to the epidemic. In their study, Barocas et al. took advantage of 13 of these linked administrative databases to perform detailed individual-level epidemiological analyses with the aim of determining the prevalence of OUD in Massachusetts. Their article offers several insights that deserve to be highlighted as examples of the power of collaborations between researchers and policymakers.

NATIONAL PREVALENCE LIKELY UNDERESTIMATED

First, using a powerful epidemiological approach not typically used in analyzing OUD prevalence, the authors found that the prevalence of OUD in Massachusetts was 4.60% in 2015, nearly four times higher than current national prevalence estimates. This single finding suggests that the true prevalence of OUD nationally is likely underestimated and that states around the country should provide detailed data sets, as we have done in Massachusetts, to enable more accurate prevalence estimates.

Second, they found that OUD prevalence increased from 2.72% to 4.60% between 2011 and 2015 and that opioid-related deaths increased even more rapidly during this period, by 273%. The latter finding suggests that the menace of OUD is increasing not only through rising use but, potentially, through the use of more deadly formulations such as synthetic opiates. The authors also documented important demographic differences in OUD prevalence; for example, the highest prevalence estimates were observed among individuals 26 to 44 years old, and the greatest relative increases were seen among those in the youngest age group (11–25 years).

The Barocas et al. analyses brought together silos of previously unrelated data that will allow Massachusetts to target prevention and treatment efforts with greater specificity and effectiveness. OUD is a chronic medical disease—not simply a social issue or personal failing—and requires us to provide evidence-based interventions based on precision public health that can identify individuals with (and at risk for) OUD, the numbers of such individuals, and the best means of locating them. We take for granted our understanding of the prevalence of common diseases such as diabetes and hypertension, but similar comprehensive information on OUD has not previously been available.

TARGETING PREVENTION AND CARE

Understanding the highest prevalence groups can assist us in targeting our outreach messages, collaborating with community and clinical partners, reaching individuals earlier in the disease process, and allocating resources. We owe it to the individuals suffering from this medical disease to fully understand and respond with appropriate medical treatment. The Barocas et al. study will help us move forward in our efforts to decrease the death toll from the opioid epidemic and increase opportunities for treatment and recovery. AJPH

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CONFLICTS OF INTEREST

The author has no conflicts of interest to declare.

REFERENCES

1. Centers for Disease Control and Prevention. CDC Wonder. Available at: https://wonder.cdc.gov. Accessed December 4, 2018.

2. Barocas JA, White LF, Wang J, et al. Estimated prevalence of opioid use disorder in Massachusetts, 2011–2015: a capture–recapture analysis. *Am J Public Health*. 2018;108(12):1675–1681.

3. Massachusetts Department of Public Health. Massachusetts responds to the opioid epidemic. Available at: https://www.mass.gov/massachusetts-responds-to-the-opioid-epidemic. Accessed December 4, 2018.

The Opioid Epidemic's Prevention Problem

With more than 115 overdose deaths a day from prescription and illicit opioid misuse, public health leaders have called the opioid crisis one of the most urgent public health challenges of our time. Increases in overdose deaths from prescription and illicit opioids are driving a decrease in America's life expectancy for the first time in generations.[1] With the number of deaths from drug overdose in 2016 surpassing the total number of American deaths in the Vietnam War, clear action is needed.[2]

We are making progress. The US Surgeon General's recent public health advisory calls for all Americans to keep the overdose-reversing medication naloxone within reach,[3] and state health agencies have issued standing orders to make the drug widely available. These are good moves: access to naloxone not only saves lives but also demonstrates that all lives are worth saving and will reduce the stigma associated with opioid use disorder and addiction. All states now have prescription drug monitoring programs that allow health care providers to view prescription histories and identify individuals who may be "pill-seeking." President Donald Trump's opioid emergency declaration and his call for a "really tough, really big, really great" campaign provides a mandate for further action directly from the commander-in-chief.[4]

But these strategies alone will not end the opioid epidemic. Naloxone is a lifesaving tool but does nothing to prevent drug use in the first place. Treatment prevents individual suffering, but its role is limited in addressing the many social and environmental factors that act as enablers or buffers against future drug use. Prescription monitoring programs address some of the "supply-side" issues of opioid addiction but do not do much to curb demand. Trump's call for action and awareness is just that: a call.

To answer that call, we must continue to deploy more and

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better clinical options to treat addiction, support evidence-based recovery programs, and increase attention to opioid use disorder and addiction from a community perspective. This is the opioid epidemic's prevention problem: we are relying too heavily on clinicians and the health care system to prevent opioid misuse and not enough on community-driven public health approaches to addressing the root causes of addiction. The breadth of the problem is now widely understood, but how to effectively intervene at the population level to prevent addiction in the first place continues to be a challenge. It is also public health's "sweet spot."

One place to start solving this problem is to build upon community-based approaches that have been effective in the past. Influenza, Ebola, and other infectious diseases are best controlled through primary prevention strategies: keeping groups from becoming infected in the first place. And although opioid use disorder is different from traditional communicable and noncommunicable diseases, the same guiding principles apply: primary prevention of opioid misuse and addiction at the community level should be our goal. Had we used a treatment-only approach with the Ebola outbreaks in 2014 and 2015, society as we know it would have been decimated. Instead, national public health leaders recommended primary prevention strategies to end the outbreak with ongoing, real-time disease surveillance, community engagement and workforce development, and early intervention in communities at highest risk.

The primary prevention of addiction requires a multidisciplinary approach, using population-based strategies, in addition to actions aimed at high-risk groups and individuals. The National Academies of Science, Engineering, and Medicine developed a framework that groups prevention strategies into universal, selective, and indicated interventions.[5] We suggest employing this framework to operationalize a primary prevention approach to addiction that provides practitioners with the specificity and direction needed to successfully intervene at both the clinical and community levels.

UNIVERSAL INTERVENTIONS

Limiting exposure to increasingly potent painkillers is an important part of current efforts to prevent addiction in the first place. Clinical guidelines that specify limited indications for prescribing opioids and suggest evidence-based alternatives to treat pain should be implemented universally. The medical community, including pharmacy and dentistry, has a major role in primary prevention of opioid addiction, and prescription drug monitoring programs are important tools to help assess prescriber and dispenser adherence to practice guidelines.

Larger social and environmental factors, such as lack of hope and purpose, are powerful drivers of addiction that require community-level intervention. Broad strategies to increase community resilience, such as those suggested in the Trust for America's Health National Resilience Strategy (https://bit.ly/2Q5lWIW), require policies that prevent despair and support quality education, meaningful employment, stable housing, and justice reforms supportive of recovery. These evidence-based policies are strategies to improve community health and well-being and are just as crucial to preventing addiction as clinical guidelines and standards for evidence-based medical practice.

SELECTIVE INTERVENTIONS

Interventions with groups at greatest risk for addiction refine the response to the epidemic by focusing resources where they are most needed. "Selective" prevention strategies are directed toward specific communities or subpopulations in which the risk of developing addiction may be higher than average. Research on adverse childhood experiences shows a dose–response relationship between traumatic childhood events and future drug use. Evidence-based interventions including home visitation and parenting supports and early childhood programs are proven to mitigate these experiences in communities where they are prevalent.[6] Adverse community events such as joblessness, lack of economic and educational opportunity, and loss of family support and community cohesion are correlated with addiction. Targeted, selective approaches to mitigating the impact of adverse community events include expanding life-skills training in areas that are economically distressed, proactive screening and treatment of maternal depression, changing treatment and prevention services in jails and prisons, and creating a culture of trauma-informed care in health, social service, and law-enforcement worksites.[7]

INDICATED INTERVENTIONS

Indicated strategies can be used to screen and identify individuals who may be in the early stages of addiction. In clinical settings, prescription drug monitoring programs allow clinicians to monitor individual patient use, to identify those seeking opioids inappropriately, and to counsel and refer patients to treatment and recovery programs when indicated. In community settings, controversial but effective harm-reduction strategies such as syringe and needle exchange programs are saving lives and providing direct opportunities for public health and health care professionals to refer individuals to treatment and recovery programs.

Regardless of universal, selective, or indicated prevention strategies, clinical and community efforts to address opioid use disorder and addiction require an honest and direct examination of the reasons individuals use drugs in the first place. This requires collaboration among disciplines with different approaches and cultures, unified by the need for an enduring solution. Public health leaders have a responsibility to engage with mental health, substance abuse, social services, law enforcement, community development, and others just as they have done with the medical community. These engagements must also include individuals and communities that have suffered the most from adverse social and economic conditions. The opioid epidemic's prevention problem is rooted in our inability to see the problem from both the clinical and community perspectives and then take an approach to primary prevention that relies on the best of health care but also the best of public health. Solving the problem is well within reach if we

effectively use new resources and increase attention to the prevention of addiction at both the clinical and community levels. AJPH

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Both authors conceptualized the content of the article and contributed to the writing of the initial draft and revisions.

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REFERENCES

1. Kochanek KD, Murphy SL, Xu J, Arias E. Mortality in the United States, 2016. *NCHS Data Brief.* 2017; (293):1–7.

2. Hedegaard H, Warner M, Miniño A. Drug overdose deaths in the United States, 1999–2016. *NCHS Data Brief.* 2017 (294): 1–8.

3. US Department of Health and Human Services. Surgeon General's advisory on naloxone and opioid overdose. Available at: https://www.surgeongeneral.gov/priorities/opioid-overdose-prevention/naloxone-advisory.html. Accessed April 11, 2018.

4. Davis JH. Trump declares opioid crisis a "health emergency" but requests no funds. *New York Times.* October 26, 2017. Available at: https://www.nytimes.com/2017/10/26/us/politics/trump-opioid-crisis.html. Accessed April 11, 2018.

5. Springer JF, Phillips J. The Institute of Medicine Framework and its implication for the advancement of prevention policy, programs and practice. Substance Abuse and Mental Health Services Administration. 2007. Available at: http://ca-sdfsc.org/docs/resources/SDFSC_IOM_Policy.pdf. Accessed November 26, 2018.

6. Pinderhughes H, Davis RA, Williams M. Adverse community experiences and resilience: a framework for addressing and preventing community trauma. 2015. Prevention Institute: 36. Available at: https://www.preventioninstitute.org/sites/default/files/publications/Adverse%20Community%20Experiences%20and%20Resilience.pdf. Accessed November 26, 2018.

7. Dasgupta N, Beletsky L, Ciccarone D. Opioid crisis: no easy fix to its social and economic determinants. *Am J Public Health.* 2018;108(2):182–186.

Recommendations for the Pilot Expansion of Medicaid Coverage for Doulas in New York State

On April 23, 2018, Governor Andrew M. Cuomo (D-NY) announced a comprehensive initiative to address maternal mortality and racial disparities in health outcomes. Alarmingly, the maternal mortality rate (number of maternal deaths per 100 000 live births) in New York State has increased by 44.5% from 17.3 in 2006 to 25.0 in 2015.[1] New York State is unlikely to meet its Prevention Agenda 2013–2018 goal of reducing the maternal mortality rate to 21.0 by the end of this year.[2] The national *Healthy People 2020* target is 11.4.[3]

Black women in New York State experience maternal mortality at a rate almost four times that of White women.[4] Chronic health conditions such as hypertension and diabetes may increase risk of pregnancy complications.[5] These health conditions are more common among Black women with pregnancy-related deaths.[4]

Governor Cuomo's plan includes increasing access to prenatal and perinatal care through a pilot expansion of Medicaid coverage for doulas. Doulas are trained, nonmedical birth coaches who provide continuous physical, emotional, and informational support before, during, and after childbirth. Given improved labor and delivery outcomes associated with doula services,[6] the American College of Obstetricians and Gynecologists recommends integrating support personnel such as doulas into existing obstetric care teams.[7]

Two states expanded Medicaid coverage for doula services: Oregon and Minnesota. On the basis of lessons learned from these states and our own ongoing evaluation of a Merck for Mothers–funded community health worker (CHW) program for pregnant and postpartum women with chronic health conditions in New York City that included doula services, we offer the following recommendations to increase the pilot program's likelihood of success: (1) provide sufficient reimbursement to doulas and an adequate number of visits for mothers, (2) fund the training and certification of a diverse doula workforce, and (3) expand the role of doulas.

SUFFICIENT REIMBURSEMENT AND NUMBER OF VISITS

Although Oregon and Minnesota pioneered the expansion of Medicaid coverage for doula services, relatively low reimbursement rates and coverage for a limited number of visits may hinder the sustainability of the doula workforce and effectiveness of the programs (Table 1). Oregon reimburses doulas $350 per mother for four maternity support visits and the day of delivery.[8] Minnesota reimburses doulas $411 per mother for seven visits, one of which is for labor and delivery.[9,10] Uptake has been minimal because reimbursement rates are below the cost for doulas to provide services.[11] Furthermore, this level of reimbursement is not financially viable for low-income doulas.[10]

Fees for out-of-pocket doula services in New York City can range from $400 to more than $2000 based on the doula's experience.[12] The high cost of these services may be a barrier for women who are most likely to benefit from having a doula. Black and publicly insured women are almost twice as likely as White and privately insured women, respectively, to report desiring but not having access to doula support.[13]

We recommend reimbursing doulas for services provided up to $1000 per mother because of the higher cost of living in New York State and accounting for additional expenditures related to home-based support such as mileage.[10] Cost-effectiveness analyses indicate that doula reimbursement at an average of $986 would be offset by health care savings related to lower rates of preterm births (births before 37 weeks of gestation) and cesarean

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