

# The Scourge Of Opioids



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It was a heartrending and unforgettable picture that quickly went viral – a confused child could be seen in the back seat of an automobile staring at two unconscious adults, each with mouth agape, in the front seat. Published in September 2016 and reprinted here, this picture opened the eyes of many Americans to an emerging public health crisis. This raw and searing photograph not only captured the personal impact of the epidemic but came to represent a call for action to combat the epidemic of opioid abuse and addiction.

Who was the young boy in the picture? Were those his parents slumped in the front? Did these two adults ultimately die of an opioid overdose (as 33,000 did in 2015)?<sup>1</sup> Did a physician prescribe the opioids that proved problematic in this instance? What happens to children whose parents or guardians fall into the grips of opioid abuse or addiction? What are the financial consequences generated by improper opioid usage?

Alas, often there are more questions than answers when opiate addiction is the subject of discussion. One thing that we do know for certain, however, is that the misuse and abuse of opioids has led to a national crisis, one that has left a destructive imprint on Hampton Roads. We provide the outlines of the crisis in this chapter and suggest a plan of action.

## Opioids: A Primer

**Opioids are painkillers and therefore fulfill many legitimate medical purposes.** They can be natural substances such as opium, which is derived from poppy plants, or morphine, a key alkaloid in opium. Alternatively, they can be synthesized from opium and morphine into other forms such as heroin, amalgamated by a Bayer chemist in 1897. Opium and morphine can be synthesized into a wide variety of legitimate products that may be prescribed by physicians, purchased over the counter or acquired illegally.

<sup>1</sup> Centers for Disease Control and Prevention, [www.cdc.gov/mmwr/volumes/65/wr/mm655051e1.htm#F1\\_down](http://www.cdc.gov/mmwr/volumes/65/wr/mm655051e1.htm#F1_down).



Source: Alice Park, "The Story Behind the Viral Photo of an Opioid Overdose," Time (Jan. 24, 2017)

**A powerful synthesized opioid known as fentanyl is 50 to 100 times more potent than morphine and is a contributor to the opioid crisis.**<sup>2</sup> Like most opioids, fentanyl has legitimate uses. It is used to combat pain during surgeries and fentanyl patches provide localized pain relief. It also can be taken by means of a nasal spray or injected. Used recreationally and abusively, however, it can be fatal.

Most fentanyl consumed in the United States is manufactured in China, shipped either to Canada or Mexico, and then smuggled across the border. The Economist magazine (May 20, 2017) reports that one kilogram of fentanyl

<sup>2</sup> [www.everydayhealth.com/drugs/fentanyl/](http://www.everydayhealth.com/drugs/fentanyl/).

purchased from a Chinese dealer for \$4,000 has a street value of \$1.6 million in the United States. China's role in this trade route constitutes yet another sore point between the two countries.

However, it is neither difficult nor terribly expensive to set up a functioning opioid factory in the United States. The television series "Breaking Bad" was on target in this respect. Hence, if one's approach to opioid abuse is an attempt to crack down on and eliminate opioid suppliers, then this is likely to be a very difficult task indeed. Encrypted internet browsers such as Tor accentuate detection difficulties.

Consistent opioid use, even when that use has been prescribed legitimately by a physician, can lead to physical dependence. Habitual use or abuse of opioids, such as heroin and fentanyl, often results in death. Tragically, however, the withdrawal of an opioid from an addict similarly can result in subsequent medical complications that end in death.

As is true for common and legitimate drugs, opioids come in five major forms: tablets, capsules, nasal sprays, patches and liquids. Table 1 reports the most common opioid varieties.

TABLE 1 THE MOST COMMON OPIOIDS		
<b>Methadone</b>	<b>Vicodin, Lorcet, Lortab (hydrocodone)</b>	<b>Dilaudid (hydromorphone)</b>
<b>Percocet, Percodan, OxyContin (oxycodone)</b>	<b>Demerol (pethidine)</b>	<b>Duragesic (fentanyl)</b>

Source: Opioids, National Institute on Drug Abuse, www.drugabuse.gov

## OPIOID-RELATED FATALITIES

Deaths attributable to opioid misuse or abuse have been rising rapidly. In the United States, opioids (including prescription opioids, fentanyl and heroin) were directly responsible for the deaths of 33,000 people in 2015, almost 10,000 more than in 2014. In Virginia, more than 600 people are reported

to have died from fentanyl overdoses in 2016, and Norfolk accounted for 55 of those deaths.<sup>3</sup> More Virginians die from opioid overdose than from car accidents each year.

Graph 1 illustrates the rapid growth in overdose deaths involving opioids between 2000 and 2015 in the United States. These data are presented in the form of overdose deaths per 100,000 people. Note that deaths attributable to commonly prescribed opioids exceed those from heroin.

Physicians reportedly wrote more than 300 million prescriptions in 2016.<sup>4</sup> Opioid deaths frequently begin with a legitimate prescription from a physician that was intended to reduce a patient's pain. Four out of five heroin abusers started their opioid use with a legitimate prescription from a physician.<sup>5</sup> Even so, only 27 percent of those taking opioids today are using their own prescription; the majority obtain their supply of opioids from other sources. A recent report issued by the U.S. surgeon general estimated that more than 27 million Americans used illegal drugs or violated the terms of their prescriptions in 2015.<sup>6</sup> These are grim statistics.

Monica Beaudry, the 23-year-old daughter of a retired Hampton Roads naval officer, died from a heroin overdose in December 2016. She became addicted, tried rehabilitation programs, but ultimately was unable to overcome her addiction. Her story is discouragingly typical. See Scott Daugherty, "Forever Changed: Family Wants Justice for Daughter Who Overdosed 9 Months After Trying Heroin," *The Virginian-Pilot* (May 18, 2016).

<sup>3</sup> Chris Horne, "Opioid Addiction: Pathway of a Potent Killer," WAVY-TV (May 3, 2017).

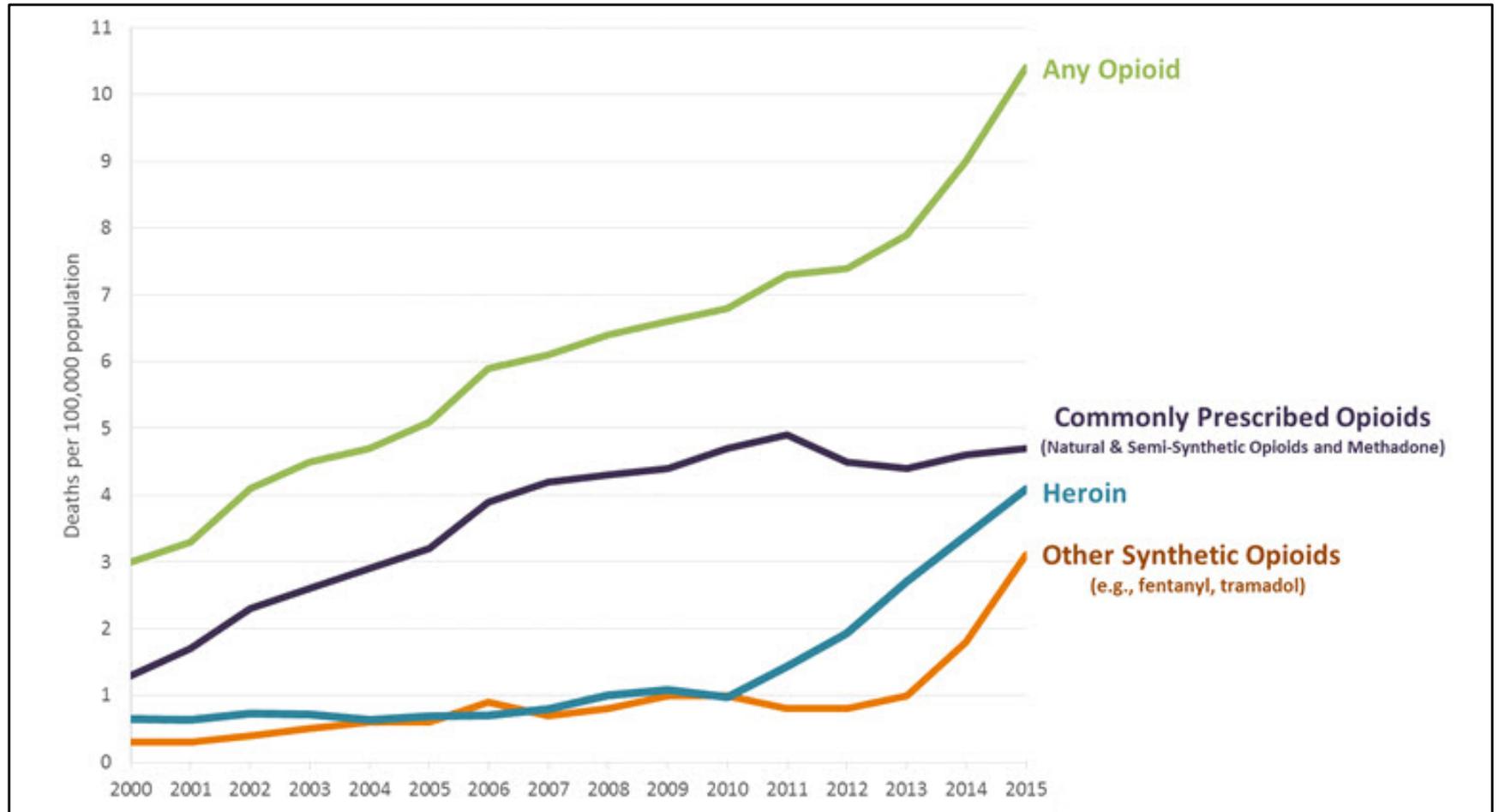
<sup>4</sup> Scott Daugherty, "Forever Changed: Family Wants Justice for Daughter Who Overdosed 9 Months After Trying Heroin," *The Virginian-Pilot* (May 18, 2016).

<sup>5</sup> Marc Siegel, "Opioids Shouldn't Be a Doctor's First Resort," *The Wall Street Journal* (March 28, 2017).

<sup>6</sup> *Addiction in America*. Surgeon General's Report. Department of Health and Human Services (2016).

GRAPH 1

OVERDOSE DEATHS INVOLVING OPIOIDS: UNITED STATES, 2000-2015



Source: National Vital Statistics System, Mortality, CDC/NCHS, <https://wonder.cdc.gov>

In many American cities, identifiable illicit street markets exist where opiates are bought and sold.<sup>7</sup> The flourishing nature of these illegal opioid street markets means not only that they constitute the major source of income for some participants, but also are responsible for their abandoning searches for legitimate employment. Not infrequently, one of the sources of the illegal opioid supply is the multiple prescriptions individuals have obtained from multiple physicians.

On occasion, unethical doctors operate “pill mills,”<sup>8</sup> writing substantial numbers of prescriptions either for addicts or middlemen who sell them to drug dealers. Ironically, the U.S. Postal Service often is the means by which opioids are shipped inside the United States.

### WHEN IS OPIOID USE ILLEGAL?

Opioids typically are prescribed by licensed medical practitioners to individuals who complain of acute or chronic pain resulting from disease, surgery or injury. Opioids also are prescribed to people with moderate to severe coughs and diarrhea.

Methadone and buprenorphine are “substitute” opioids prescribed to treat addiction to other opioids, such as heroin or oxycodone. In essence, addicts are provided with a consistent, legal supply of these drug substitutes, with the aim of gradually weaning them off an uncontrolled opioid, such as heroin. Success in this regard has been mixed.

The use of prescription opioids for other than their medical purpose is illegal. Much attention is given to the abuse of illegal opioid drugs such as heroin, but the reality is that some of the most commonly abused opioids are prescription drugs, including fentanyl, Tylenol containing codeine, hydromorphone (Dilaudid), oxycodone (OxyContin, Percocet and Percodan) and morphine.<sup>9</sup>

Opioids are sold legally under many different brand names, including those just named. At the same time, they exist under different street names. Some of the well-known brand and street names for opioids are listed in Table 2.

<b>TABLE 2</b>		
<b>COMMON STREET AND BRAND NAMES OF OPIOIDS</b>		
<b>Street Names (Non-Prescribed and Illegal)</b>		<b>Brand names (Prescribed)</b>
<b>Captain Cody</b>	<b>Goodfella</b>	<b>Fiorional with Codeine</b>
<b>Cody</b>	<b>Murder 8</b>	<b>Robitussin A-C</b>
<b>Schoolboy</b>	<b>Tango and Cash</b>	<b>Tylenol with Codeine</b>
<b>Doors &amp; Fours</b>	<b>China White</b>	<b>Empirin with Codeine</b>
<b>Pancakes &amp; Syrup</b>	<b>Friend</b>	<b>Roxanol</b>
<b>Loads</b>	<b>Jackpot</b>	<b>Duramorph</b>
<b>M</b>	<b>TNT</b>	<b>Demerol</b>
<b>Miss Emma</b>	<b>Oxy 80</b>	<b>Actiq</b>
<b>Monkey</b>	<b>Oxycat</b>	<b>Duragesic</b>
<b>White Stuff</b>	<b>Hillbilly Heroin</b>	<b>Sublimaze</b>
<b>Demmies</b>	<b>Percs</b>	<b>OxyContin</b>
<b>Pain Killer</b>	<b>Perks</b>	<b>Percodan</b>
<b>Apache</b>	<b>Juice</b>	<b>Percocet</b>
<b>China Girl</b>	<b>Dillies</b>	<b>Tylox</b>
<b>Dance Fever</b>		<b>Dilaudid</b>

Source: Opioids and Morphine Derivatives, Foundation for a Drug Free World, [www.drugfreeworld.org](http://www.drugfreeworld.org)

<sup>7</sup> Harriet Ryan et al., “How black-market OxyContin spurred a town’s descent into crime, addiction and heartbreak,” *Los Angeles Times* (July 10, 2016).

<sup>8</sup> David Armstrong, “Illegal Street Drugs, Not Prescriptions, Now Powering Opioid Abuse, Study Finds,” published on Aug. 25, 2016, [www.statnews.com/2016/08/25/fentanyl-street-drugs-cdc](http://www.statnews.com/2016/08/25/fentanyl-street-drugs-cdc).

<sup>9</sup> Centre for Addiction and Mental Health (CAMH), [www.camh.ca/en/hospital/health\\_information/a\\_z\\_mental\\_health\\_and\\_addiction\\_information/oxycontin/Pages/opioids\\_dyk.aspx](http://www.camh.ca/en/hospital/health_information/a_z_mental_health_and_addiction_information/oxycontin/Pages/opioids_dyk.aspx).

## WHERE DO OPIOIDS COME FROM?

The key contents of most opioids used in the United States come either from South America or Mexico. Even though perhaps 90 percent of the world's heroin is cultivated in Afghanistan, only about 4 percent of heroin in the United States came from Afghanistan in 2013.<sup>10</sup>

Synthetic opioids such as oxycodone (OxyContin), hydromorphone (Dilaudid) or hydrocodone (Tussionex) are made by changing the chemical structure of naturally occurring opioids.<sup>11</sup> The starting point, however, is a naturally occurring opioid such as opium or morphine.

## THE MEDICAL CONSEQUENCES OF OPIOID USE

Opioid abuse often has devastating consequences. To the surprise of some, during the past decade, even while the death rates associated with heart disease and cancer declined substantially, the death rate associated with opioid pain medication increased markedly.

Opioid abuse and addiction nearly always have negative mental and physical effects, including nausea, vomiting, a weakened immune system, slower breathing rates, comas, increased risk of HIV, infectious diseases, hepatitis, hallucinations, collapsed veins and clogged blood vessels, and choking.<sup>12</sup>

Unfortunately, symptoms associated with the withdrawal from opioids can be almost as terrifying. When someone who is addicted to opioids stops using the drugs, they likely will exhibit withdrawal symptoms, including anxiety, sweating, insomnia, agitation, tremors, muscle aches, nausea, vomiting, diarrhea, and extreme mental and physical discomfort. These can lead to death.

The cure is not worse than the disease in the case of opioids. However, Angee Baldini et al. (2012) found that even positive, well-intentioned opioid therapy can adversely affect respiratory, gastrointestinal, musculoskeletal,

cardiovascular, immune, endocrine and central nervous systems.<sup>13</sup> Further, the higher the daily dose of a prescribed opioid, the higher the risk of overdose and accompanying problems, such as fractures, addiction, intestinal blockages and sedation. Hence, physicians and patients must weigh the full spectrum of medical risks against a realistic assessment of observed benefits related to pain reduction. It is not clear that some physicians understand this responsibility fully.

It is possible to reverse the immediate deadly impact of an opioid overdose. Naxolone (also known as Narcan) is a drug that can be used to treat narcotic overdoses in emergency situations. Since March 13, 2017, when Gov. Terry McAuliffe approved the Virginia Board of Medicine's declaration of an opioid emergency, naxolone has been much easier to obtain in the Commonwealth. Amazingly, it can restore breathing to a comatose, headed-for-death individual within two to eight minutes after being administered. Now, a wide variety of individuals, including families and friends of abusers, can obtain a prescription for it and have it ready when needed. While naxolone addresses the results of opioid abuse and not the causes, its greater availability is a positive step forward that undoubtedly will save lives.

## WHAT DOES THE LAW HAVE TO SAY?

Federal laws delimit the possession and distribution of nearly all opioids and substantial penalties attach to their illegal use. Additionally, every state has adopted laws proscribing opioid activity. Prescription opioids are legal only when prescribed by a licensed medical practitioner and used by the person to whom they are prescribed. Even so, "double doctoring" – obtaining a prescription from more than one doctor without telling the prescribing doctor about other prescriptions – is both illegal and common.<sup>14</sup>

<sup>10</sup> "The Drug Addiction Pipeline: Who Supplies Drugs to America?" The Recovery Village, <https://www.therecoveryvillage.com/drug-addiction/who-supplies-drugs-america>.

<sup>11</sup> Centre for Addiction and Mental Health (CAMH). [www.camh.ca/en/hospital/health\\_information/a\\_z\\_mental\\_health\\_and\\_addiction\\_information/oxycotin/Pages/opioids\\_dyk.aspx](http://www.camh.ca/en/hospital/health_information/a_z_mental_health_and_addiction_information/oxycotin/Pages/opioids_dyk.aspx).

<sup>12</sup> Opioid (Opiates) Abuse and Addiction, <http://www.healthline.com/health/opioids-and-related-disorders#overview1>.

<sup>13</sup> Angee Baldini, et al., A Review of Potential Adverse Effects of Long-Term Opioid Therapy. The Primary Care Companion for CNS Disorders, 2012, doi:10.4088/pcc.11m01326.

<sup>14</sup> Dina Gusovsky, "Americans Consume Vast Majority of The World's Opioids," CNBC (April 27, 2016), [www.cnbc.com/2016/04/27/americans-consume-almost-all-of-the-global-opioid-supply.html](http://www.cnbc.com/2016/04/27/americans-consume-almost-all-of-the-global-opioid-supply.html).

# A Look At Virginia And Hampton Roads Data

Since 2010, the rate of opioid-connected deaths has increased nearly five-fold in Virginia. The Virginia Department of Health reported a 38 percent increase in deaths from prescription opioid and heroin overdoses between 2012 and 2014.<sup>15</sup> A more recent report found a 175 percent increase in deaths from several varieties of fentanyl during the same period.<sup>16</sup>

Graph 2 reveals that opioid-related deaths in Hampton Roads have recently overtaken statewide levels. While opioid deaths per 100,000 individuals were initially lower in 2011 and 2012, Hampton Roads endured a rapid increase in opioid fatalities in 2015. Graph 3 shows that these tragic deaths have been unequally distributed across the region's major cities.

Looking at fatal fentanyl deaths only in Table 3, it is apparent that these incidents have risen rapidly in recent years, with the 2016 regional total about five times as large as the comparable number for 2014.

<b>Location</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
<b>Chesapeake</b>	<b>0</b>	<b>5</b>	<b>4</b>	<b>15</b>	<b>13</b>
<b>Hampton</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>6</b>
<b>Newport News</b>	<b>1</b>	<b>0</b>	<b>8</b>	<b>6</b>	<b>10</b>
<b>Norfolk</b>	<b>0</b>	<b>13</b>	<b>2</b>	<b>23</b>	<b>28</b>
<b>Portsmouth</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>9</b>	<b>9</b>
<b>Suffolk</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>4</b>	<b>2</b>
<b>Virginia Beach</b>	<b>2</b>	<b>6</b>	<b>3</b>	<b>23</b>	<b>23</b>
<b>Hampton Roads</b>	<b>4</b>	<b>29</b>	<b>18</b>	<b>82</b>	<b>91</b>
<b>Virginia</b>	<b>50</b>	<b>102</b>	<b>134</b>	<b>224</b>	<b>288</b>

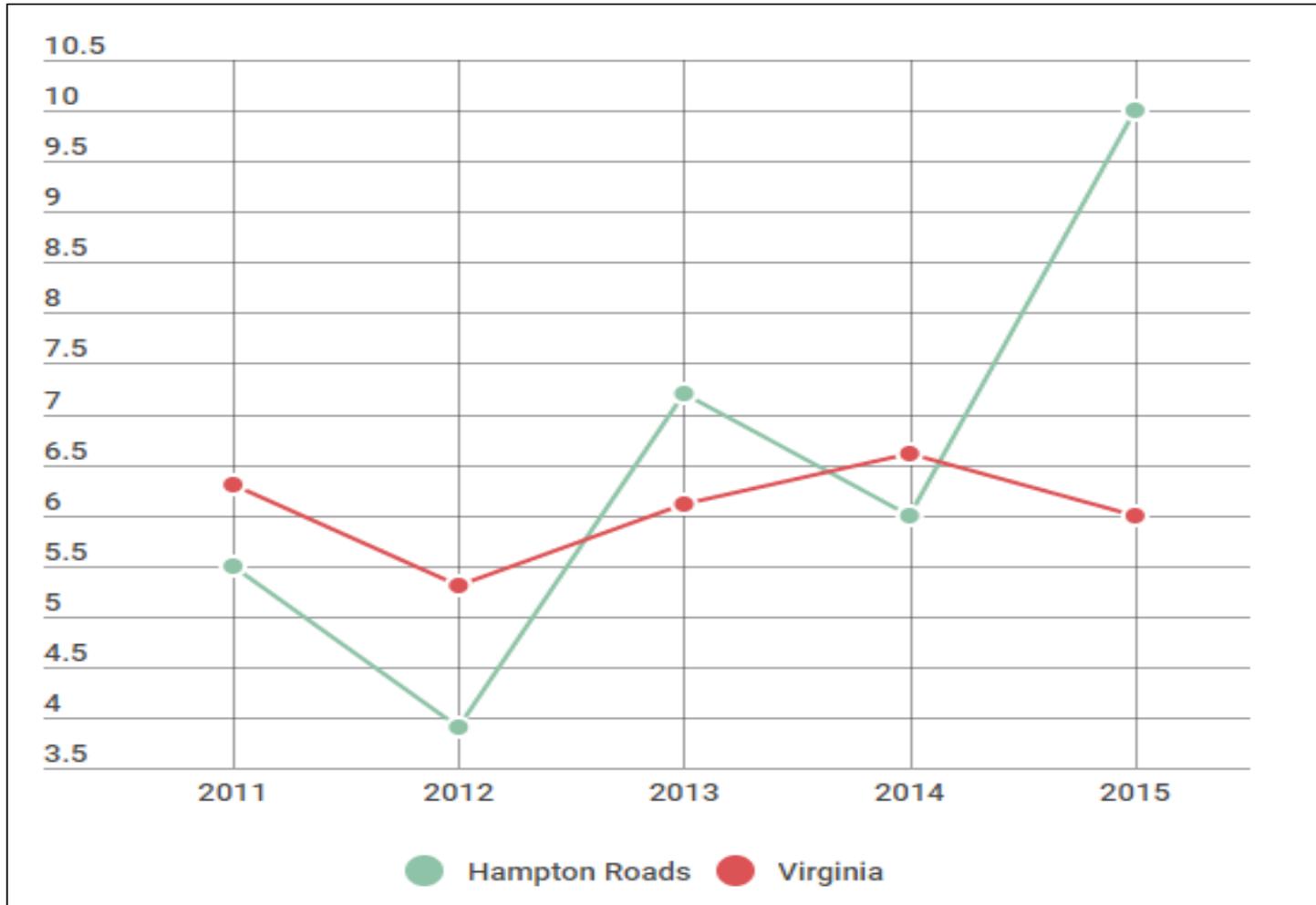
Source: Amir Vera, "Fentanyl: The Drug You've Never Heard of That's Killing More and More People in Hampton Roads," *The Virginian-Pilot* (Oct. 17, 2016)

<sup>15</sup> "Increases in Drug and Opioid-Involved Overdose Deaths – United States, 2010–2015," [www.cdc.gov/mmwr/volumes/65/wr/mm65051e1.htm](http://www.cdc.gov/mmwr/volumes/65/wr/mm65051e1.htm).

<sup>16</sup> Patricia Sullivan, "Drug Overdose Deaths Top 1,400 in Virginia in 2016," *The Washington Post* (April 13, 2017).

**GRAPH 2**

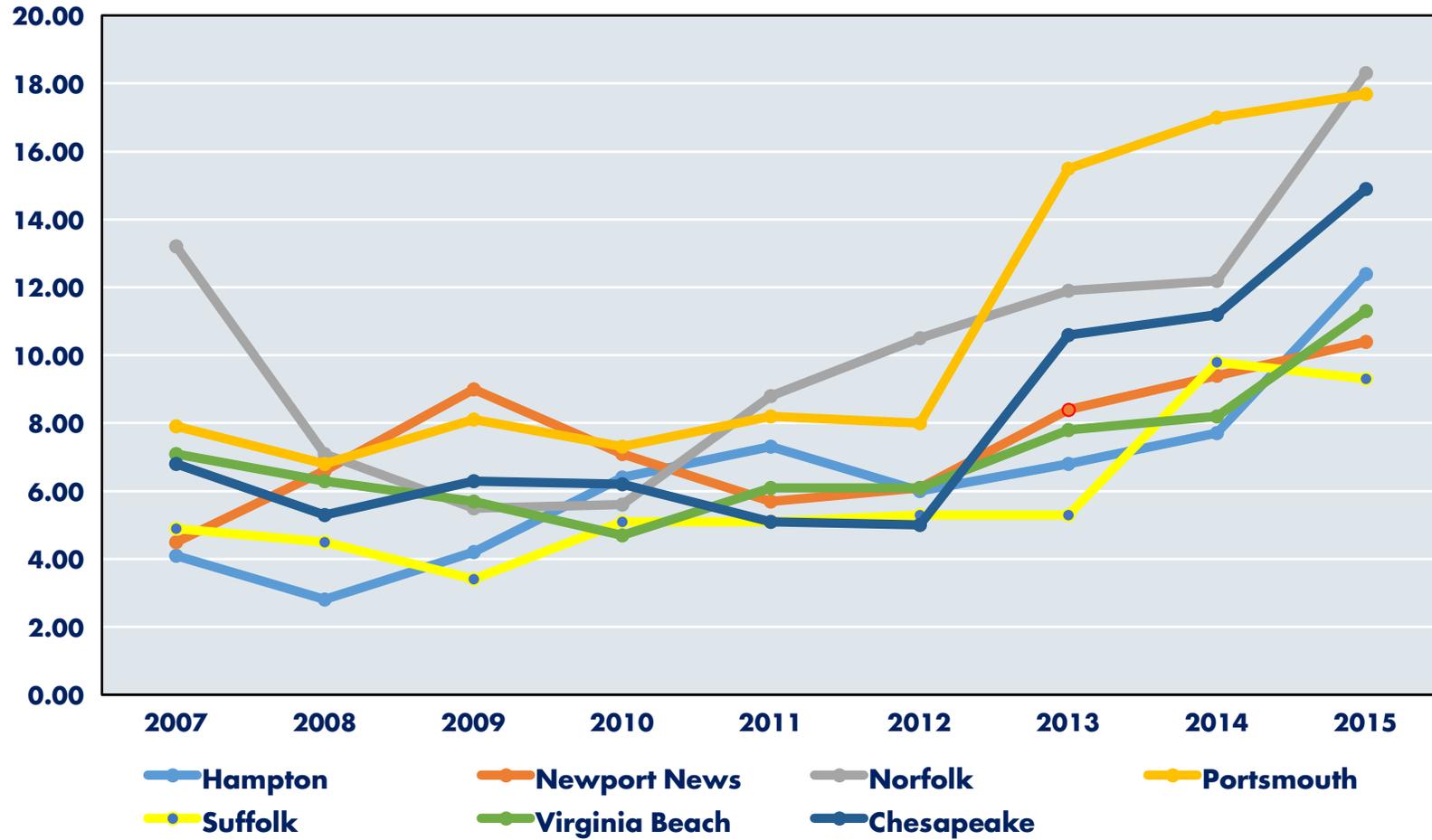
**OPIOID DEATHS IN HAMPTON ROADS AND VIRGINIA, 2011-2015 (DEATHS PER 100,000)**



Source: Gary A. Harki, "Virginia's Drug Problem: Heroin and Opioid Deaths Continue to Rise," The Virginian-Pilot (Dec. 25, 2015)

GRAPH 3

OPIOID-INDUCED DEATHS IN THE MAJOR CITIES OF HAMPTON ROADS, 2007-2015 (DEATHS PER 100,000)



Source: Data taken from graph by Will Houpp, The Virginian-Pilot (May 20, 2016)

# Opiate Addiction And Employment

*Prima facie*, opiate misuse or abuse is antithetical to regular, productive employment. Perhaps, but this is not immediately evident if one were to rely upon aggregate unemployment rates as one's evidence. The Bureau of Labor Statistics tells us that the region's unemployment rate declined from 8.2 percent in January 2010 to 4.2 percent in March 2017, even while opioid usage was accelerating upward.

However, a statistic considerably more relevant to measuring the possible effects of opioid usage on work is the labor force participation rate (LFPR). The LFPR measures whether an individual of prime working age either is employed, or looking for a job. **The relevance of LFPRs to opioid usage is straightforward: The consensus is that opioid addiction causes people to drop out of the labor force by making them less ambitious, more lackadaisical and even unresponsive to ordinary labor market incentives.**

It also is true that unemployment rates can be deceptive because an individual who drops out of the labor force and no longer is looking for a job is not counted as unemployed. LFPRs, however, catch this.

**The labor force participation rate in the United States for adults ages 25-54 has been on the decline for many years and reached a near 40-year low in May 2015 (see Graph 4).** As of September 2016, 11.4 million men between the ages of 25 and 54 were not in the labor force.

Does the decline in labor force participation reflect increasing opioid usage? Recent work conducted by Alan Krueger of Princeton University, under the aegis of the Federal Reserve Bank of Boston, strongly suggests that this may be so.<sup>17</sup> Krueger found that **44 percent of men not in the labor force said they took painkillers daily, and two-thirds of that subset were on prescription medicines. By contrast, just 20 percent**

<sup>17</sup> Alan B. Krueger, "Where Have All the Workers Gone?" Federal Reserve Bank of Boston Working Paper (Oct. 16, 2016).

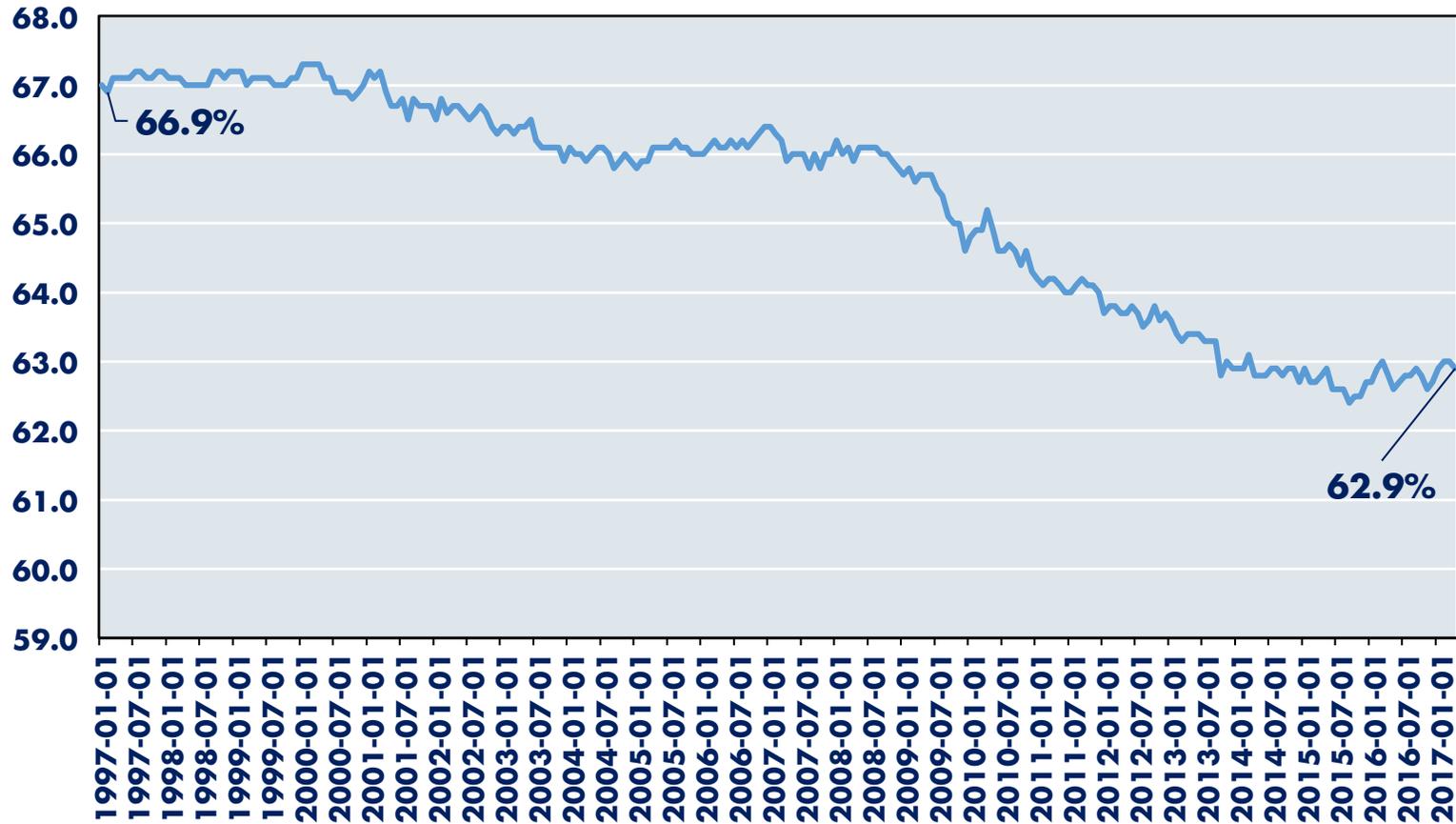
**of employed men and 19 percent of unemployed men (but looking for work) in the same age group reported taking any painkillers.** Graph 5 presents opioid use data for both men and women.

If, for whatever reason, many people of prime working age are not working, how do they survive? Some successfully claim disability. Disability insurance programs provided benefits to nearly 9 million disabled American workers in 2013, almost six times the 1.5 million disabled workers who received benefits in 1970. An increasing proportion of people who have left the labor force cobble together a combination of sources of support that may include disability payments, but also extended family support, charitable gifts, unemployment insurance, food stamps and perhaps some criminal activity. They may end up standing on the proverbial street corner, or lounging in a park – but not in the labor force except on a part-time, temporary or "gig" basis.

What is the cost of such behavior to the Hampton Roads economy? This is difficult to say. **If, however, labor force participation rate data for Hampton Roads mirror national trends, and the average wage of a labor force dropout averages \$30,000, then \$1.05 billion in lost productivity is a ballpark estimate of the 2016 cost of lower labor force participation to our region.**

GRAPH 4

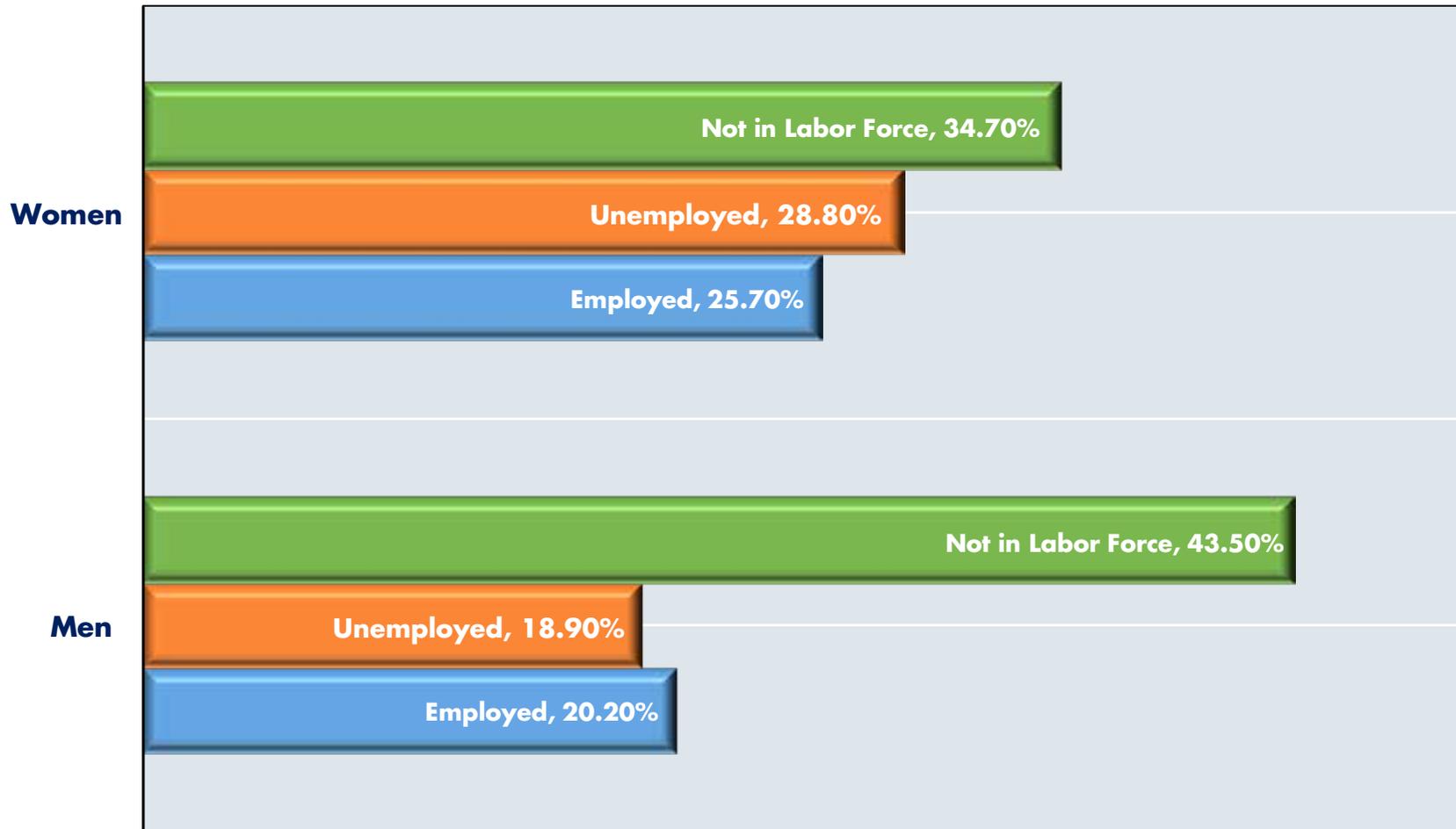
LABOR PARTICIPATION RATE FOR ADULTS, 25-54 YEARS: UNITED STATES, 1997-2017



Source: Bureau of Labor Statistics, [www.bls.gov](http://www.bls.gov)

**GRAPH 5**

**PERCENTAGE OF PEOPLE WHO TOOK PAINKILLERS THE DAY BEFORE (BY EMPLOYMENT STATUS)**



Source: Alan B. Krueger, based upon data from the American Time Use Survey of the U.S. Census Bureau

# Opiate Addiction And Crime

Does opioid abuse or addiction lead to additional crime? The National Council on Alcoholism and Drug Dependence argues that “drugs and crime are directly and highly correlated and serious drug use can amplify and perpetuate preexisting criminal activity.”<sup>18</sup> Evidence concerning this, however, is limited. Most crime rates in a majority of the areas of the United States have been declining in recent years, and hence it is difficult to make the case that the upward spike in opioid abuse and addiction has had much of an impact on crime rates. This is not the same as saying there has been no effect, but rather that many different factors affect crime rates and it is difficult to extract the precise contribution of opioid abuse to crime rates.

There are two additional observations of import to make with respect to opioid addiction and crime rates. First, opioid addicts typically do not survive for long periods of time and therefore do not remain alive to commit crimes. Second, the nature of opioid addiction is such that it saps energy and vitality. One is unlikely to commit crimes when one is semi-inert.

## Other Costs Of Addiction

Drug addicts or abusers frequently end up in hospital emergency rooms and there are costs associated with this. Virginia’s Joint Legislative Audit and Review Commission (JLARC) estimated that already in 2008, untreated substance abuse resulted in \$613 million in public safety expenditures (police, jail, prison) and health care services by local and regional governmental units.<sup>19</sup> The average hospital stay for those who were admitted because of drug abuse was 3.8 days in 2010 and their average treatment cost was \$29,497.<sup>20</sup> No doubt these numbers are higher today.

It is interesting to note that one well-regarded national study of the economic cost of opioid abuse concluded that governments bear only about one-quarter

<sup>18</sup> Virginia Performs, <http://vaperforms.virginia.gov/indicators/publicsafety/crime.php>.

<sup>19</sup> Joint Legislative Audit and Review Committee, Report to the Governor and the General Assembly of Virginia, Mitigating the Costs of Substance Abuse in Virginia. <http://jlarc.virginia.gov/dfs/reports/Rpt372.pdf> (2008).

<sup>20</sup> [www.latimes.com/nation/la-sci-sn-opioid-overdose-prescription-hospital-er-20141026-story.html](http://www.latimes.com/nation/la-sci-sn-opioid-overdose-prescription-hospital-er-20141026-story.html).

of the national cost of opioid addiction. The lion’s share of the costs are borne by families, employers and charitable organizations. Nearly two-thirds of the total economic burden was due to health care expenses, substance abuse treatment and lost productivity.

We want opioid abusers to seek treatment, but the treatment costs also can prevent them from doing so. In 2015, the average cost to a patient of an uncomplicated emergency room visit was \$746 in eastern Virginia.<sup>21</sup> Further, the drug substitutes used to move opioid addicts to a controlled status also can be pricey. The two most widely used drug substitutes are methadone and Suboxone (buprenorphine); each costs about \$500 per month per individual. These drug substitutes can be administered in the form of an implant that slowly releases the curative drug over a period of several months, but this costs around \$6,000.<sup>22</sup> One of several goals in instituting a drug substitute program is to reduce the size of the clandestine drug market, which often is dominated by organized crime and gangs.

## Policy Considerations

1. The foremost need of citizens, physicians and elected officials is more and better information concerning opioid addiction. Despite the adverse impact of opioid addiction upon labor force participation and even though this imposes substantial costs on society, many individuals seem unaware of the challenges.
2. It is not disputed that some physicians remain uninformed about the risks of opioids and are insufficiently trained to prescribe them while managing chronic patient pain. A Boston Medical Center study examined nearly 3,000 patients who survived an opioid-related overdose between 2000 and 2012.<sup>23</sup> The study found that over 90 percent of these patients continued

<sup>21</sup> Virginia Health Information, <http://www.vhi.org/healthcarepricing/procedure.asp?id=ERM22>.

<sup>22</sup> Matt Gregory, “Drug Addiction: The Cost of a Second Chance,” (Feb. 16, 2017), <http://drugfreeva.org/drug-addiction-the-cost-of-a-second-chance>.

<sup>23</sup> Marc R. Larochelle, Jane M. Liebschutz, Fang Zhang, Dennis Ross-Degnan, and J. Frank Wharam. “Opioid Prescribing After Nonfatal Overdose and Association With Repeated Overdose: A Cohort Study of Opioid Prescribing After Nonfatal Overdose.” *Annals of Internal Medicine*. American College of Physicians (Jan. 5, 2016).

to receive opioid medications from doctors, even after their overdose. Physician education is in order.

3. Additional financial support should be provided for research into nonaddictive, “selective” painkillers such as PZM21 and BU00028 (both experimental drugs). They offer hope that long-term use of opioids need not result in addiction.
4. We should create a national prescription registry. A recurring problem in opiate addiction is the ability of an individual to obtain multiple opiate prescriptions from multiple physicians. While there are privacy downsides to a national prescription registry, the nature of the current crisis suggests that the benefits accruing from such a registry probably would outweigh the costs by eliminating the ability of individuals to obtain repeated prescriptions.
5. The medical community should continue to utilize opiate substitute drugs such as methadone to move opiate addicts away from their addiction. Moving opiate-blocking drugs such as Naloxone (branded as Narcan and Evzio) from prescription to over-the-counter could lead to wider availability and the saving of lives. Almost needless to say, such interventions will not only require legislative action but also funding if they are to make a difference.
6. Opiate addiction should be regarded as a medical problem. Another “war on drugs” is not going to improve the opiate situation we face today.

Finally, it should be apparent that opiate misuse and abuse ultimately reflect our society – the values, attitudes, laws, geography and range of economic opportunities that together make us who we are. Hence, one cannot press a single button and eliminate the scourge of opiate addiction because this wave of abuse represents the conjunction of a set of complex phenomena deep within us. It would take a decade or more of attention, education and funding to reverse our current dismal situation, and even this may be too ambitious a goal.



