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American College of Preventive Medicine Statement on Prioritizing Prevention in Opioid Research

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Abstract

Research is the foundation of evidence-based health care that motivates innovations in clinical interventions and public health. Prior and current research on opioid use has focused mainly on individual patient-physician relationships, opioid use disorder and treatment, and overdose responses. This article recommends 3 priorities for future research and investigates why, from clinical and ethical standpoints, future research should be directed toward building the capacity and increasing the effectiveness of population-based programs and improving prevention strategies.

Prevention as a Priority

Many factors contribute to deciding which health knowledge gaps are most worth filling, how research topics are selected, and how research funding is allocated. Overall, however, research priorities are products of social, cultural, and community values. Prior and current research on opioid use has focused mainly on individual patient-physician relationships, opioid use disorder and treatment, and overdose responses. We suggest that it is now time to prioritize research focused on building the capacity and increasing the effectiveness of population-based programs that reduce opioid-related harms. We recommend 3 areas of future focus in shifting opioid research toward prevention: (1) understanding the roles of social determinants in opioid misuse, opioid use disorder, and other opioid-related harms (henceforth "opioid misuse"); (2) improving prevention policy and program implementation; and (3) investigating and implementing risk mitigation and harm reduction approaches.

Social Determinants of Opioid Misuse

Inequities in the distribution of societal benefits and resources are intimately tied to nearly all aspects of health—hence the term *social determinants of health*.[1,2] The phrase usually addresses issues related to socioeconomic conditions, education and job opportunities, housing, neighborhood conditions, crime, social norms and attitudes, and race and gender, among others.[3] Research has suggested associations between certain social determinants and the later development of opioid misuse.[4,5] However, the

relationship between social determinants and opioid misuse has been less well studied than the relationship between social determinants and other health issues.

Social determinants likely play a role in whether someone both develops opioid use disorder and enters remission and recovery. The Substance Abuse and Mental Health Services Administration (SAMHSA) identifies 4 dimensions that support recovery: health, home, purpose, and community.[6] Thus, it is a natural progression to pursue research on how social determinants influence risk or protection so as to better predict, identify, and prevent opioid misuse. For example, if we shifted efforts and funding from incarceration towards housing and job training, would outcomes be different? The boundless potential for public good and well-being that might be generated through addressing social determinants need only be explored, and there is an ethical impetus to do so.

We offer 2 ethical arguments for research on the relationship between social determinants and opioid misuse. First, distributive justice and equality of opportunity are highly relevant when discussing social determinants and how they relate to health. Many communities with high rates of opioid misuse are systematically disadvantaged by a maldistribution of resources apart from medical care (eg, housing, nutritious food, safe recreational areas) that can be influenced by social policies and that shape health in powerful ways.[7] As a matter of equity, there is a deep ethical imperative to study such factors in relation to opioids, particularly in these chronically and pervasively disadvantaged populations. Ultimately, justice-based approaches to opioid research aim to ensure a more equitable allocation and dedication of resources to disadvantaged populations to enable individuals to achieve some baseline level of capability, thereby promoting a healthy society.[8]

Second, we consider the likelihood that understanding and addressing the relationship between social determinants and opioid misuse will create beneficial effects across multiple domains of health. Social determinants significantly influence the life trajectories of individuals and populations over a wide variety of health considerations and across multiple domains of well-being.[9] For example, opioid misuse has been linked to the recent epidemic of despair.[10,11,12] The spread of opioid misuse (ie, cross-generationally and within communities) via shared traumas or normalized experiences of opioid use could be interrupted by addressing the shared social determinants in these contexts. Ameliorating one outcome (ie, opioid misuse) of social determinants would achieve positive effects across multiple domains of well-being, thereby offering a more powerful ethical argument to prioritize research endeavors in this area.[13] Establishing an improved understanding of the relationship between social determinants and opioid misuse would further strengthen the case for policymakers and public health officials to implement strategies to address social determinants in communities to improve their overall health and well-being.

Prevention Programs and Policies

Primary, secondary, and tertiary prevention strategies are all critical in addressing the opioid crisis. Primary prevention focuses on preventing the initial development of disease; secondary prevention attempts to identify preclinical disease; and tertiary prevention seeks to reduce the impact of disease.[14] Current efforts are largely focused on tertiary prevention strategies (ie, addiction treatment and prevention of opioid overdose deaths). As an ethical imperative, we argue for increasing research in the areas of primary prevention (ie, preventing opioid misuse and the development of opioid use disorder) and secondary prevention (ie, early identification of opioid use disorder

and reducing preclinical opioid-related harms) and for broadening the research focus in tertiary prevention to include a more comprehensive array of programming. In addition, primary and secondary prevention programs must be expanded beyond school-based programming and reducing opioid prescribing. They must include family strengthening programs, assisted housing opportunities, job training and placement programs, improvements in mental health services, and programs that capitalize on other known risk factors for the development of opioid misuse and opioid use disorder. Reducing rates of adverse childhood events is likely to reduce the incidence of opioid and other substance use disorders[15,16]; yet, if we do not establish these associations or develop interventions, we allow unnecessary incursions of risk throughout populations. During the early years of the opioid crisis, much attention focused on interventions that were known to have short-term impact on opioid-related mortality, such as medications for opioid use disorder and naloxone distribution.[17,18] This work must continue, but it is unreasonable and unethical not to simultaneously address upstream factors to circumvent the unnecessary accumulation of harms.

If we truly wish to combat the opioid crisis, we should consider implementing policies employed internationally to test their effectiveness in US populations (ie, benchmarking foreign policies). Utilizing evidence-based public health tools is both the most effective and the most ethical practice to ensure that we are using scarce resources most appropriately. Policies at local, state, and federal levels also set the tone for how we address opioid misuse and those who suffer from it. Some argue that the state has certain ethical responsibilities to promote the health and well-being of its citizens and to proactively set that tone.[19] Policy is the language through which the state defines its values and conveys its priorities for bettering society. In order for the state to fulfill these responsibilities through policy for opioids, it requires sufficient evidence to support policies that address opioid misuse.

Risk Mitigation and Harm Reduction

Risk mitigation and harm reduction include both secondary and tertiary prevention methodologies. Examples include naloxone distribution programs,[20,21] syringe service programs,[22,23] overdose prevention sites (ie, safe consumption sites),[24,25] and efforts that support safer drug supply (such as drug testing[26,27] or heroin-assisted treatment[28,29]). Several harm reduction strategies have strong evidence in support of their effectiveness for reducing morbidity and mortality related to opioids, while others have not been sufficiently evaluated (in some cases, because implementing such programs is currently illegal in the United States).[30] In addition to directly improving the health of individuals, risk mitigation and harm reduction strategies hold promise for breaking interfamilial, intergenerational, and community patterns of opioid misuse.[31]

Unfortunately, risk mitigation and harm reduction programs and participants in such programs face significant cultural, political, and social stigma. Opposition to these programs stems from the philosophy that punitive measures (eg, criminalization and incarceration) will better control drug use than more supportive medical models used in the management of other chronic conditions. Evidence focused on these modalities might identify more effective harm reduction techniques and shift social norms and beliefs, enabling better alignment of policy with epidemiologic evidence. Incremental gains in these areas could mirror condom distribution during the height of the HIV/AIDS epidemic, which not only reduced HIV transmission but also helped to change many Americans' perceptions about public health interventions regarding sexual health.[32] In addition, some promising practices (eg overdose prevention sites, decriminalization of

drug use, and heroin assisted treatment) remain illegal in the United States but could offer important lifesaving services to many.[30,33]

Several ethical and participatory questions arise from risk mitigation implementation research. In the context of opioid use, public health researchers should continue controverting misguided moralistic views of addiction by addressing opioid use disorder as the chronic condition it is (in contrast to opioid misuse, which could be occasional or sporadic) and strive to implement evidence-based programming to reduce morbidity and mortality. Without public health officials and clinicians engaging with the public to foment a shift in social attitudes from blaming users of opioids to acceptance of opioid misuse as a medical and public health issue, these critical strategies will remain sidelined though they are desperately needed. The perpetuation of harms that otherwise could be avoided by utilizing risk mitigation strategies creates an ethical impetus to engage in social dialogue regarding opioid misuse and its management.

Conclusions

It is clear we must shift our focus regarding opioid research. If we are to better control the opioid epidemic, we must generate a greatly improved evidence basis in 3 critical areas: social determinants; prevention embedded in programs, policies, and strategies; and better utilization of proven risk mitigation and harm reduction strategies. Policymakers, clinicians, and public health officials have an epistemological responsibility—which is an ethical responsibility when health and well-being are at stake—to ensure that decisions affecting the health of populations are well informed. If they choose to implement unproven strategies or ignore more effective strategies because of misguided moralistic views, they are wasting resources and making an unethical choice in a resource-constrained environment. If, however, limited research funds continue to be allocated only to treatment, the evidence for primary and secondary prevention will never be sufficiently developed to drive policy and practice change. Providing policymakers with data-supported legislative strategies, imparting to clinicians the confidence to employ established interventions, and informing public health officials of empirically supported population-based programs and research is an ethical imperative.

In the face of historical mores and pharmaceutical industry trends that favor pharmacological treatment interventions over prevention methodologies, a paradigm shift toward more deliberate and deserved attention to and funding for prevention strategies is desperately needed. Even in recent conferences dedicated to addressing the gaps in opioid research, there has been no mention of any of the research domains raised in this article.[34] A call for prevention-based strategies is not only needed but also ethically justified.

Each of the 3 research domains discussed here are critical to future prevention and control strategies in addressing the opioid epidemic. Greater research focus must be placed not only on public health and prevention efforts broadly, but also on complex societal issues such as opioid misuse.[35,36] This focus stems from the overarching ethical primacy of preventing harms before they arise and the idea that the pursuit of public health promotes equity in multiple dimensions of well-being. By failing to devote more research efforts to prevention-oriented pursuits, we will remain trapped in a reactionary role, struggling to treat new and existing cases rather than preventing them at their onset.

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