20Recommendations%20(FINAL).pdf. Published February 22, 2021. Accessed February 23, 2021.
59. Strote J, Walsh M, Auerbach D, Burns T, Maher P. Medical conditions and restraint in patients experiencing excited delirium. *Am J Emerg Med.* 2014;32(9):1093-1096.
60. Sullivan N, Chen C, Siegel R, et al. Ketamine for emergency sedation of agitated patients: A systematic review and meta-analysis. *Am J Emerg Med.* 2020;38(3):655-661.
61. Zanos P, Moaddel R, Morris PJ, et al. Ketamine and Ketamine Metabolite Pharmacology: Insights into Therapeutic Mechanisms. *Pharmacological reviews.* 2018;70(3):621-660.
62. Riddell J, Tran A, Bengiamin R, Hendey GW, Armenian P. Ketamine as a first-line treatment for severely agitated emergency department patients. *Am J Emerg Med.* 2017;35(7):1000-1004.
63. Kunz SN, Þórðardóttir S, Jónasson JG. Arrest-related death on the basis of a drug-induced excited delirium syndrome. *J Forensic Leg Med.* 2020;77:102091.
64. Otahbachi M, Cevik C, Bagdure S, Nugent K. Excited delirium, restraints, and unexpected death: a review of pathogenesis. *Am J Forensic Med Pathol.* 2010;31(2):107-112.
65. O'Connor L, Rebesco M, Robinson C, et al. Outcomes of Prehospital Chemical Sedation With Ketamine Versus Haloperidol and Benzodiazepine or Physical Restraint Only. *Prehosp Emerg Care.* 2019;23(2):201-209.
66. Parks DJ, Alter SM, Shih RD, Solano JJ, Hughes PG, Clayton LM. Rescue Intubation in the Emergency Department After Prehospital Ketamine Administration for Agitation. *Prehosp Disaster Med.* 2020;35(6):651-655.
67. Allam S, Noble JS. Cocaine-excited delirium and severe acidosis. *Anaesthesia.* 2001;56(4):385-386.
68. Steenblock D. Treatment of Behavior Disturbances with Ketamine in a Patient Diagnosed with Major Neurocognitive Disorder. *Am J Geriatr Psychiatry.* 2018;26(6):711-714.
69. Stratton SJ, Rogers C, Brickett K, Gruzinski G. Factors associated with sudden death of individuals requiring restraint for excited delirium. *Am J Emerg Med.* 2001;19(3):187-191.
70. Substance Abuse and Mental Health Service Administration. Crisis Intervention Team (CIT) Methods for Using Data to Inform Practice: A Step-by-Step Guide. https://store.samhsa.gov/sites/default/files/d7/priv/sma18-5065.pdf. Published 2018. Accessed March 30, 2021.
71. Franz S, Borum R. Crisis Intervention Teams may prevent arrests of people with mental illnesses. *Police Practice and Research.* 2011;12(3):265-272.
72. Broner N, Lattimore PK, Cowell AJ, Schlenger WE. Effects of diversion on adults with co-occurring mental illness and substance use: outcomes from a national multi-site study. *Behav Sci Law.* 2004;22(4):519-541.

73. National Alliance on Mental Illness. Crisis Intervention Team (CIT) Programs. https://nami.org/Advocacy/Crisis-Intervention/Crisis-Intervention-Team-(CIT)-Programs. Published 2021. AccessedMarch 30, 2021.
74. Watson AC, Compton MT. What Research on Crisis Intervention Teams Tells Us and What We Need To Ask. *Journal of the American Academy of Psychiatry and the Law Online.* 2019:JAAPL.003894-003819.
75. Substance Abuse and Mental Health Service Administration. National Guidelines for Behavioral Health Crisis Care Best Practice Toolkit. https://www.samhsa.gov/sites/default/files/national-guidelines-for-behavioral-health-crisis-care-02242020.pdf. Published 2020. Accessed March 30, 2021.
76. CIT International. CIT International's Guide to Best Practices in Mental Health Crisis Response. https://www.citinternational.org/bestpracticeguide. Published 2021. Accessed March 30, 2021.
77. Bratina MP, Carsello JA, Carrero KM, Antonio ME. An Examination of Crisis Intervention Teams in Rural Jurisdictions. *Community Ment Health J.* 2021.
78. Sachs D. In the first six months of health care professionals replacing police officers, no one they encountered was arrested. Denverite. https://denverite.com/2021/02/02/in-the-first-six-months-of-health-care-professionals-replacing-police-officers-no-one-they-encountered-was-arrested/. Published February 2, 2021. Accessed March 30, 2021.
79. STAR PRogram Evaluation. https://wp-denverite.s3.amazonaws.com/wp-content/uploads/sites/4/2021/02/STAR_Pilot_6_Month_Evaluation_FINAL-REPORT.pdf. Published 2021. Accessed March 30, 2021.
80. American Psychiatric Association. *Position Statement on Concerns About Use of the Term "Excited Delirium" and Appropriate Medical Management in Out-of-Hospital Contexts.* November 2020.
81. ACEP Excited Delirium Task Force. White Paper Report on Excited Delirium Syndrome. https://www.acep.org/globalassets/uploads/uploaded-files/acep/clinical-and-practice-management/ems-and-disaster-preparedness/ems-resources/acep-excited-delirium-white-paper-final-form.pdf. Published September 10, 2009. Accessed March 18, 2021.
82. American Society of Anesthesiologists and American College of Emergency Physicians. ASA/ACEP Joint Statement on the Safe Use of Ketamine in Prehospital Care. https://www.asahq.org/about-asa/newsroom/news-releases/2020/08/asa-acep-joint-statement-on-the-safe-use-of-ketamine-in-prehospital-care. Published 2020. Accessed January 4, 2021.
83. American College of Medical Toxicology. Case Summary: Walking a Tightrope – Intoxication and Agitated Delirium FAQs. https://www.acmt.net/October_2020_FAQ.html. Published 2020. Accessed January 4, 2021.
84. American College of Medical Toxicology. ACMT Statement on Ketamine Sedation and Law Enforcement. https://www.acmt.net/cgi/page.cgi/_zine.html/The_ACMT_Connection/Statement_on_Ketamine_Sedation_and_Law_Enforcement. Published 2020. Accessed March 16, 2021, 2021.
85. American College of Medical Toxicology. Addiction Toxicology Case Conference, October 2. https://www.acmt.net/_Library/2020_Webinar/ACMT-ASAM-ORN_Addiction_Tox_Presentation_Slides_10_02_2020.pdf. Published 2020. Accessed January 4, 2021, 2020.
86. The National Association of EMS Physicians. Patient Restraint in Emergency Medical Services https://naemsp.org/NAEMSP/media/NAEMSP-Documents/Restraint-position-statement-Approved-Version-for-PEC.pdf. Published 2016. Accessed March 16, 2021.

3. ADDRESSING INCREASES IN YOUTH SUICIDE

Reference committee hearing: see report of Reference Committee D.

HOUSE ACTION: RECOMMENDATIONS ADOPTED AS FOLLOWS
ADDITIONAL PROPOSED RECOMMENDATION REFERRED FOR DECISION
REMAINDER OF REPORT FILED
See Policies H-60.937, H-145.975, H-170.984 and, H-515.952

INTRODUCTION

In the United States, suicide is the 10th overall leading cause of death. Suicides are a preventable cause of death and have devastating effects on families and communities. Suicides and suicide attempts among youth, ages 10-24 have increased steadily since 2007. Data shows that although suicides remained relatively stable in this age group from 2000 to 2007, rates started to rise in 2007 and increased 54.7 percent through 2018.[1] While we do not yet know the full impact of the COVID-19 pandemic on youth suicide, the potential mental health consequences of COVID-related stressors are of concern. As a result of the steady increase in youth suicides, the Council on Science and Public Health initiated this report to understand current risk and protective factors, examine evidence-based interventions for youth and young adult suicide, and to update American Medical Association (AMA) policy accordingly.

The focus of this report will be on children, adolescents, and young adults age 10-24, hereinafter referred to in this report as youth. Data and trends in suicide in populations beyond this age group, while important, are outside the scope of this report.

METHODS

English-language articles were selected from a search of the PubMed database through January of 2021 using the search terms "teen," "youth," and "adolescent," coupled with "suicide," "suicide contagion," "suicidal ideation," "and "suicidal thoughts and behavior." Related search terms linked with the above were "mental health," "substance use," "trauma," "ACEs," "LGBTQ," and "bullying." Additional articles were identified from a review of the references cited in retrieved publications. Searches of selected medical specialty society and international, national, and local government agency websites were conducted to identify clinical guidelines, position statements, and reports.

Much of the literature reviewed for this report uses the term "suicidal thoughts and behavior" or "STB" as shorthand to describe suicidal thoughts, ideation, planning, and suicide attempts. Non-suicidal self-injury (NSSI) is differentiated in the literature in the United States whereas in Europe it might be included as an STB. For the purposes of this report, the abbreviation STB will be used to mean suicidal thoughts, suicidal ideation and planning, and suicide attempts.

BACKGROUND

Addressing youth suicide is a critical and growing public health issue. Suicides in the United States rose since 2000, increasing 30 percent from 2000 to 2016, with rates increasing among all age groups in the 10-24 range and across 42 states. Rates of suicide in the 10-24 age group have risen 57.4 percent from 6.8 per 100,000 in 2007 to 10.7 per 100,000 in 2018. In 2017 approximately 2.4 percent of all students in grades 9-12 reported making a suicide attempt that required treatment by a physician or nurse.[3] Suicide was the second-leading cause of death for young people ages 15 to 24, second only to accidents in 2019.[2] While more recent data suggest there was a modest decrease in youth suicide in 2018 and 2019, overall levels of suicide among youth are still significantly higher than they were ten years before. And since 2019 stress on youth as well as adults has increased in the wake of the disruption associated with the COVID-19 pandemic, such as physical distancing and social isolation[1,2,4,5]

Total mortality of youth from suicide in 2017 was 6,200 deaths in those age 10-24, with that number rising to 6,807 in 2018.[6] Centers for Disease Control and Prevention (CDC) Youth Risk Behavior Surveillance Survey (YRBSS) data from 2019 show that more high school students were contemplating suicide, rising from 13.8 percent in 2009 to 18.8 percent in 2019.[7] Of all high school students in 2019, 8.9 percent reported having attempted suicide, with prevalence estimates highest among females (11.0 percent) and black non-Hispanic students (11.8 percent).[3] Completed suicides are more common in males at rates two to four times higher than females, but suicide attempts are 3-9 times more common in females overall.[8,9] From 2009 through 2019, prevalence of suicide attempts increased overall and particularly increased among female, non-Hispanic white, non-Hispanic black, and 12th-grade students.[7,10]

STB varies by race and ethnicity among youth. Native American Indian/Alaska Natives have had the highest suicide rate over the last 20 years. While suicide rates have historically been higher among White individuals than Black individuals, data suggests that suicide risk is increasing among Black youth. One study showed higher incidence of STB for Black youth in the 5-12 age group than White counterparts.[11] There is data showing overall increase in the rate of STB among Black youth age 12-17 through the period of 1991-2017, while rates for STB among White youth in that age group have decreased.[10] Rates of STB in Hispanic/Latinx female young adults also increased between 2000 and 2015.[12,13] In addition, sexual and gender minority youth are more likely to engage in suicidal behavior than their non-LGBTQ peers. It is important to understand the impact of structural racism, historical trauma, and accumulative stress on mental health in minority and historically marginalized communities, may contribute to depression and other risk factors for STB.[14-16]

In 2019 firearms were the leading cause of suicide death in those age 15-24 and the second leading cause of suicide death for those in the 10-14 age group. Suffocation is the other leading cause of suicide death among those 10-24. Firearms as a means of suicide have trended upward for young females and deaths from poisonings have decreased.[2,5] In 2018, the Council on Science and Public Health released a report adopted by the House of Delegates on "The Physician's Role in Firearm Safety and recognized the role of firearms in suicides and encouraged physicians, as a part of their suicide prevention strategy, to discuss lethal means safety and work with families to reduce access to lethal means of suicide.[17]

CURRENT AMA POLICY

Highlights of AMA policy related to youth suicide include recognizing teen and young adult suicide as a serious health concern Policy H-60.937, "Teen and Young Adult Suicide in the United States." Policy D-350.988, "American Indian / Alaska Native Teen Suicide" encourages significant funding for suicide prevention and intervention directed toward American Indian/Alaska Native communities. Policy H-60.927, "Reducing Suicide Risk Among Lesbian, Gay, Bisexual, Transgender, and Questioning Youth Through Collaboration with Allied Organizations," also recognizes the special risk for LGBTQ+ teens and calls for partnering with public and private organizations to help reduce suicide among these teens. Policy H-515.952, "Adverse Childhood Experiences and Trauma-Informed Care," recognizes the importance of trauma-informed care and the impact of adverse childhood experiences (ACEs) and trauma on patient health.

Policy H-60.911 "Harmful Effects of Screen Time in Children" encourages physicians to "assess pediatric patients and educate parents about amount of screen time, physical activity and sleep habits" and to advocate for education in schools about balancing screen time, physical activity, and sleep. Policy H-515.959 "Reduction of Online Bullying" addresses this urging social networking platforms to" define and prohibit electronic aggression, which may include any type of harassment or bullying, including but not limited to that occurring through e-mail, chat room, instant messaging, website (including blogs) or text messaging" as part of their Terms of Service agreements. In addition, Policy H-60.943 "Bullying Behaviors Among Children and Adolescents" addresses bullying in several ways, including urging physicians to be aware of the signs and symptoms of bullying in children and teens, to recognize the mental, emotional and physician effects of bullying and to counsel patients and parents on effective interventions and coping strategies.

RISK FACTORS FOR YOUTH SUICIDE

Various behavioral, emotional, psychological, and social risk factors for youth suicide have been well established, and include depression, anxiety, bullying, substance use disorder (SUD), trauma, family history of suicide, sexual orientation or sexual and gender minority status and other stressors.[18,19] Prior suicide attempts are one of the most serious indicators of risk for subsequent self-harm and suicidal behavior.[20] Over 30 percent of youth suicides are preceded by a prior attempt, with boys with previous suicide attempts having a 30-fold increase for risk of a subsequent attempt in comparison with boys with no prior attempts. Girls with previous suicide attempts show a 3-fold increase in risk for subsequent attempts in comparison to girls with no prior attempts.[8] The presence of multiple factors increases underlying risk. Prevention starts with a thorough understanding of risk factors. Identifying risk factors is essential but does not provide the ability to predict acute suicidality effectively and accurately. Underlying risk factors can exist for years without producing active suicidality and imminent risk of suicide, and no one risk factor alone can be an absolute predictor.[18,19,21]

Role of Mental Health Disorders

Suicide is closely linked to mental health disorders, mainly depression and other mood disorders.[22,23] Among all age groups, approximately 90 percent of people who complete a suicide have had at least one mental health disorder.[24] Risk is significantly increased for acute suicidality when there are psychotic symptoms and when there are family members who have mental health or SUD issues.[25,26]

Data shows that depression in youth has been on the rise from 2005 to 2019. The 2019 National Survey on Drug Use and Health (NSDUH) indicates that among teens aged 12-17, rates of major depressive disorder increased 52 percent during the period between 2005 and 2017, and an increase of 63 percent was seen in young adults aged 18-25. Those trends were also accompanied by increases in reports of serious psychological distress and suicide related outcomes (STB and suicide mortality) with a dramatic increase of 71 percent for those aged 18-25.[27] More recent statistics show that reports of suicidal ideation, planning, persistent feelings of hopelessness and sadness in high school students rose consistently from 2009 to 2019. More high school aged teens were injured in a suicide attempt during that period as well.[7] Other trends from 2009 to 2019 include the rise of electronic devices and digital media as well as declines in sleep which may be contributors to depression and other mood disorders.[27] Lack of availability of mental health services is also a concern. Youth who live in urban and suburban areas have been shown to have greater access to mental health resources than teens who live in rural areas.[28] When mental health disorders are not properly addressed, the risk for suicide can increase dramatically.[19,29]

Substance Use Disorder

Substance use is a major predictor of STB in youth.[30,31] Studies have shown that youth who used substances (tobacco, alcohol, cannabis, MDMA, ketamine) exhibit more suicidal behavior. In general, historically, boys exhibit more serious substance use, for example, using alcohol and drugs in larger quantities, with more frequency, and starting at an earlier age than girls. The association between substance use and suicidal behavior, however, is consistent between males and females.[30]

Adverse Childhood Experiences (ACEs)

ACEs, including physical, mental, and sexual abuse, physical and emotional neglect, and household dysfunctions such as family mental illness, violence, incarceration, substance use, and divorce, are well documented risk factors for suicide and according to the CDC, are associated with at least five of the ten leading causes of death overall. The higher the number of ACEs experienced, the greater the risk for suicide, and for youth, the risk is greater than in adults. A 2001 study found that an ACE score of 7 or more increased the risk of suicide attempts 51-fold among youth and 30-fold among adults. The study also found that between various forms of abuse, emotional abuse in childhood was the greatest predictor of future suicide attempts and the least addressed by traditional child welfare systems. ACEs increase risk for suicide as well as negative opioid-related outcomes, including overdose. These risk factors due to ACEs are preventable and require urgent attention.[32-34]

COVID-19 Pandemic

The COVID-19 pandemic has impacted youth STB and mental health. According to CDC data, from April 2020, the proportion of youth mental health-related emergency department (ED) visits increased and remained elevated through October of 2020. Compared with 2019, the proportion of mental health-related visits for youth aged 12-17 years increased approximately 31 percent. Studies have also identified increased rates of suicide ideation and suicide attempts in 2020 during the COVID-19 pandemic as compared with 2019 rates. The increases correspond to times when COVID-related stressors and community responses were heightened. This increase was seen across demographics in the 11-21 age group and based on routine suicide risk screens in a pediatric ED setting.[35,36]

Stigma

Ample evidence exists related to the negative impact of stigma on mental health. Youth learn stigmatizing attitudes from many sources including parents, peers, and media and start to concretize their attitudes in adolescence. Recognition of mental health stigma as a barrier to care for youth is essential for targeted suicide prevention efforts. In addition, myths around suicide contribute to stigma. Characterization of people who experience STB as “weak” or “cowardly” perpetuate stigma and can inhibit youth from asking for help.[37-39]

Increased Screen Time and Use of Digital Devices Linked to Depression

The increased use of digital devices and social media can be linked to increases in mental health symptoms, including depression, among youth grades 8-12. Use of social media and digital devices also have an association with increases in youth suicides from 2010 to 2015. A review of several studies on social media/internet use and suicide attempts found consistent associations between heavy internet/social media use and suicide attempts of those under the age of 19.[40] Depressive symptoms, which have a strong correlation with STB, increased together with screen time and social media use. Moreover, youth who spent less time onscreen and on smartphones and more time on non-screen activities (in person visiting, sports, religious activities, reading) reported fewer depression symptoms and suicidal thoughts.[40,41]

Bullying and Cyberbullying

Although cyberbullying is a new area of research, several investigators report associations with both emotional and physical variables, including loneliness, anxiety, depression, suicidal ideation, and somatic symptoms. Also linked to cyberbullying is an increased risk of STB and self-harm for victims, and an increased risk of STB for perpetrators.[42-45]

The effects of bullying can be magnified and intensified by youths’ access to social media, where the typical number of peers in a school and community circle is now expanded to any youth who has access to the internet and social

networking sites. Several examples of tragic stories exist in the media of cases where victims experienced repeated instances of bullying that that were widely spread over the internet and social media. Teens left behind messages indicating they felt hopeless that the bullying would stop.[46]

A 2013 review of resources for cyberbullying examined interventions and prevention strategies acknowledge that many resources have been developed, but that there must be more research to determine effectiveness and how best to tailor programs to various school settings.[47] An online cyberbullying information clearinghouse, The Cyberbullying Research Center, provides guides to state laws on cyberbullying, research, and resources for parents, educators, youth and health care providers on addressing cyberbullying.[48]

Suicide Contagion/Clusters

Suicide clusters consist of episodes of multiple suicides that are greater than what would be typical in a specific location, many times in quick succession, and are more common in young people (<25 years) than adults. Approximately 1-5 percent of youth suicides occur in a cluster after a youth dies by suicide. Suicide contagion, which is triggered by exposure to a death by suicide, can increase the risk of suicide in another and has been shown to be a significant factor in youth STB.[49] The colloquial term often used for this phenomenon is "copy-cat suicide." Suicide contagion can result from direct exposure such as a suicide of a family member, friend, or classmate or indirect exposure through media or online reports. Youth are especially sensitive to peers' thoughts and expressions and may be more impacted by media reporting on suicide, suicide clusters, and exposure to a suicidal peer. A study showing a 28.9 percent spike in youth (ages 10-17) suicide across the United States in the months following the release of the fictional Netflix series "13 Reasons Why," is an example of the influence of media; the show follows a fictional character who ultimately dies by suicide.[50]

Media depictions or social networking posts that romanticize youth suicide may result in suicide contagion and clusters.[51-56] Guidelines for the media on responsible reporting on suicides for media are available including a collaboratively produced guide called "Recommendations for Suicide Reporting" and the International Association for Suicide Prevention's (IASP) guide "Preventing Suicide: A Resource for Media Professionals" outlining numerous "dos and don'ts" for media in reporting on suicide. Among the points of guidance are not using language which sensationalizes or normalizes suicide; not presenting suicide as a constructive solution to problems; avoiding explicit descriptions of the method(s) used in a completed suicide; and using sensitivity when interviewing family and friends of suicide victims.[57,58]

Developmental Characteristics of Adolescence That Increase Vulnerability

Impulsivity in young people is typical and has been shown to be a factor in their vulnerability to suicidal impulses. Research has found that emotion-relevant impulsivity as well as poor control over emotional reactions are more prevalent in adolescence. A type of emotion-relevant impulsivity, negative urgency, which is a strong and immediate need to avoid unpleasant emotions or physical sensations, is a distinct form of impulsivity and is a strong predictor of problem behaviors and STB.[59] Underdevelopment of the prefrontal areas of the brain and discordant development in the prefrontal and limbic systems are thought to be linked to teen risk taking and impulsivity. The drive to reward seeking without effective inhibitory controls results in a variety of negative outcomes driven by impulsive behaviors, including STB.[60,61]

PROTECTIVE FACTORS

Enhancing resiliency and identifying protective factors are important ways to mitigate risks for youth suicide. Protective factors include connectedness to supports such as peers, family, community and social institutions, life skills, coping skills access to behavioral and mental health care, and cultural, religious, or personal beliefs that discourage suicide. There are many resources on ways to enhance resiliency in youth that help mitigate suicide risk including developing a positive identify, and age-appropriate empowerment. The Interagency Working Group on Youth Programs composed of representatives from 21 Federal agencies, has a multitude of web-based resources designed to support positive youth development.[62-64]

PREVENTION

School Based Suicide Prevention Programs

School based suicide prevention programs fall generally into several categories; suicide awareness and prevention trainings for school personnel, universal suicide prevention curriculum for all students, and targeted or selected interventions for students who are identified as at risk.

Reviews of research in these areas show that there are some benefits in all these approaches, but there is wide variability in methodology and outcome measurements. Research shows that effectiveness of school-based programs has not been well established yet in terms of impact on primary outcomes (numbers of suicides). More recent reviews of studies on school-based programs literature calls for continued and better research to determine which interventions or which combination of interventions are most effective in preventing suicides.[65,66]

Screening

The U.S. Preventive Services Task Force (USPSTF) examined the evidence to determine whether asymptomatic youth should be screened for suicide risk in their 2013 report and found the evidence to clearly establish risks and benefits to be insufficient.[67] However, the USPSTF does recommend that primary care clinicians screen youth for depression when appropriate systems are in place to ensure adequate diagnosis, treatment, and follow-up. USPSTF also recommends primary care clinicians provide increased focus for their patients during periods of high suicide risk, such as immediately after discharge from a psychiatric hospital or after an emergency department visit for deliberate self-harm. Recent evidence suggests that interventions during these high-risk periods are effective in reducing suicide deaths.[68-70] Experts in youth suicide prevention note that effective screening can be a simple conversation beginning with the question: "Are you OK?"[69]

Currently, there is no recommendation from the American College of Emergency Physicians to institute widespread screening for suicide in Emergency Departments (ED). Some evidence notes that EDs are an ideal place for expanding screening since many youths visit an ED at some point during adolescence. A study using a computerized screening tool, the Computerized Adaptive Screen for Suicidal Youth (CASSY), designed for teens aged 12-17 having an ED visit, accurately predicted a suicide attempt within a three-month period following the ED visit.[71]

The Joint Commission

The Joint Commission has developed seven new and revised elements of performance in accreditation surveys applicable to hospitals, behavioral health care organizations, and accredited critical access hospitals. These new elements are designed to "improve the quality and safety of care for those who are being treated for behavioral health conditions and those who are identified as high risk for suicide." The revised elements involve environmental risk assessment, use of validated screening tools, evidence-based screening for suicide risk, documentation of overall risk for suicide and mitigation plans, written policies (staff training, reassessment, monitoring high-risk individuals), follow up care, and monitoring whether procedures are effective. It is important to note however, that the new elements of performance for accreditation surveys do not explicitly require that all patients in hospital settings be screened. Despite the allowance for selective screening, some hospital care settings have instituted universal screening of patients and the feasibility of this is an ongoing debate. Other accrediting bodies, specifically the Council on Accreditation (COA) and Commission on Accreditation of Rehabilitation Facilities (CARF), have also made changes to their standards for facilities related to suicide prevention. The movement in this direction will eventually require some adaptation in health care facilities to these new elements.[72]

The Joint Commission recommends several evidence-based screening tools for assessing suicide risk in accredited organizations. They include the Columbia Suicide Severity Rating (C-SSR), the Ask Suicide-Screening Questions (ASQ), and the Suicide Behaviors Questionnaire-Revised (SBQ-R). The Patient Health Questionnaire (PHQ-9) is also recommended as a depression screening tool and scale to determine severity. [73,74]

Targeted Prevention Efforts

Statistics note that special attention to targeted prevention efforts could be important for sub-populations of youth that are showing higher risk than others for STB. This includes Native American and Native Alaskan males, Black youth,

LGBTQ+ teens, and Latina youth. The National Suicide Prevention Lifeline website devotes a page to resources for Native American and Alaskan populations. All these youth sub-populations could benefit from targeted prevention efforts that are culturally sensitive and community based.[75-77]

INTERVENTIONS

Access to Mental Health Care

Reportedly, less than half of young people who have died by suicide had received psychiatric care. Increased access to mental health services is needed in addition to community supports, peer supports, school-based programs, college counseling services and social services designed to prevent youth and young adult suicide.[23] Substance Abuse and Mental Health Services Administration (SAMHSA) has developed a suicide prevention resource list of guides, crisis lines, and prevention programs for children and youth.[78]

Medications

Medications used to treat mental health conditions can alleviate symptoms and hopefully mitigate risk of STB. Evidence exists that treatment with antidepressants can result in lower suicide rates overall.[79,80] Evidence is also available that indicates lithium and clozapine can directly lower suicidal behavior, however the use of these medications is limited because of the time needed to reach therapeutic levels and the narrow therapeutic index of each of these agents. Anxiolytics, sedative-hypnotics, and some antipsychotic medications can be utilized to decrease agitation, anxiety, distress, insomnia, and other symptoms of psychological distress in an acute situation.[79,81]

An esketamine nasal spray for depression was recently approved by the US Food and Drug Administration (FDA) for use in adult patients who are contemplating suicide and shows promise for relieving acute suicidality and rapidly improving depressive symptoms. Esketamine can relieve symptoms within 24 hours, as opposed to typical antidepressants which can take up to 3-4 weeks to relieve symptoms. This medication is approved for use in adults only. The American Academy of Child and Adolescent Psychiatry (AACAP) has made a statement reiterating that it is not approved by the FDA for use in pediatric patients and cautioning physicians about off-label use.[82-84] Recently, the National Institute of Mental Health (NIMH), released a research update stating that they are supporting multiple new research projects on ketamine and esketamine as well as transcranial magnetic stimulation (TMS) for safety, efficacy and feasibility in youth and young adults who are acutely suicidal. TMS uses magnets to stimulate specific parts of the brain. Both these interventions could produce rapid decrease in severe suicidal thoughts and feelings.[85]

Specific Psychotherapies

Among psychotherapeutic models, cognitive behavioral therapy (CBT) has the most evidence of effectiveness in youth and adults for a variety of disorders, particularly anxiety and depression.[86] Internet based CBT (iCBT) has also been studied and consistently shows some efficacy in reducing suicide attempts. iCBT has also shown some efficacy in reducing both SUD and STB in youth and is potentially a highly scalable intervention.[87,88] Additionally, YST-II, a social support program, shows promise in reducing suicidal ideation in youth following a suicide attempt.[89] A 2018 report of two independent trials on Dialectical Behavioral Therapy (DBT), showed promise for effectiveness with youth experiencing STB.[90] More research is needed to fully understand the utility of psychotherapies.

FEDERAL EFFORTS TO REDUCE YOUTH SUICIDE

US Department of Health and Human Services

Office of the Surgeon General. Efforts to prevent adult and youth suicide at the federal level in the United States have been led by the U.S. Surgeon General going back to 2001. The National Strategy for Suicide Prevention (NSSP) was the first organized and comprehensive effort on suicide prevention, with the latest revision done in 2012. The NSSP contains four strategic directions that each include a set of goals and objectives: (1) Create supportive environments that promote healthy and empowered individuals, families, and communities (4 goals, 16 objectives); (2) Enhance clinical and community preventive services (3 goals, 12 objectives); (3) Promote the availability of timely treatment and support services (3 goals, 20 objectives); and (4) Improve suicide prevention surveillance collection, research, and evaluation (3 goals, 12 objectives). The NSSP's four strategic directions are meant to work together in a synergistic way to prevent suicide in the nation.

In January of 2021, the Surgeon General released a "Call to Action to Implement the National Strategy for Suicide Prevention," an effort to broaden perceptions of suicide, who is affected, and recognition of the environmental factors as well as individual factors related to suicide risk.[91,92]

SAMHSA. The National Suicide Prevention Lifeline has been in operation since 2005 and is funded by SAMHSA in partnership with the National Action Alliance for Suicide Prevention (Action Alliance[93]), The National Suicide Prevention Lifeline is a network of over 160 independently operated crisis call centers nationwide that are linked to a series of toll-free numbers, the most prominent of which is 800-273-TALK. In July 2020, the Federal Communications Commission (FCC) designated the three-digit number 988 for the National Suicide Prevention Lifeline to aid rapid access to suicide prevention and mental health services.[75,93]

Additionally, SAMHSA recently released an evidence-based guide, "Treatment for Suicidal Ideation, Self-Harm, and Suicide Attempts Among Youth." This guide is targeted to healthcare professionals and a broad range of stakeholders and details the strategies for addressing suicidal ideation, self-harm, and suicide attempts among youth. The guide highlights psychotherapeutic models that have shown evidence of effectiveness in reducing one or more of the outcomes of suicidal ideation, self-harm (non-suicidal), self-harm (unknown intent), and completed suicides.[75,89,93]

CDC. The CDC has created a comprehensive technical package of strategies that can be implemented by communities and states that include strengthening economic supports; strengthening access and delivery of suicide care; creating protective environments; promoting connectedness; teaching coping and problem-solving skills; identifying and supporting people at risk; and lessening harms and preventing future risk. Also, the CDC has recently released information showing the increased risk for suicide and negative opioid related outcomes (including overdose) associated with ACEs.[33,62]

FEDERATION OF MEDICINE EFFORTS

Several medical specialty societies have addressed youth suicide. The American Academy of Pediatrics (AAP) has developed web-based downloadable targeted at teens and their parents/caretakers on mental health as well as identifying suicide risk and creating emotional well-being in teens and children.[94] Other societies including the American College of Emergency Physicians (ACEP), American Association of Family Physicians (AAFP), the American Psychiatric Association (APA) and the American Academy of Child and Adolescent Psychiatry (AACAP) all have patient resources, policies, clinical guidance, or public statements addressing depression and identifying imminent risk for STB in youth and adults.[50,94-97]

A 2021 joint summit on teen suicide co-hosted by the AAP, the American Foundation for Suicide Prevention (AFSP), and the National Institute for Mental Health (NIMH), brought forth several recommendations including the need for early identification of suicide risk, screening/assessment, follow up, and counseling. Other recommendations included the importance of widespread screening for youth seen in the ED for any reason and using a strengths-based and culturally sensitive approach to help youth disclose possible suicidal thoughts and ideation. A focus on prevention efforts, along with better data on their effectiveness for sub-populations (Black, Indigenous/Alaska natives, and LGBTQ youth) was also highlighted. A suicide prevention blueprint document from the summit is scheduled to be available later in 2021.[98]

EMERGING AREAS OF RESEARCH

Medications

New medications for acute STB are being developed and experts have called for increased utilization of existing medications. Leading experts encourage continued research to understand the neurobiology of suicide, including the identification of biomarkers and neuropsychological vulnerabilities associated with acute suicidality.[79,99] A better understanding of the neuropathophysiology of suicide can assist in the development of new medications for treatment.

Digital Technology and Machine Learning

The National Institutes of Health is funding research into the Mobile Assessment for the Prediction of Suicide (MAPS) as a way of using machine learning to detect suicide risk. These risk prediction algorithms can be embedded in digital devices such as smartphones, tablets, and laptops, and show promise in detection of near and imminent risk.[100]

Imminent Risk-Warning Signs

One of the most significant challenges of reducing suicides in youth, as in all demographics, is detecting windows of acute and imminent risk. While many of the risk factors for suicide in young people are understood, the ability to predict imminent risk effectively is lacking. Signs of imminent risk include talking about wanting to die, asking how one will be remembered, seeking out means of suicide, talking about feeling hopeless, expressing feelings of being trapped in unbearable pain, increased misuse of alcohol or drugs, increased agitation, withdrawal, mood dysregulation, and giving away treasured items and belongings.[19,69]

CONCLUSION

Suicides are increasing among both male and female adolescents, with males using more lethal means such as firearms in completed suicides and attempts. The young Native American/Alaska Native demographic group has the highest number of completed suicides and attempts among all youth. Increases in instances of cyberbullying are an important factor that are associated with youth suicide and require additional attention. Increases in screen time and use of digital devices, internet, and social networking sites have been associated with decreases in time sleeping and increased depression. Additionally, stress and disruption associated with the COVID-19 pandemic, such as physical distancing and isolation, have worsened mental health for all cohorts, including young people and increased suicidal ideation in some cases. Importantly, evidence clearly notes that when co-occurring mental illness (depression, anxiety), SUD, ACEs, or other stressors are present, risk for STB increases. [29,41,70]

Enhancing physician ability and capacity to screen, identify and respond to risk factors are an important feature of effective suicide prevention for youth, especially for those physicians who are more likely to encounter these patient populations. Physicians should have access to the tools to identify acute and imminent risk and respond with appropriate treatments, linkages to appropriate counseling services, collaboration, and safety planning. Collectively, parents, teachers, peers, physicians, social workers, faith communities, counselors, and others, are critical in identifying when an individual is experiencing a period of imminent risk and assisting in preventing suicide attempts.

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-60.937 be amended to read as follows:

   ~~Teen~~ Youth and Young Adult Suicide in the United States

   Our AMA:

   (1) Recognizes ~~teen~~ youth and young adult suicide as a serious health concern in the US;

   (2) Encourages the development and dissemination of educational resources and tools for physicians, especially those more likely to encounter youth or young adult patients, addressing effective suicide prevention, including screening tools, methods to identify risk factors and acuity, safety planning, and appropriate follow-up care including treatment and linkages to appropriate counseling resources;

   (3) Supports collaboration with federal agencies, relevant state and specialty medical societies, schools, public health agencies, community organizations, and other stakeholders to enhance awareness of the increase in youth and young adult suicide and to promote protective factors, raise awareness of risk factors, support evidence-based prevention strategies and interventions, encourage awareness of community mental health resources, and improve care for youth and young adults at risk of suicide;

   (4) Encourages efforts to provide youth and young adults better and more equitable access to treatment and care for depression, substance use disorder, and other disorders that contribute to suicide risk;

   (5) Encourages continued research to better understand suicide risk and effective prevention efforts in youth and young adults, especially in higher risk sub-populations such as Black, LGBTQ+, Hispanic/Latinx,

Indigenous/Native Alaskan youth and young adult populations and among youth and young adults with disabilities;

(6) Supports the development of novel technologies and therapeutics, along with improved utilization of existing medications to address acute suicidality and underlying risk factors in youth and young adults;

(7) Supports research to identify evidence-based universal and targeted suicide prevention programs for implementation in middle schools and high schools;

(8) Will publicly call attention to the escalating crisis in children and adolescent mental health in this country in the wake of the COVID-19 pandemic;

(9) That our AMA advocate at the state and national level for policies to prioritize children's mental, emotional and behavioral health; and

(10) That our AMA advocate for a comprehensive system of care including prevention, management and crisis care to address mental and behavioral health needs for infants, children and adolescents.

2. That Policy H-515-952, "Adverse Childhood Experiences and Trauma-Informed Care" be amended by addition to read as follows:

1. Our AMA recognizes trauma-informed care as a practice that recognizes the widespread impact of trauma on patients, identifies the signs and symptoms of trauma, and treats patients by fully integrating knowledge about trauma into policies, procedures, and practices and seeking to avoid re-traumatization.

2. Our AMA supports:
   a. evidence-based primary prevention strategies for Adverse Childhood Experiences (ACEs);
   b. evidence-based trauma-informed care in all medical settings that focuses on the prevention of poor health and life outcomes after ACEs or other trauma at any time in life occurs;
   c. efforts for data collection, research, and evaluation of cost-effective ACEs screening tools without additional burden for physicians.
   d. efforts to educate physicians about the facilitators, barriers and best practices for providers implementing ACEs screening and trauma-informed care approaches into a clinical setting; ~~and~~
   e. funding for schools, behavioral and mental health services, professional groups, community, and government agencies to support patients with ACEs or trauma at any time in life; and
   f. increased screening for ACEs in medical settings, in recognition of the intersectionality of ACEs with significant increased risk for suicide, negative substance use-related outcomes including overdose, and a multitude of downstream negative health outcomes.

3. Our AMA supports the inclusion of ACEs and trauma-informed care into undergraduate and graduate medical education curricula.

3. That Policy H-145.975, "Firearm Safety and Research, Reduction in Firearm Violence, and Enhancing Access to Mental Health Care," which recognizes the role of firearms in suicides; encourages the development of curricula and training for physicians with a focus on suicide risk assessment and prevention as well as lethal means safety counseling; and encourages physicians, as a part of their suicide prevention strategy, to discuss lethal means safety and work with families to reduce access to lethal means of suicide, be reaffirmed.

4. That Policy H-170.984, "Healthy Living Behaviors," encouraging state medical societies and physicians to promote physical and wellness activities for children and youth and to advocate for health and wellness programs for children and youth in schools and communities, be reaffirmed.

Editor's note: The following proposed addition to Policy H-60.937 (as paragraph 11) was referred for decision:

That our AMA consider supporting the Child and Adolescent Mental and Behavioral Health Principles 2021 developed by the American Academy of Pediatrics and partner organizations including AACAP, APA and

Children's Hospital Association among others, and join with these and other partner organizations in advocating for a comprehensive approach to the child and adolescent mental and behavioral health crisis.

REFERENCES

1. Curtain S, MA. *State Suicide Rates Among Adolescents and Young Adults Aged 10–24: United States, 2000–2018.* CDC-National Center for Health Statistics;2020.
2. WISQARS. 10 Leading Causes of Death, United States. In: Control NCfIPa, ed. Atlanta GA: CDC; 2019.
3. Ivey-Stephenson AP, et al. *Suicidal Ideation and Behaviors Among High School Students —Youth Risk Behavior Survey, United States, 2019.* 2020.
4. Administration SAaMHS. *2019 National Survey on Drug Use and Health.* Washington DC2019.
5. Hedegaard H CS, Warner M. Suicide Mortality in the United States, 1999–2019. In: Statistics NCfH, ed. Vol NCHS Data Brief, no 398. Hyattsville, MD: Centers for Disease Control; 2021.
6. Services DoHaH. *Increase in Suicide Mortality in the United States, 1999–2018.* Washington DC: Centers for Disease Control;2020.
7. CDC. *Youth Risk Behavior Survey Data Summary and Trends 2000-2019.* 2019.
8. Wunderlich U, Bronisch T, Wittchen HU, Carter R. Gender differences in adolescents and young adults with suicidal behaviour. *Acta Psychiatr Scand.* 2001;104(5):332-339.
9. Hedegaard H, Curtin SC, Warner M. Suicide Rates in the United States Continue to Increase. *NCHS data brief.* 2018(309):1-8.
10. Lindsey MA, Sheftall AH, Xiao Y, Joe S. Trends of Suicidal Behaviors Among High School Students in the United States: 1991–2017. *Pediatrics.* 2019;144(5):e20191187.
11. Bridge JA, Horowitz LM, Fontanella CA, et al. Age-Related Racial Disparity in Suicide Rates Among US Youths From 2001 Through 2015. *JAMA pediatrics.* 2018;172(7):697-699.
12. Centers for Disease C, Prevention. Web-based Injury Statistics Query and Reporting System (WISQARS). *wwwcdcgov/ncipc/wisqars.* 2002.
13. Zayas LH, Lester RJ, Cabassa LJ, Fortuna LR. Why do so many latina teens attempt suicide? A conceptual model for research. *Am J Orthopsychiatry.* 2005;75(2):275-287.
14. Edwards KM, Banyard VL, Charge LL, Kollar LMM, Fortson B. Experiences and Correlates of Violence Among American Indian and Alaska Native Youth: A Brief Report. *J Interpers Violence.* 2020:886260520983273.
15. Assari S, Moghani Lankarani M, Caldwell CH. Discrimination Increases Suicidal Ideation in Black Adolescents Regardless of Ethnicity and Gender. *Behavioral Sciences.* 2017;7(4):75.
16. Silva C, Van Orden KA. Suicide among Hispanics in the United States. *Curr Opin Psychol.* 2018;22:44-49.
17. Health ACoSaP. *Physicians Role in Firearm Safety.* 2018.
18. Franklin JC, et al. Risk Factors for Suicidal Thoughts and Behaviors: A Meta-Analysis of 50 Years of Research. *Psychological Bulletin.* 2017(2):187-232.
19. Bilsen J. Suicide and Youth: Risk Factors. *Frontiers in psychiatry.* 2018;9(540).
20. Cooper J, et al. Suicide After Deliberate Self-Harm: A 4-Year Cohort Study. *Am J of Psychiatry.* 2005;162(2):297-303.
21. CDC. *Youth Risk Behavior Survey Data Summary and Trends Report 2000-2017.* Atlanta, GA2018.
22. Bridge JA, Goldstein TR, Brent DA. Adolescent suicide and suicidal behavior. *Journal of Child Psychology and Psychiatry.* 2006;47(3-4):372-394.
23. Pelkonen M, Marttunen M. Child and Adolescent Suicide. *Pediatric Drugs.* 2003;5(4):243-265.
24. Brådvik L. Suicide Risk and Mental Disorders. *International journal of environmental research and public health.* 2018;15(9):2028.
25. Kelleher I, Corcoran P, Keeley H, et al. Psychotic symptoms and population risk for suicide attempt: a prospective cohort study. *JAMA psychiatry.* 2013;70(9):940-948.
26. Portzky G, Audenaert K, van Heeringen K. Suicide among adolescents. *Social Psychiatry and Psychiatric Epidemiology.* 2005;40(11):922-930.
27. Twenge JM, Cooper AB, Joiner TE, Duffy ME, Binau SG. Age, period, and cohort trends in mood disorder indicators and suicide-related outcomes in a nationally representative dataset, 2005-2017. *J Abnorm Psychol.* 2019;128(3):185-199.
28. Graves JM, Abshire DA, Mackelprang JL, Amiri S, Beck A. Association of Rurality With Availability of Youth Mental Health Facilities With Suicide Prevention Services in the US. *JAMA Network Open.* 2020;3(10):e2021471-e2021471.
29. Orri M, Galera C, Turecki G, et al. Association of Childhood Irritability and Depressive/Anxious Mood Profiles With Adolescent Suicidal Ideation and Attempts. *JAMA psychiatry.* 2018;75(5):465-473.
30. Wang P-W, Yen C-F. Adolescent substance use behavior and suicidal behavior for boys and girls: a cross-sectional study by latent analysis approach. *BMC Psychiatry.* 2017;17(1):392-392.
31. Mars B, Heron J, Klonsky ED, et al. Predictors of future suicide attempt among adolescents with suicidal thoughts or non-suicidal self-harm: a population-based birth cohort study. *Lancet Psychiatry.* 2019;6(4):327-337.
32. Ports KA, Merrick MT, Stone DM, et al. Adverse Childhood Experiences and Suicide Risk: Toward Comprehensive Prevention. *American journal of preventive medicine.* 2017;53(3):400-403.
33. CDC. Adverse Childhood Experiences, Overdose, and Suicide. Injury Prevention & Control Web site. https://www.cdc.gov/injury/priority/index.html. Published 2021. Accessed2021.
34. CDC. Adverse Childhood Experiences (ACEs) Preventing early trauma to improve adult health. In: Signs CV, ed. Atlanta, GA2019.

35. Hill R, et al. Suicide Ideation and Attempts in a Pediatric Emergency Department Before and During COVID-19. *Pediatrics.* 2021;147(3).
36. Leeb RT BR, Radhakrishnan L, Martinez P, Njai R, Holland KM. Mental Health–Related Emergency Department Visits Among Children Aged <18 Years During the COVID-19 Pandemic — United States, January 1–October 17, 2020. In. Vol MMWR CDC; 2020.
37. Aggarwal S, Borschmann R, Patton GC. Tackling stigma in self-harm and suicide in the young. *The Lancet Public Health.* 2021;6(1):e6-e7.
38. Olson R. Suicide and Stigma. In. Vol InfoExchange 12. Calgary, Alberta, Canada: Centre for Suicide Prevention; 2013.
39. Corrigan PW, Watson AC. Understanding the impact of stigma on people with mental illness. *World psychiatry : official journal of the World Psychiatric Association (WPA).* 2002;1(1):16-20.
40. Sedgwick R, Epstein S, Dutta R, Ougrin D. Social media, internet use and suicide attempts in adolescents. *Current Opinion in Psychiatry.* 2019;32(6):534-541.
41. Twenge JM, Joiner TE, Rogers ML, Martin GN. Increases in Depressive Symptoms, Suicide-Related Outcomes, and Suicide Rates Among U.S. Adolescents After 2010 and Links to Increased New Media Screen Time. *Clinical Psychological Science.* 2018;6(1):3-17.
42. Nixon CL. Current perspectives: the impact of cyberbullying on adolescent health. *Adolesc Health Med Ther.* 2014;5:143-158.
43. Sourander A, Brunstein Klomek A, Ikonen M, et al. Psychosocial Risk Factors Associated With Cyberbullying Among Adolescents: A Population-Based Study. *Archives of General Psychiatry.* 2010;67(7):720-728.
44. John A, Glendenning AC, Marchant A, et al. Self-Harm, Suicidal Behaviours, and Cyberbullying in Children and Young People: Systematic Review. *J Med Internet Res.* 2018;20(4):e129.
45. Kowalski RM, Giumetti GW, Schroeder AN, Lattanner MR. Bullying in the digital age: a critical review and meta-analysis of cyberbullying research among youth. *Psychol Bull.* 2014;140(4):1073-1137.
46. Chuck E. Is Social Media Contriuting to Rising Teen Suicide Rates? NBC News. https://www.nbcnews.com/news/us-news/social-media-contributing-rising-teen-suicide-rate-n812426. Published 2017. Accessed.
47. Notar C PS, Roden J. Cyberbullying: Resources for Intervention and Prevention. *Universal Journal of Educational Research.* 2013;1:133-145.
48. Cyberbullying Research Center. https://cyberbullying.org/. Published 2005. Accessed April 20, 2021.
49. Gould M, Ph.D., M.P.H., Lake, A, M.A. THE CONTAGION OF SUICIDAL BEHAVIOR. In: Press NA, ed. *Contagion of Violence: Workshop Summary: Forum on Global Violence Prevention; Board on Global Health; Institute of Medicine; National Research Council.* . Washington DC2013.
50. ACEP. The Suicide Contagion in Adolescents: What's Emergency Medicine's Role? In: ACEP Now; 2019.
51. Scott Poland RLMN. Suicide Contagion and Clusters—Part 1: What School Psychologists Should Know. *National Association of School Psychologist-Communique.* 2019;47:21-23.
52. Gould MS. Suicide and the media. *Ann N Y Acad Sci.* 2001;932:200-221; discussion 221-204.
53. Abrutyn S, Mueller AS. Are Suicidal Behaviors Contagious in Adolescence?: Using Longitudinal Data to Examine Suicide Suggestion. *Am Sociol Rev.* 2014;79(2):211-227.
54. Hawton K, Hill NTM, Gould M, John A, Lascelles K, Robinson J. Clustering of suicides in children and adolescents. *The Lancet Child & Adolescent Health.* 2020;4(1):58-67.
55. Beal JA. 13 Reasons Why: A Trigger for Teen Suicide? *MCN: The American Journal of Maternal/Child Nursing.* 2018;43(1):55.
56. Bridge J, PhD , et al Association Between the Release of Netflix's 13 Reasons Why and Suicide Rates in the United States: An Interrupted Time Series Analysis. *Journal of Child and Adolescent Psychiatry.* 2020;59(2):246-243.
57. IASP. Preventing Suicide: A Resource Guide for Media Professionals-Update 2017. In: WHO; 2017.
58. Recommendations for Reporting on Suicide. https://reportingonsuicide.org/. Accessed.
59. Auerbach RP, Stewart JG, Johnson SL. Impulsivity and Suicidality in Adolescent Inpatients. *J Abnorm Child Psychol.* 2017;45(1):91-103.
60. Ernst M, Pine DS, Hardin M. Triadic model of the neurobiology of motivated behavior in adolescence. *Psychological medicine.* 2006;36(3):299-312.
61. Forbes EE, Dahl RE. Neural systems of positive affect: relevance to understanding child and adolescent depression? *Dev Psychopathol.* 2005;17(3):827-850.
62. Stone D, Holland,, K, Bartholow, B, Crosby, A, Davis, S, Wilkins, N. Preventing Suicide: A Technical Package of Policy, Programs, and Practices. In. Atlanta GA: CDC; 2017.
63. The Search Institute. https://www.search-institute.org/our-research/development-assets/developmental-assets-framework/. Accessed.
64. Youth.gov. Suicide Prevention. 2020.
65. Calear AL, Christensen H, Freeman A, et al. A systematic review of psychosocial suicide prevention interventions for youth. *European Child & Adolescent Psychiatry.* 2016;25(5):467-482.
66. Cusimano MD, Sameem M. The effectiveness of middle and high school-based suicide prevention programmes for adolescents: a systematic review. *Injury prevention : journal of the International Society for Child and Adolescent Injury Prevention.* 2011;17(1):43-49.
67. USPSTF. Suicide Risk in Adolescents, Adults and Older Adults: Screening-Final Recommendation Statement. https://www.uspreventiveservicestaskforce.org/uspstf/recommendation/suicide-risk-in-adolescents-adults-and-older-adults-screening. Published 2013. Accessed2021.

68. USPSTF. *Screening for Depression, Anxiety, and Suicide Risk in Children and Adolescents.* 2020.
69. Health NIo. Teen Suicide-Understanding the Risk and Getting Help. In. *NIH News in Health.* Vol September, 2019. Bethesda MD2019.
70. Wu P, Hoven CW, Liu X, Cohen P, Fuller CJ, Shaffer D. Substance use, suicidal ideation and attempts in children and adolescents. *Suicide Life Threat Behav.* 2004;34(4):408-420.
71. King CA, Brent D, Grupp-Phelan J, et al. Prospective Development and Validation of the Computerized Adaptive Screen for Suicidal Youth. *JAMA psychiatry.* 2021.
72. Goldstein Grumet J H, M, Chu A, Covington D, Johnson K. Compliance Standards Pave the Way for Reducing Suicide in Health Care Systems. *J Health Care Compliance.* 2019;21(January-February):17–26.
73. Commission TJ. *National Patient Safety Goal for Suicide Prevention.* Oakbrook Terrace, IL2018.
74. Commission TJ. *Suicide Prevention Resources to support Joint Commission Accredited organizations implementation of NPSG 15.01.01.* November 2018 2018.
75. National Suicide Prevention Lifeline. https://suicidepreventionlifeline.org/. Accessed.
76. youth.gov. Increased Risk Groups. https://youth.gov/youth-topics/youth-suicide-prevention/increased-risk-groups. Published 2020. Accessed.
77. Goldston DB, Molock SD, Whitbeck LB, Murakami JL, Zayas LH, Hall GCN. Cultural considerations in adolescent suicide prevention and psychosocial treatment. *The American psychologist.* 2008;63(1):14-31.
78. Administration-SAMHSA SAaMH. Resources for Suicide Prevention. Department of Health and Human Services. https://www.samhsa.gov/childrens-awareness-day/event/resources-suicide-prevention. Published 2019. Accessed.
79. Griffiths JJ, Zarate CA, Jr., Rasimas JJ. Existing and novel biological therapeutics in suicide prevention. *American journal of preventive medicine.* 2014;47(3 Suppl 2):S195-S203.
80. Nischal A, Tripathi A, Nischal A, Trivedi JK. Suicide and antidepressants: what current evidence indicates. *Mens Sana Monogr.* 2012;10(1):33-44.
81. Pompili MM, PhD; Goldblatt M, MD. Psychopharmacological Treatment to Reduce Suicide Risk. In. *Psychiatric Times*: MJH Life Sciences; 2012.
82. Canuso CM, et al. Efficacy and Safety of Intranasal Esketamine for the Rapid Reduction of Symptoms of Depression and Suicidality in Patients at Imminent Risk for Suicide: Results of a Double-Blind, Randomized, Placebo-Controlled Study. *American Journal of Psychiatry.* 2018;April 2018(7):620-630.
83. FDA approves new nasal spray medication for treatment-resistant depression; available only at a certified doctor's office or clinic [press release]. Washington DC: FDA2019.
84. AACAP. Psychopharmacology Committee Statement on Ketamine. https://www.aacap.org/AACAP/Latest_News/statement_ketmamine.aspx#:~:text=Therefore%2C%20esketamine%20is%20not%20proven,View%20full%20prescribing%20information. Published 2018. Accessed March 31, 2021.
85. NIMH. Research Highlight: NIMH Addresses Critical Need for Rapid-Acting Interventions for Severe Suicide Risk. https://www.nimh.nih.gov/news/research-highlights/2021/nimh-addresses-critical-need-for-rapid-acting-interventions-for-severe-suicide-risk.shtml. Published 2021. Accessed April 20, 2021.
86. Dirks A. Treatment for the Suicidal Adolescent: A Critical Analysis of the Cognitive-Behavioral Approach. *Acta Psychopathologica.* 2017;03.
87. Büscher R, Torok M, Terhorst Y, Sander L. Internet-Based Cognitive Behavioral Therapy to Reduce Suicidal Ideation: A Systematic Review and Meta-analysis. *JAMA Network Open.* 2020;3(4):e203933-e203933.
88. Esposito-Smythers C, Spirito A, Kahler CW, Hunt J, Monti P. Treatment of co-occurring substance abuse and suicidality among adolescents: a randomized trial. *J Consult Clin Psychol.* 2011;79(6):728-739.
89. National Mental Health and Substance Use Policy Laboratory SAaMHSA. Treatment for Suicidal Ideation, Self-Harm, and Suicide Attempts Among Youths. In: Administration SAaMHS, ed. Maryland2020.
90. McCauley E, Berk MS, Asarnow JR, et al. Efficacy of Dialectical Behavior Therapy for Adolescents at High Risk for Suicide: A Randomized Clinical Trial. *JAMA psychiatry.* 2018;75(8):777-785.
91. 2012 National Strategy for Suicide Prevention: Goals and Objectives for Action-Overview. In. Rockville, MD: National Action Alliance for Suicide Prevention; Substance Abuse and Mental Heatlh Services Adminstration; 2012.
92. Prevention USSGaotNAAfS. *The Surgeon General's Call to Action: TO IMPLEMENT THE NATIONAL STRATEGY FOR SUICIDE PREVENTION.* Washington DC2021.
93. Designating 988 for the National Suicide Prevention Lifeline [press release]. Washington DC2020.
94. Pediatrics AAo. Suicide Prevention. https://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/child_death_review/Pages/Suicide-Prevention.aspx. Published 2020. Accessed.
95. Ting SA, Sullivan AF, Boudreaux ED, Miller I, Camargo CA, Jr. Trends in US emergency department visits for attempted suicide and self-inflicted injury, 1993-2008. *Gen Hosp Psychiatry.* 2012;34(5):557-565.
96. Psychiatry GftAo. *Adolescent Suicide.* American Psychiatric Association Publishing; 1996.
97. Behaviors APA-WGOS. PRACTICE GUIDELINE: Assessment and Treatment of Patients With Suicidal Behaviors. In:2003.
98. Wyckoff A. 'It's everybody's problem': Goal to end youth suicide unites experts, organizations. American Pediatric Association. https://www.aappublications.org/news/2021/03/03/suicide-summit-030321. Published 2021. Accessed 3-8-21, 2021.
99. Prevention NAAfS. A Prioritized Research Agenda for Suicide Prevention: An Action Plan to Save Lives. In. Rockville, MD2014.

100. Servick K. Suicide attempts are hard to anticipate. A study that tracks teen cellphone usage aims to change that. In. *Science*: American Association for the Advancement of Science-AAAS; 2019.