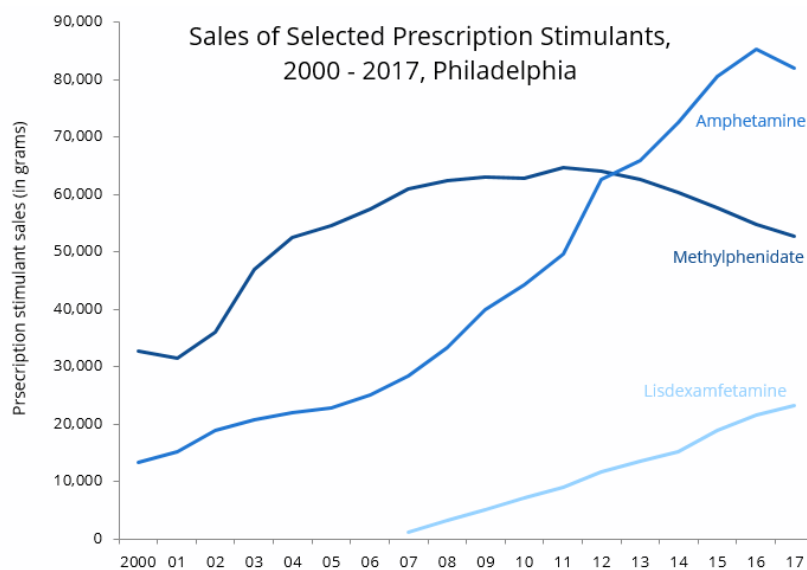# Stimulant Prescribing and
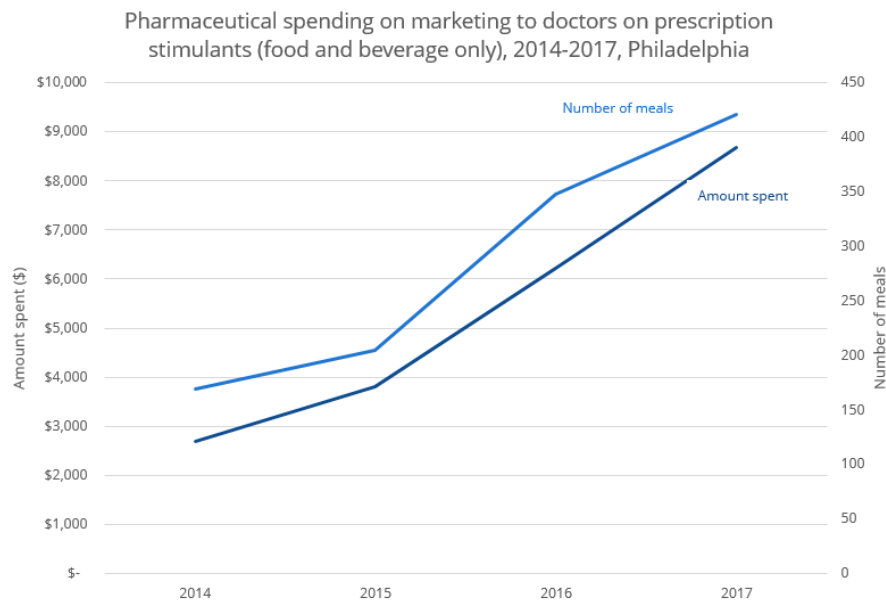# Stimulant-Involved Deaths in Philadelphia

While much national attention has focused on over-prescribing of opioids, physicians have also greatly increased prescribing of stimulant drugs, primarily for the treatment of Attention Deficit Hyperactivity Disorder (ADHD). These drugs include methylphenidate, amphetamine, and lisdexamfetamine. This increase in prescribing coincides with high levels of use of illicit stimulants, include cocaine and methamphetamine (while most methamphetamine use is illicit, this drug is occasionally prescribed legally). All of these stimulant drugs increase attention, mood and energy in the short-term, but they are addictive and have been associated with severe cardiac, neurologic and psychiatric side effects, including sudden death, stroke, seizures and psychosis. These drugs are also often used in combination with other addictive drugs, and stimulants are increasingly found in drug overdose deaths, usually in combination with opioids. This issue of CHART highlights the scale and trajectory of stimulant prescribing and stimulant-related deaths in Philadelphia.

Sale of prescription stimulants is increasing in Philadelphia

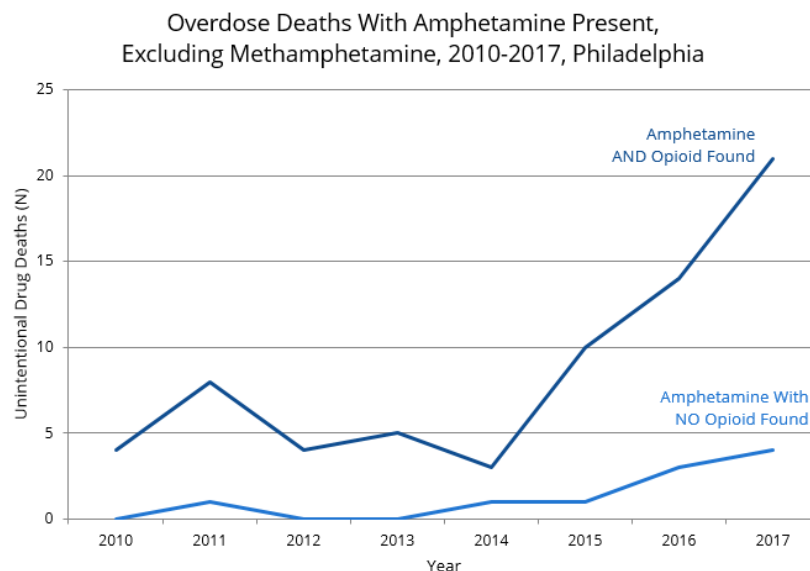Sales of Selected Prescription Stimulants, 2000 - 2017, Philadelphia

- Sales of the prescription stimulants, methylphenidate (e.g., Ritalin) and amphetamine (e.g., Adderall), as tracked by the Drug Enforcement Administration, increased 61% and 617%, respectively, from 2000 to 2017.
- Lisdexamfetamine (e.g. Vyvanse) sales have increased continuously since the drug was first marketed for treatment of ADHD in 2012.

Prescription stimulants are increasingly marketed to doctors in Philadelphia

Pharmaceutical spending on marketing to doctors on prescription stimulants (food and beverage only), 2014-2017, Philadelphia

- Pharmaceutical companies often provide free meals to doctors while promoting their products, a marketing technique known to increase prescribing.
- According to data in the federal Open Payments database, between 2014 and 2017, the amount of money that pharmaceutical manufacturers of stimulants spent on these meals increased by 222%.
- More doctors are receiving meals each year in connection with stimulant medications, with 111 doctors receiving meals in 2017.
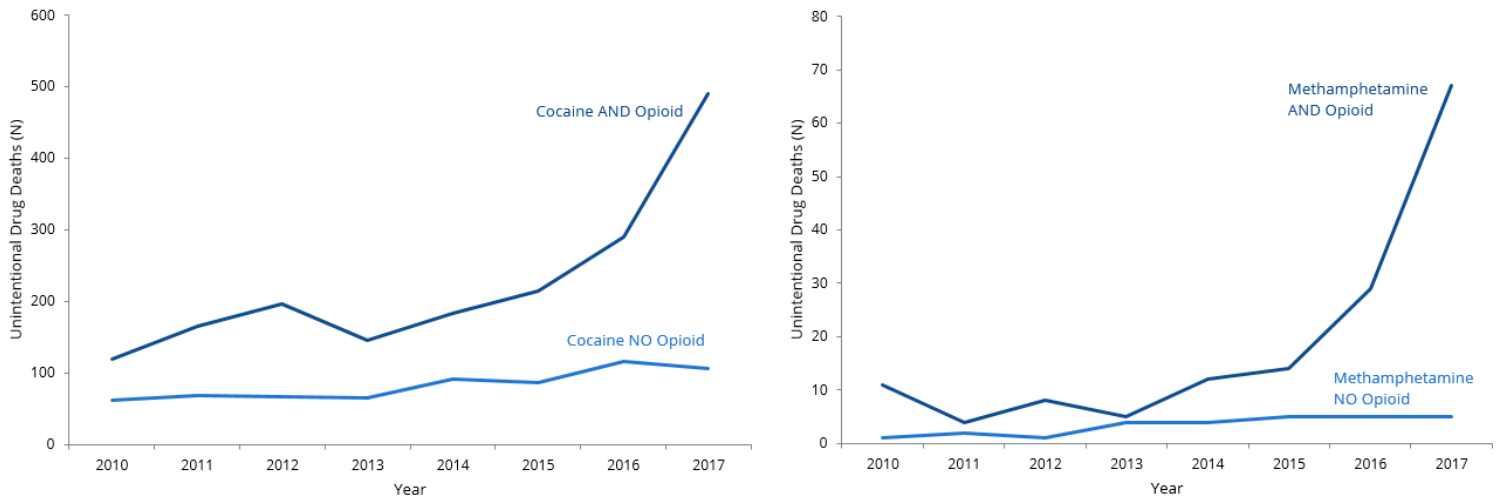

Amphetamine-involved deaths are increasing in Philadelphia

Overdose Deaths With Amphetamine Present, Excluding Methamphetamine, 2010-2017, Philadelphia

- According to data from the Philadelphia Medical Examiner, overdose deaths involving amphetamine, a stimulant drug often legally prescribed for ADHD, though also obtained and used illicitly, increased 158% from 2014 to 2017.   This increase correlates with the rise in prescription stimulant sales.
- Eighty-five percent of the amphetamine involved deaths also involved an opioid.
- Most (92%) of the decedents were non-Hispanic white and under 35 years of age (55%).

Cocaine and methamphetamine-involved deaths are increasing in Philadelphia
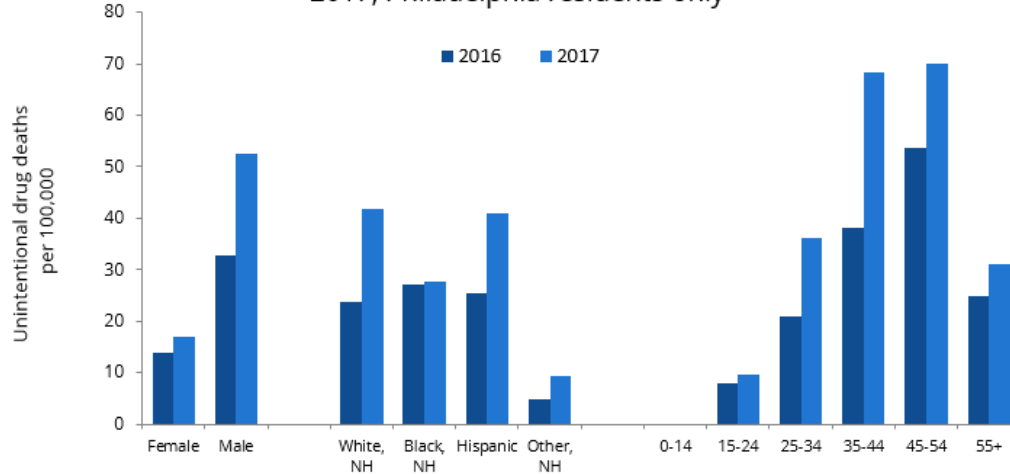
Number of drug-related deaths with cocaine or methamphetamine present, 2010-2017, Philadelphia

- Cocaine is a commonly used illicit drug that has similar effects on the body as prescription stimulants.

- Methamphetamine is a potent and addictive synthetic stimulant similar to amphetamine but much less often legally prescribed. Methamphetamine is considerably more likely to be used illicitly than amphetamine.

- In Philadelphia, cocaine and methamphetamine were increasingly present in overdose deaths in which opioids were found. Since 2010, there were smaller increases in overdose deaths involving these drugs without opioids.

- 597 (49%) of the 1,217 drug overdose deaths in Philadelphia in 2017 involved cocaine, a 47% increase from 2016.

- 490 (82%) of the cocaine-involved deaths also involved an opioid, 79% of which included fentanyl.

- 72 (6%) of the drug overdose deaths in 2017 involved methamphetamine, a 112% increase from 2016.

- 67 (93%) of the methamphetamine-involved deaths also involved an opioid, of which 93% included fentanyl.
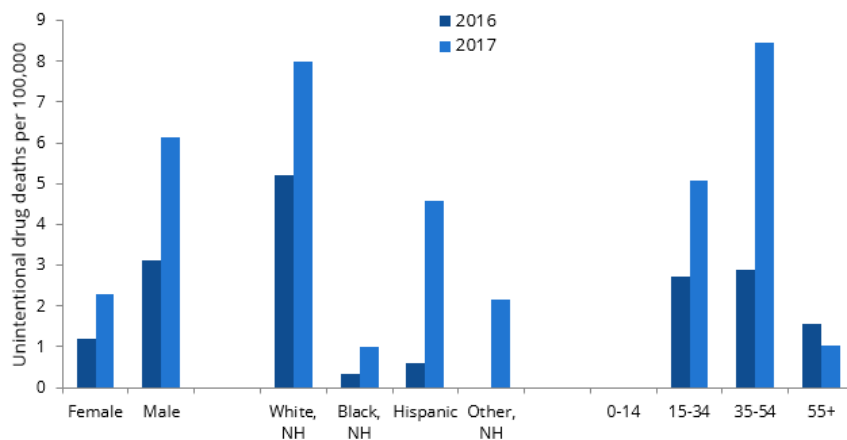
Cocaine– and methamphetamine-involved overdose death rates have increased in all demographic groups

Cocaine-involved overdose death rates by demographics, 2016-2017, Philadelphia residents only

■ 2016 ■ 2017

Unintentional drug deaths per 100,000

Female, Male, White, NH, Black, NH, Hispanic, Other, NH, 0-14, 15-24, 25-34, 35-44, 45-54, 55+

- Cocaine-involved overdose mortality rates increased 60% among males from 2016 to 2017, and 22% among females.
- Non-Hispanic white individuals had the largest increase in cocaine-involved overdose deaths in 2017 (77%), followed by Hispanics (61%). Cocaine-involved overdose deaths did not increase substantially among non-Hispanic blacks.
- Cocaine-involved overdose deaths peaked in the 45-54 age group. However, the 35-44 year old age group had the biggest increase in cocaine-related overdose deaths in 2017 (79%), followed by the 25-34 year old age group (31%).

Methamphetamine-involved death rates by demographics, 2016-2017, Philadelphia residents only

■ 2016 ■ 2017

Unintentional drug deaths per 100,000

Female, Male, White, NH, Black, NH, Hispanic, Other, NH, 0-14, 15-34, 35-54, 55+

- Methamphetamine-involved deaths were far more common in males and among whites.
- Methamphetamine-involved overdose rates increased 95% among males from 2016 to 2017, and 90% among females.
- Hispanics had the largest increase in methamphetamine-involved overdose in 2017 (764%).
- The 35-54 year old age group had the biggest increase in methamphetamine-involved overdose deaths in 2017 (291%) followed by the 15-34 year age group (186%).

What can be done

The City of Philadelphia is:

- Educating patients about the potential for abuse of and dependence on prescribed stimulants.
- Encouraging people who use stimulants to check their drugs for the presence of fentanyl, a dangerous synthetic opioid that has been found in other illicit drugs.
- Consolidating and distributing local data relating to the rise in stimulant use that is updated quarterly.
- Supporting syringe exchange programs to reduce the risk of HIV and hepatitis C among people who inject stimulants.

Health care providers can:

- Prescribe behavioral therapy as first line treatment for pre-school aged children (ages 4-5 years) with ADHD, rather than medications.
- Before prescribing stimulant medications, confirm the diagnosis of ADHD using DSM-V criteria and determine, in discussions with patients or parents, that the benefits outweigh the serious risks of these drugs.
- Incorporate Screening, Brief Intervention and Referral to Treatment (SBIRT) into practices to routinely assess for recreational stimulant use and the use of other legal and illicit psychoactive drugs.
- Register for and use the Prescription Drug Monitoring Program database when prescribing stimulants.
- Help patients who are dependent on cocaine or methamphetamine get treatment. This can be through referral to drug detox or treatment programs.
- Screen all individuals with a history or current use of injection drug use for HIV and hepatitis C. If negative, rescreen users every 6 months.
- Encourage people currently using injection drugs to use clean syringes and equipment with every use.
- Alert the Department of Public Health about surges in overdose or new patterns of overdose morbidity or mortality.

People can:

- Be informed and share about the risks of stimulant use.
- Avoid taking stimulants not prescribed for you, and ask medical providers who prescribe stimulants for treatment of ADHD about alternative, safer forms of treatment.
- If using illicit stimulants like cocaine or methamphetamine, seek treatment for drug use. In the meantime, regularly test drugs for the presence of fentanyl using fentanyl test strips.
- Recommend that your acquaintances who are using cocaine or methamphetamine seek treatment and help them find treatment providers.

Resources

- Harm reduction resources and education, including syringe exchange, smoking kit distribution, and infectious disease screening at Prevention Point; 215-634-5272
- Drug treatment referrals and education from Community Behavioral Health (Medicaid-enrolled); 1-888-545-2600; Behavioral Health Services Initiative (uninsured); 215-546-1200
- Drug Take Back collection sites, y ear-round drug disposal, and education materials

CHART

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All PDPH CHARTs are available on http://www.phila.gov/health.