

community physicians to encourage them to suggest a "park prescription" to their patients.

While the primary goal of the Mattapan Community Health Center program was stress reduction, the community health center also educated fitness class participants on healthy eating topics and referred them to the center's other health services, such as mammography screenings, said Callender.

Violence, in addition to being a barrier to physical activity, can make it harder for people to access fresh food, creating food deserts in these areas. Neighborhood residents are less likely to buy healthy food when they are fearful of walking or taking a bus to the grocery store, and supermarkets are less likely to locate in violent neighborhoods, noted Rachel Davis, the Prevention Institute's managing director.

Urban gardens can also help improve health by providing healthy food in neighborhoods that may otherwise lack grocery stores. The participants in Revision's violence prevention program in Denver, for

example, sold the produce they had grown at a farmer's market in the underserved neighborhood of Westwood, which currently does not have a comprehensive grocery store, explained Kornacki.

A few other examples of urban gardens that are growing fresh produce for underserved neighborhoods are the Growing Home program (<http://bit.ly/1iAbujX>) in Chicago's Englewood neighborhood and Alice's Garden in Milwaukee (<http://alicesgardenmilwaukee.com>).

Considerations for Success

Programs like PAD, FIT Zone, and urban gardening, although popular, do have the limitation of being resource-intensive endeavors. It costs about \$90 000 per park to run PAD, according to the Los Angeles County Parks and Recreation Department. Revision's violence prevention program ended after 3 years when the Convergence grant ended, and the free fitness classes at the Mattapan Community Health Center were discontinued because of a lack of funding.

Just like a garden, such programs must be nurtured over the long-term and coordinated with other violence prevention activities, said Cohen. "It's not going to be one thing. It's not like you put in a community garden, and suddenly the community is going to be completely safe," he said.

Despite the broad collaboration needed among disparate governmental and non-profit organizations, as well as the time and money required, programs like PAD are a useful addition to the violence prevention toolbox, Simon said.

"All of the research indicates that successful violence prevention programs require a comprehensive approach with multiple sectors," said Simon. "Our experience indicates that summer park programming can be a valuable piece of the puzzle, if well organized and well integrated with other community prevention efforts."

Tillman, for one, is sold on PAD's merits.

"It's something that is really nice for kids to do," she said. "They don't have to get involved with gangs. Everything about the program is awesome." ■

The JAMA Forum

Community Approaches to the Opioid Crisis

Howard Koh, MD, MPH

The abuse of opioids continues to have a devastating effect throughout the United States, as 2 recent studies highlight.

The first study, a national poll by the Harvard T. H. Chan School of Public Health and the *Boston Globe*, found that about 40% of respondents personally knew someone who had abused or misused prescription pain medicines such as hydrocodone in the past 45 years (<http://bit.ly/1JHYqtd>). Only about 45% believed that long-lasting treatment was effective for opioid dependency.

The second study, from the Centers for Disease Control and Prevention and the Food and Drug Administration (FDA), found that heroin abuse, traditionally more common among men and the poor, is now rising rapidly in groups such as women, the privately insured, and those of higher income (<http://1.usa.gov/1Fo8QtT>).

These findings represent just the tip of the iceberg. From 2001-2013, the annual

number of overdose deaths rose 3-fold for prescription opioid analgesics (to more than 16 200) and 5-fold for heroin (to more than 8200 deaths) (<http://1.usa.gov/1znaUDW>). Such trends parallel the steady increase in opioid analgesics to 259 million prescriptions a year, enough for each American adult (<http://1.usa.gov/1JFmWJg>).

People can readily access and misuse legal drugs in the medicine cabinet prescribed for others. Three-quarters of new users of heroin, a cheaper and more readily available opioid, initially began using prescription painkillers for nonmedical reasons. Researchers cite additional factors, such as aggressive pain treatment as a desired feature of quality care, availability of new formulations, pharmaceutical marketing, and previous underappreciation of addiction risk by professionals and public alike, as contributing to these trends.

Currently, nearly 2 million people abuse or are dependent on prescription opioids and



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more than half a million abuse or are dependent on heroin (<http://1.usa.gov/1rpXmxJ>). Multiple drug use, involving alcohol and sedatives for example, can increase overdose risk. Further complicating the picture are HIV and hepatitis C associated with intravenous use.

The crisis has triggered a dramatic response nationwide. Federal agencies, such as the White House Office of National Drug Control Policy (ONDCP) and the US Department of Health and Human Services, have offered comprehensive strategies to prevent opioid abuse and overdose. State and local leaders, including elected officials, have led a surge of community activity on the following fronts:

Reducing Supply

Clinicians are striving for a finer balance that meets the patient's need for pain relief while minimizing chances for abuse. Updated professional education efforts promote state-based and specialty society-based prescribing guidelines that encourage separate treatment approaches for acute and chronic pain; careful consideration of abuse risk before prescribing; "contracts" that clarify expectations, goals, and responsibilities for patients and prescribers; and use of the lowest effective dose for the shortest possible duration.

In addition, community public education efforts have encouraged safer disposal of unused medicines from the home. Research to reduce the supply of unsafe analgesics has prioritized creating deterrent forms of pills that cannot be crushed and abused, as well as novel painkillers with little or no abuse potential.

Monitoring Use and Potential Misuse

Prescription drug monitoring programs (PDMPs), which electronically track prescriptions of all controlled drugs, now operate in 49 states (except Missouri) and Washington, DC (<http://nyti.ms/1u8aKxQ>). PDMPs can identify possible nonmedical use and diversion. Physicians can connect to them as part of prescribing while pharmacists can check them before dispensing.

A preliminary analysis of mandated PDMP use in Kentucky, Tennessee, and New York showed fewer episodes of patients seeking prescription opioids from multiple providers (<http://bit.ly/1IP9kJP>). Nonetheless, many PDMPs still need substantial improvements to reach the ideal in which they are easy to use, offer standardized content, update information in real time, and demonstrate interstate accessibility. Also, a new

national initiative pairs law enforcement with public health officials to better trace and monitor trafficking of heroin, which in some states is now often laced with fentanyl, a powerful synthetic opioid.

Reversing Overdoses

Naloxone (Narcan), which temporarily reverses the respiratory depression associated with opiate overdose, can prevent opioid-related death. Although it is traditionally administered intravenously in the medical setting, the availability of an intranasal formulation now allows ready use in the field by laypersons and first responders—fire and police department personnel.

A recent survey notes that expanded naloxone use by laypersons, viewed as safe and cost-effective, has now reached 30 states and Washington, DC (<http://1.usa.gov/1NgErFz>). In 2014, the FDA approved a naloxone autoinjector that could further expand usage.

Accessing Treatment and Prevention

To counter public misperceptions about treatment futility, ONDCP Director Michael Botticelli, MD, emphasizes showing "hope on the other side" of addiction (<http://bit.ly/1OIADRA>). Citing his personal perspective as a person in recovery, Botticelli promotes the proven value of linking people to care through a continuum of services, including medication-assisted treatment (including buprenorphine, methadone, and naltrexone), counseling, and behavioral therapy. Promising approaches also include using the emergency department setting to initiate buprenorphine for opioid-dependent patients (as opposed to brief intervention and referral), as well as to connect with recovery coaches (<http://bit.ly/1bSDRxm>).

Long-term success requires substantially improving treatment capacity that has been chronically underresourced with respect to facilities and trained clinicians. The Affordable Care Act (2010) and the Mental Health Parity and Addiction Equity Act (2008) offer major opportunities to improve insurance coverage and treatment, but barriers for smooth implementation remain. Meanwhile, community-based coalitions, involving local schools, youth groups, law enforcement and faith-based

organizations, among others, have heightened public education about the power of prevention.

Humanizing the Epidemic

Media stories about how the opioid crisis cuts short promising lives are renewing public attention, commitment, and concern. Viewing substance use disorders as a chronic disease that waxes and wanes, not as a moral failing, may help overcome stigma that prevents affected people from seeking treatment. Encouraging public dialogue that refers to a "person with a substance use disorder" (instead of "addict") and "person in recovery" (instead of "former addict") can medicalize what many still view as primarily a criminal problem.

The heightened national response to the current opioid crisis, although noteworthy, must be deepened and sustained. Although prescription opioid-related deaths have leveled in the last several years, the country has not yet documented the progress seen with other substance abuse areas, such as tobacco dependence and underage drinking. Overcoming the opioid crisis will require the highest level of commitment of communities, clinicians, public health, and public safety for many years to come. ■

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