

# THE OPIOID CRISIS: HOSPITAL PREVENTION AND RESPONSE

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## KEY FINDINGS

- A surge in opioid-related morbidity and mortality over the past several years has become a pressing public health issue in communities across the country.
- The health care system is uniquely positioned as a contributor and solution to increased opioid use in the United States.
- There have been dramatic increases in opioid-related emergency department visits and inpatient stays, placing a significant burden on hospitals.
- Hospitals can combat the opioid crisis by forming multisector partnerships; assessing and refining opioid prescribing practices; screening for and monitoring opioid use among patients; engaging transitional treatment, and supporting overdose rescue efforts.

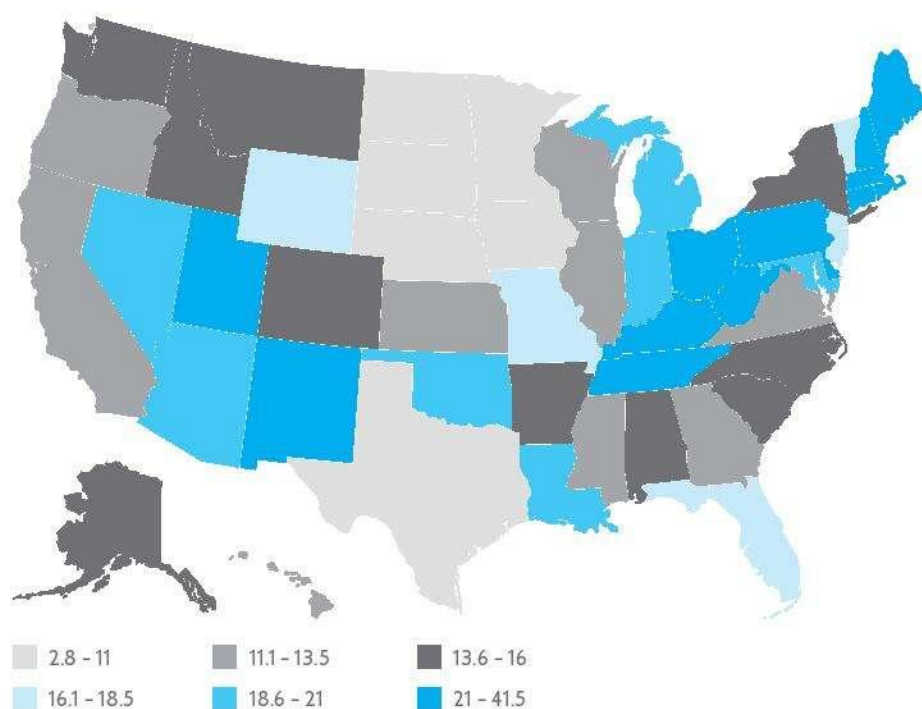
## BACKGROUND

Often referred to as the opioid “epidemic” or “crisis,” the surge in opioid-related morbidity and mortality over the past several years has become a pressing public health issue in communities across the country. Referring to both legally prescribed

painkillers and illicit drugs like heroin, opioid use and dependence effects people of all ages, races, and socioeconomic statuses.<sup>1-3</sup> At the center of this issue is the health care system, which is uniquely positioned as a contributor and solution to increased opioid use in America.

A substantial driver of the opioid crisis is increased availability and access.<sup>4-7</sup> While there has been no significant increase in the amount of reported pain in the United States, the number of prescribed opioids has quadrupled since 1999.<sup>8</sup> According to the Department of Health and

## NUMBER AND AGE-ADJUSTED RATES OF DRUG OVERDOSE DEATHS BY STATE, US 2015\*



\* Per 100,000 people

Source: CC/NCHS Vital Statistics System, Mortality

Human Services (HHS), more than 650,000 opioid prescriptions are dispensed every day (translating to more than 237 million per year).<sup>9</sup> Opioids are prescribed for a variety of health conditions, including post-surgical recovery, chronic pain, and injury.<sup>8</sup> One in 15 people that begin taking opioids will become long-term users.<sup>3</sup> Although many people need medication to manage acute or chronic pain, there are several health conditions for which extended opioid use is not the most effective treatment.<sup>10</sup> The increase in legally prescribed opioids has also spurred a more recent spike in the production of illicit drugs, like heroin and illegally manufactured fentanyl.<sup>7,11,12</sup> According to the Centers for Disease Control and Prevention, half of all heroin users originally became addicted to prescription pain relievers. When people use prescription opioids for long periods of time, they build up a

tolerance that leads to dependence and eventually need more of the drug to avoid withdrawal. Once consistent opioid use turns into misuse, individuals often turn to the illegal alternatives to supplement their access.<sup>4,7,8</sup> In fact, people with prescription opioid use disorder are 40 times more likely to use heroin than the average person.<sup>1</sup> Chronic opioid misuse can lead to a variety of negative health outcomes, and increases the risk of serious infection, HIV, and hepatitis B/C.<sup>1,5,12</sup> This transition between prescribed, legal use and illicit use is a significant reason for the staggering prevalence of opioid use disorders.

In 2016, HHS stated that more than 10 million people in the United States report nonmedical use of prescription opioids, and an additional 900,000 report using heroin.<sup>1,9</sup> Although opioid use and dependence has become an issue all over the country, particularly high rates are seen in the Southwest,

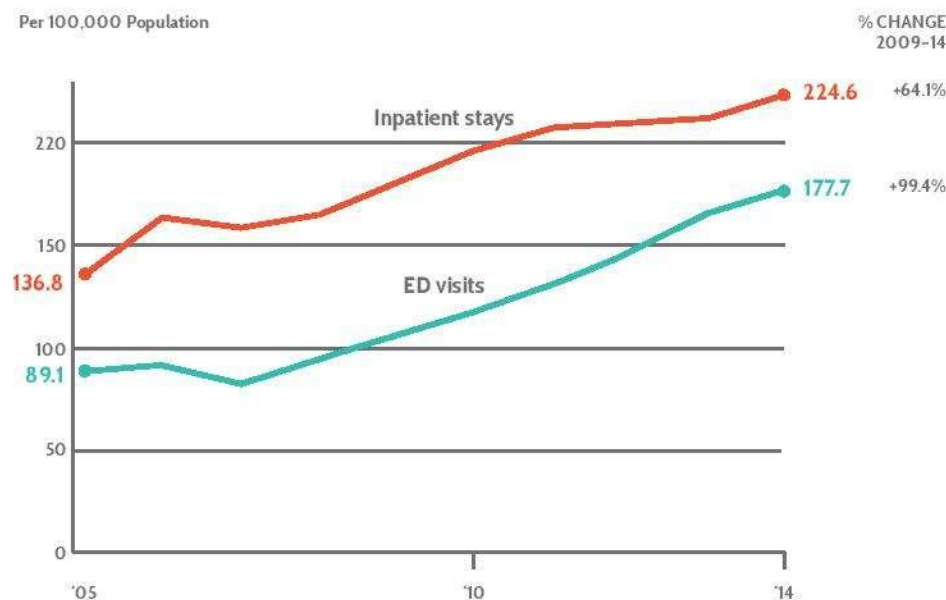
## Boston Medical Center

(BMC) has been a national leader in addressing the opioid crisis. BMC runs the largest primary care office-based opioid treatment program in New England. The program was the first of its kind in the nation and has been replicated in 35 states. It employs a collaborative care model using nurse care managers to provide medication-assisted treatment to individuals with opioid use disorder. The program also has been tailored to meet the needs of other patient populations, including adolescents and pregnant women.

BMC also created among the first emergency department (ED)-based and urgent care opioid treatment programs in the country, and its inpatient addiction consult service has reduced ED visits for participants by 30 percent. In partnership with the state health department, BMC has pioneered naloxone distribution programs with law enforcement and other first responders and overdose bystanders.

Most recently, BMC announced its new Grayken Center for Addiction Medicine, the result of a \$25 million gift intended to help the health system tackle the urgent opioid problem in its community. The Grayken Center's mission is to replicate successful models of care locally and nationally, develop new treatment models, and educate health professionals to identify, prevent, and treat substance use disorders.<sup>4,14-17</sup>

## U.S. RATE OF OPIOID-RELATED INPATIENT STAYS AND EMERGENCY DEPARTMENT VISITS



Source: Agency for Healthcare Research and Quality Center for Delivery, Organization, and Markets' Healthcare Cost and Utilization Project: HCUP Fast Stats, Opioid-Related Hospital Use



Northeast, and Appalachia regions.<sup>6,9</sup> The most serious consequence of the increase in opioid use has been opioid-related overdose deaths, which now is the leading cause of accidental death in the United States, with at least 60 percent of such deaths resulting from opioids.<sup>8,11</sup> Opioid overdoses have quadrupled since 1999, leading to a reported 33,091 deaths in 2015, and more than half of a million deaths between 2000 and 2015.<sup>2,5,11,13-15</sup> Another major indicator of opioid use and misuse is the number of babies born with neonatal abstinence syndrome (NAS). NAS occurs when babies are born dependent on opioids, leading to various health complications, such as underdevelopment, respiratory problems, feeding issues, jaundice, and seizures.<sup>7,8,16</sup> Like overdoses, NAS incidence has significantly increased over the past 15 years.<sup>16,17</sup>

## OPIOIDS AND THE HEALTH CARE SYSTEM

Hospitals and other providers play a unique and significant role in the opioid crisis. In one regard, hospitals might be the first place people use opioids, if painkillers are prescribed following a procedure or injury. Conversely, hospitals are a main care

provider for people experiencing opioid-related health problems once they engage in substance misuse, like infection or overdose.<sup>18</sup> As a result, hospitals have an enormous role to play in the prevention and intervention of this widespread problem.

For physicians, the decision to prescribe opioids is a complicated one. Opioids are a valuable option for treating pain, particularly for cancer treatment and palliative care.<sup>15,19</sup> Millions of Americans suffer from chronic pain and opioid therapy is sometimes their best chance at living comfortably.<sup>20</sup> Things are further complicated when clinicians must decide whether to prescribe opioids relatively quickly—for example, during an emergency department (ED) visit—and with limited information.<sup>10</sup>

Over the past several years, the health care field has questioned whether overprescribing could be linked, in part, to patient satisfaction concerns. Evaluating patient satisfaction is an important part of quality improvement and equitable care delivery, but physicians might be put in a tough situation if patients expect opioids and perceive their treatment as inadequate without them.<sup>10,20</sup> Patient satisfaction scores can affect physicians' professional

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Opioid overdoses have quadrupled since 1999, leading to more than half a million deaths between 2000 and 2015.

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## UK HealthCare Chandler Hospital

has implemented new guidelines for prescribing opioids, particularly in the emergency department (ED). The hospital has been training ED doctors to use opioids as a last resort for patients, rather than an initial line of a defense. The hospital is urging providers to first provide non-opioid options—like ibuprofen and acetaminophen—and then to explore alternative pain management, such as localized nerve blocking methods. The hospital has engaged physicians, pharmacists, and nurses to ensure that all staff are committed to providing non-opioid regimens before prescribing stronger medications. Initial evaluations showed that the policies resulted in a nearly 50 percent decline in the number of opioids prescribed to trauma patients.<sup>49</sup>

Similar programs have been implemented at other essential hospitals, including **St. Joseph's Regional Medical Center** in Paterson, New Jersey, and **Temple University Health System** in Philadelphia.<sup>32,49,50</sup>

## Oregon Health & Science University Hospital

in Portland worked with several partners—including community organizations and a Medicaid accountable care organization—to conduct a needs assessment and subsequent response to substance use disorder in its area. The needs assessment revealed high rates of hospitalization, long lengths of stay, and high readmissions related to substance use disorder. The hospital and its partners worked to create a care model, called “Improving Addiction Care Team” (IMPACT), for medically complex patients experiencing substance use disorder. The IMPACT model employs a consultation service, direct access to post-hospital treatment, and a medically supported residential care program.<sup>48</sup>



standing and even have financial implications.<sup>10,21</sup> Studies examining a direct relationship between opioid prescribing and pain-related patient satisfaction have not found a conclusive correlation, but concern remains over potential conflicting interests.<sup>22,23</sup> As a response to concerns about this conflict, the Centers for Medicare & Medicaid Services (CMS) recently announced that it will remove and revise pain management questions from the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey in 2018. This is important for Medicare's value-based purchasing program, which rewards and penalizes hospitals for various metrics and relies on the HCAHPS survey for 25 percent of hospitals' scores.<sup>22,24</sup> The change is intended to ensure that clinician incentives are consistent with responsible care and pain management.<sup>10</sup>

The impact of the opioid crisis is clearly reflected in opioid-related hospital costs and utilization, which have dramatically increased in recent years.<sup>4,5,12</sup> Between 2005 and 2014, opioid-related inpatient stays increased by 64.1 percent, and ED visits increased by 99.4 percent.<sup>5,25</sup> Forty-six states saw increases in

inpatient stays and ED visits, to varying degrees.<sup>5,25</sup> Health care costs tell a similar story: An estimated \$55 billion in annual health and social costs stem from prescription opioid abuse, \$20 billion of which are a direct result of inpatient and ED care.<sup>9</sup> The cost of opioid-related diagnoses increased by more than 1,000 percent from 2011 to 2015.<sup>26</sup> These costs often are the result of ED charges, laboratory tests, outpatient visits, and costly complications like infections and NAS.<sup>8,12,26</sup> As of 2015, the average cost of a patient with opioid abuse or dependence was more than 500 percent higher than the cost for a patient without these conditions.<sup>12,26</sup> The drain on resources affects hospitals and health systems across the country as they try to meet the demands of a rapidly growing problem.<sup>27</sup>

Essential hospitals play a key part in the health care industry's response to the opioid crisis. Although this problem has reached people of all demographics, the disadvantaged populations treated by essential hospitals often have limited resources and complex social needs—substantial risk factors for substance use disorders.<sup>6</sup> Data show that Medicaid is the most common primary payer for opioid-related

### HOSPITAL PARTNERS IN COMBATting THE OPIOID CRISIS:

**Prescription monitoring:** pharmacies, other providers, public health departments

**Rescue and Naloxone Access:** law enforcement, emergency medical services, pharmacies

**Educating the Community:** public health departments, schools, elected officials

**Transitional Treatment:** substance abuse clinics and community providers, social services

morbidity and mortality, and nearly 12 percent of adults covered by Medicaid have a substance use disorder.<sup>4,6,12,28,29</sup> As cost and utilization figures indicate, opioid-related health care services place a sizable resource burden on providers, representing a particular struggle for essential hospitals that often operate on thin margins. Patients at essential hospitals also are less likely to be able to afford follow-up care at other facilities, meaning they might rely more heavily on the hospital's emergency and inpatient services.<sup>12,30</sup>

## University of Illinois Hospital & Health Sciences

**System** (UI Health) in Chicago has combatted the opioid crisis by updating opioid prescribing and monitoring policies, adopting new tools for analyzing opioid safety, and fostering a culture of safe opioid therapy. To date, UI Health has updated pain management policies, created patient education materials on the risks of opioids, and updated distribution and tracking of naloxone. Later this year, UI Health will take measures to detect opioid-induced respiratory depression earlier in high-risk patients. UI Health uses technology to standardize and automate best practices throughout the system. The system also plans to centralize patient pain data and streamline provider access to prescription drug monitoring programs by integrating data with its electronic health record.<sup>31</sup>

### PROMISING INTERVENTIONS

Moving forward, hospitals can help mitigate opioid use and its consequences by working with community partners to provide outreach and care. The main priorities and opportunities are to decrease the availability of opioids and provide coordinated, effective treatment.<sup>2,12,15</sup> Hospitals also can help inform their community and its leaders about the risks of opioid use, the nature of substance use disorders, and appropriate preventive measures.<sup>3</sup> By engaging multidisciplinary groups



within the hospital, getting support from leadership, and assessing current practices, hospitals can implement a series of strategies to help prevent opioid use and associated health conditions.<sup>31</sup>

### *Prescribing Practices*

All hospitals should take the important step of identifying and implementing clear guidelines on opioid prescribing.<sup>11</sup> CDC has released guidelines at the federal level, and many states are providing their own guidance.<sup>8,9,29</sup> Guidelines generally urge clinicians to consider alternatives to opioid treatment; effectively communicate with patients; coordinate with primary care and other providers; consult prescription monitoring programs; choose the lowest possible doses when prescribing opioids; avoid time-released substances; and reevaluate often before prescribing additional medication.<sup>2,8,11,32,33</sup> Some health systems have facilitated systematic changes using guidelines to create decision-making tools for clinicians.<sup>2</sup> Studies examining the effectiveness of prescribing improvement practices consistently show declines in the amount of opioids being prescribed with minimal negative consequences.<sup>29,32</sup>

To enact widespread change, these types of guidelines should be taught to medical students and licensed clinicians.<sup>2,15,18,34,35</sup> The field has made some progress in this respect: In 2016, 60 medical schools, 50 pharmacy schools, and 200 nursing schools committed to requiring prescription education for their students.<sup>8,18</sup>

Introducing alternative pain management options is an important move in lowering opioid prescriptions. This often includes a first line of defense through non-addictive drugs, like acetaminophen, and might include

## **Women & Infants Hospital of Rhode Island,**

part of Care New England Health System in Providence, has implemented a comprehensive program targeting neonatal abstinence syndrome (NAS). The hospital's nursing and physician leadership partnered with community organizations to provide innovative care delivery for babies with NAS and their mothers. The program introduces a "rooming-in" option, which is a family care unit that offers a private room to mothers and babies to support bonding in a supervised environment. The care teams consist of doctors, nurses, nurse practitioners, occupational therapists, social workers, case managers, and community partners that provide follow-up care. The program tracks infant exposure to medication-assisted treatment, length of stay, dosing, and maternal involvement.<sup>52</sup>

options like physical therapy or localized nerve blocking.<sup>3,4,10,36</sup> CDC and other federal agencies suggest that providers continue to explore alternative options to mitigate overprescribing. Policymakers, providers, and payers must work to ensure these services are covered by insurance to make them viable options.<sup>15</sup> Preventing opioid diversion—in which legally prescribed medicine is distributed illicitly—is another component of these improvement efforts.

Hospitals can work with onsite or partnering pharmacies to ensure opioids are sufficiently secure to avoid mishandling.<sup>4,37,38</sup>

### *Screening and Monitoring*

To accompany stringent prescribing guidelines, hospitals should use any available resources to structure routine monitoring and screening programs. Doing so will create opportunities to identify patients that are at risk for or currently experiencing opioid dependence and allow the hospital to track its own progress in safe prescribing.<sup>18</sup> By identifying opioid use disorder, hospitals can refer patients to

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**Hospitals can engage multidisciplinary groups, get support from leadership, and assess current practices to develop a series of strategies to help prevent opioid use and associated health conditions.**

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appropriate care and services once they leave the health system; Gathering and leveraging appropriate data is a critical part of this process.<sup>39</sup> Implementing systematic screening and recording substance use information enables hospitals to harness data to monitor individual risk factors and use patterns.<sup>40</sup> Hospitals can collaborate with other health systems, public health officials, pharmacies, and emergency medical services to track and target communitywide outbreaks.<sup>5,40,41</sup> Prescription drug monitoring programs (PDMPs) are becoming more routine at the state level, and hospitals should coordinate with those programs to the best of their ability.<sup>41</sup>



### *Treatment and Rescue*

Evidence-based treatment programs, which can exist within or outside of a hospital system, are a key component of combatting opioid use.<sup>27</sup> One of the most commonly used treatment models—medication-assisted treatment (MAT)—uses counseling in combination with drugs like methadone and Buprenorphine to prevent withdrawal, suppress cravings, and support recovery.<sup>7,18</sup> MAT has proved successful in decreasing mortality, decreasing risk of infection, improving social functioning, and increasing retention in rehabilitation programs.<sup>18</sup> But there are large gaps between MAT capacity and demand. To meet this need, some health systems are developing their own infrastructure and care teams—which include physicians, licensed therapists, counselors, and/or recovery specialists—to treat opioid misuse.<sup>27</sup> To help patients navigate transitional care, it is critical that hospitals continue to coordinate with other facilities that offer MAT in the community to prevent relapses once patients leave an inpatient stay or ED visit.<sup>18</sup>

Hospitals should assess naloxone access and distribution in their communities. Naloxone is an effective overdose reversal drug that can help patients survive until they can receive care in the ED.<sup>21</sup> Hospitals can help prevent opioid overdose deaths in their patient population by training staff, working with pharmacies, providing education and outreach within the community, and supporting policies that promote widespread distribution.<sup>15,40,42</sup> Some hospitals are implementing programs that provide naloxone to patients after an opioid-related ED visit, though this can be complicated by costs and legal concerns.<sup>42</sup>

### *Multisector Partnerships*

The most effective way for hospitals to reduce opioid use in their communities is to work with a diverse group of partners, including law enforcement, elected officials, other health care providers, pharmacies, first responders, schools, social services, and public health departments.<sup>1,7,8,11,15,18,37,43</sup> By treating this problem as an epidemic, hospitals can use resources and tactics to focus on prevention, raising awareness, and community outreach.<sup>4,8,15</sup> Law enforcement is an essential partner in opioid use response, as police often are the first responders to opioid-related overdoses. More than 2,000 law enforcement agencies across the United States are trained and equipped to use naloxone, and others are enacting strategies to divert illicit drug users to treatment, rather than correctional facilities.<sup>15</sup> Hospitals can work with community partners to set up needle exchange programs to decrease rates of infection and safe disposal units to ensure unused opioids are properly discarded.<sup>18,40</sup> Lastly, close coordination with social services is necessary for responsible handling of NAS cases, and hospitals should correspond with agencies—such as child welfare—to ensure that necessary information is shared between clinicians and case managers.<sup>7</sup>

### *Federal and State Resources*

As the opioid crisis continues to escalate, it is important for hospitals to stay up-to-date on policies, funding opportunities, and available resources at the state and federal levels. For example, the recently enacted 21st Century Cures Act allocated \$1 billion in funding to combat opioid misuse, and CDC was awarded more than \$30 million to 29 states to improve

safe prescribing and prescription monitoring programs.<sup>5,9</sup> The Agency for Healthcare Research and Quality, as well as the Health Resources and Services Administration, recently provided grant funding to improve MAT capacity in high-use states (committing \$12 million and \$94 million, respectively).<sup>5,9</sup> In May 2017, the Substance Abuse and Mental Health Services Administration announced it will award more than \$70 million in grants to help health care providers and community organizations treat opioid use disorder and prevent overdoses. There also are new developments in drug technologies—intranasal naloxone and implant-based buprenorphine recently were approved by the Food and Drug Administration.<sup>9</sup>

Hospitals must prepare for potential large-scale changes in federal health care legislation, which have the potential to significantly cut and fundamentally change the Medicaid program. In recent years, states have leveraged the Medicaid program—through Section 1115 waivers, state plan amendments, and the Medicaid Innovation Accelerator Program—to target care for at-risk and substance use disorder populations.<sup>13</sup> Looming cuts to Medicaid threaten to jeopardize access for critical prevention, treatment, and recovery services for low-income individuals with substance use disorders, as well as diminish recent progress made in the battle against opioid addiction.

In addition to state Medicaid programs, specific legislation and resources are constantly evolving on the state level. Many states have responded to the opioid crisis through initiatives led by governors or other state officials.<sup>15</sup> As previously mentioned, attuning with state PDMPs provides hospitals with more timely data and information.<sup>5,38</sup>



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