Prescription Opioid and Heroin Crisis in Philadelphia

Board of Health

March 9, 2017

Outline

- Overdoses in Philadelphia
- Prescription opioids
- Transition to heroin
- Magnitude of the problem
- Approaches to a solution

Drug overdoses in Philadelphia

Number of Overdose and Injury-related Deaths – Philadelphia, 2003-2016*

Number of Deaths

1000
900
800
700
600
500
400
300
200
100
0

Drug Overdose

Homicide

* projected

2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016*

Year of Death

Drug overdose deaths continue to rise in Philadelphia, with close to 900 deaths expected in 2016

Medical Examiner's Office, Philadelphia Department of Public Health

Deaths continue to rise steadily

Deaths (y-axis 0–250) by Death Year and quarter

Death Year	Quarter	Opioid Involved	No Opioid Detected
2013	1	82	25
2013	2	89	27
2013	3	101	23
2013	4	85	27
2014	1	105	35
2014	2	158	31
2014	3	103	33
2014	4	129	35
2015	1	138	35
2015	2	138	26
2015	3	135	33
2015	4	148	48
2016*	1	167	34
2016*	2	161	46
2016*	3	164	41
2016*	4		

~80% of these deaths involve opioids

Drug overdoses in Philadelphia

Number of decedents with drug detected ***

450
400
350
300
250
200
150
100
50
0

2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015

Year of Death

Heroin*
Fentanyl
Oxycodone
Hydrocodone
Methadone
Other pharmaceutical opoids**
Benzodiazepines
Cocaine

Opioids include prescription medications, heroin and fentanyl

Medical Examiner’s Office, Philadelphia Department of Public Health

Prescription Opioid Sales, Treatment Admissions, and Overdose Deaths

U.S., 1999-2010

Vital Signs: Overdoses of Prescription Opioid Pain Relievers --- United States, 1999—2008 MMWR 2011;60:1487-1492

Prescription Opioids

In Philadelphia, sales increased 2x between 2001-2012

Sales of Opioids, Philadelphia, 2001-2016

1600000
1400000
1200000
1000000
800000
600000
400000
200000
0

2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016

All opioids

Oxycodone

Other opioids

Codeine
Oxycodone
Hydromorphone
Hydrocodone
Meperidine
Morphine
Oxymorphone
Tapentadol
Fentanyl
TOTAL

Reports from DEA Automated Reports and Consolidated Ordering System (ARCOS) system for Philadelphia zip codes

Transition to Heroin

$25

30mg Roxicodone,
street price in Philadelphia

$14

30mg South American heroin

- Few people who misuse pharmaceutical opioids become heroin users (4% initiate heroin use within 5 years)
- People who have misused opioid pain relievers are 19 times more likely than others to start using heroin

Muhuri PK. 2013.; https://www.cvs.com/webcontent/images/drug/DrugItem_10115.JPG; https://i.ytimg.com/vi/w1zFL0-XmQ8/maxresdefault.jpg

Heroin is pure and cheap in Philadelphia

Purity
Cost per milligram

80%
70%
60%
50%
40%
30%
20%
10%
0%

$3.50
$3.00
$2.50
$2.00
$1.50
$1.00
$0.50
$0.00

Purity

Cost per milligram

PHILADELPHIA
Newark
Pittsburgh
New York
Detroit
Atlanta
Washington, DC
Miami
New Orleans
Orlando
Boston
Richmond
Baltimore
Chicago

City

2014 Heroin Domestic Monitor Program

Evolution of the Opioid Crisis

Overdose Deaths, U.S., 2000-2015

Deaths per 100,000 population

11
10
9
8
7
6
5
4
3
2
1
0

2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015

Any Opioid

Commonly Prescribed Opioids
(Natural & Semi-Synthetic Opioids and Methadone)

Heroin

Other Synthetic Opioids
(e.g., fentanyl, tramadol)

SOURCE: CDC/NCHS, National Vital Statistics System, Mortality. CDC WONDER, Atlanta, GA: US Department of Health and Human Services, CDC; 2016. https://wonder.cdc.gov/.

Fentanyl

Percentage of Unintentional Opioid Related Deaths with Fentanyl or a Fentanyl Analog Present, 2003-2015

100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%

2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016

Fentanyl or Fentanyl Analog Present
No Fentanyl or Fentanyl Analog Present

Data for 2016 includes data through September 30, 2016 and are subject to change

Fentanyl, a synthetic opioid that is 50-100 times stronger than morphine, is increasingly found in users who have fatally overdosed

Medical Examiner's Office, Philadelphia Department of Public Health

Opioid-Involved Overdose Deaths

Age-Adjusted Death Rate* per 100,000 Residents, 2015

Age Adjusted Death Rate per 100,000 Residents

70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0

Female
Male
White, NH
Black, NH
Hispanic
Other*
15-24
25-34
35-44
45-54
55+

Total
Gender
Race/Ethnicity
Age***

**Rates are calculated using Philadelphia county population denominators from the 2015 American Community Survey 1-year estimtes. Rates are adjusted to the 2000 U.S. Standard Population age distribution.*

*** Deaths among persons who had race/ethnicity listed as other were too few to calculate a rate*

**** Age-specific death rates are shown*

Source: Medical Examiner's Office, Philadelphia Department of Public Health.

Drug overdoses in Philadelphia, 2014-2015

Upper Far Northeast
Lower Far Northeast
Central Northeast
Upper Northwest
Upper North
Lower Northeast
North Delaware
Lower Northwest
North
West Park
River Wards
West
Lower North
University/ Southwest
Central
South
Lower Southwest
Lower South

Place of Incidence
Non-Philadelphia resident
Philadelphia resident
Planning districts

While many overdose deaths occur in the Kensington area, they happen across all of the city

Medical Examiner’s Office, Philadelphia Department of Public Health

Estimated magnitude of the problem in Philadelphia

Fatal overdoses Source: Medical Examiner's Office	~900
In treatment for opioid dependence (publicly funded) Source: CBH/BHSI	~14,000
Heroin use (last year) Source: NSDUH, BHSI	~55,000
Misuse/abuse of prescription opioids (last year) Source: NSDUH	~55,000
Adults receiving >1 opioid prescription/year Source: PA DHS, Aetna, Census	~150,000

Fatal overdoses are only the tip of the iceberg

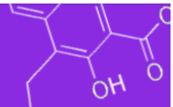
PDPH involvement in Addressing the Opioid Crisis

- **Reducing over-prescribing of opioids** to reduce number of people who become dependent
- **Increasing treatment** for those already dependent
- **Increasing availability and use of naloxone** to prevent fatal overdose

Reducing over-prescribing of opioids

- Opioid and benzodiazepine prescribing guidelines
- Analyze prescribing data for targeted education to high prescribers

Opioid Prescribing



Opioids can provide short-term relief of moderate to severe acute pain, but there is little evidence supporting their effectiveness for chronic pain, and they have substantial risks. Long-term opioid use should be reserved for patients with cancer-related pain, or patients receiving palliative or end-of-life care. If you prescribe opioids for other conditions, use safety principles as embodied by Limiting Use and Avoiding Adverse Consequences.

Limiting Use

1. **Do not prescribe opioids as first-line or routine therapy for chronic pain**; use nonpharmacologic and nonopioid pharmacologic therapies first (see Chronic Pain Treatment Principles).
2. **Discuss benefits, risks, and side effects of opioid therapy (e.g., addiction, overdose)**; continue to discuss the risks and benefits of opioids throughout treatment.
3. **Set realistic and measurable goals for pain and function**; plan for how opioid therapy will be stopped if benefits do not outweigh risks.
4. **Use short-acting opioids when starting opioid therapy for chronic pain.**
5. **Prescribe the lowest effective dosage when starting opioid therapy**, and reassess risks and benefits when increasing dosages to 50 morphine milligram equivalents (MME) per day or more, and avoid increasing dosages by 90 MME per day or more.

   Prescribing Calculations
   50 morphine milligram equivalents (MME) = 50 mg hydrocodone/day, or 33 mg oxycodone/day
6. **Long-term opioid use often starts with treatment of acute pain.** When using opioids for acute pain, prescribe short-acting forms and no more than necessary; three days or less is often sufficient.

Avoiding Adverse Consequences

7. **Follow-up regularly to re-evaluate risk of harm and reduce dose or taper if needed**; follow-up should occur within one to four weeks of starting opioid therapy or increasing dosage and continue quarterly.
8. **Prescribe naloxone to individuals who are undergoing long-term opioid therapy**, due to the higher risk of an overdose while taking these drugs.
9. **Check the Prescription Drug Monitoring Program (PDMP)** for prescriptions from other providers when starting opioid therapy and each time before writing a prescription.
10. **Use urine drug screening to identify prescribed substances and undisclosed use of other drugs** before starting opioid therapy and periodically thereafter.
11. **Avoid concurrent benzodiazepine and opioid prescribing.**
12. **Arrange treatment for opioid use disorder if needed, including medication-assisted treatment (buprenorphine or methadone).** Philadelphia's Department of Behavioral Health and Intellectual disAbility Services can help you identify treatment options through its website. (http://bit.ly/DBHResources)
13. **Consider incorporating buprenorphine treatment into your own practice.** Find out how through the SAMHSA website. (http://bit.ly/BUPTraining)

City of Philadelphia
DBHIDS
DEPARTMENT of BEHAVIORAL HEALTH and INTELLECTUAL disABILITY SERVICES

Department of Public Health
City of Philadelphia

Increasing Access to Treatment

- Supporting primary care clinics across the city in offering buprenorphine
- Start buprenorphine prescribing in Health Centers

http://257cu52hn58148zsaf2jma2c-wpengine.netdna-ssl.com/wp-content/uploads/2016/08/Buprenorphine.jpg

Naloxone

	Administered to by EMS (2016)	~4,000
	Administered by Police (2016)	~200
+	Distributed by Prevention Point (2016)	~5,500
		~9,700

Despite this use of naloxone, approximately ~~2~~ **5** **people die** from opioid overdoses **every day** in Philadelphia.

Increasing Access to Naloxone

- Community education and distribution
- Educating and distributing naloxone to inmates of Philadelphia Department of Prisons
- Pharmacy outreach

Mayor’s Task Force

Task Force
23 members
January – March 2017

- Public Education & Prevention
- Treatment Access
- Criminal Justice & Law Enforcement
- Overdose Prevention & Harm Reduction
- Data