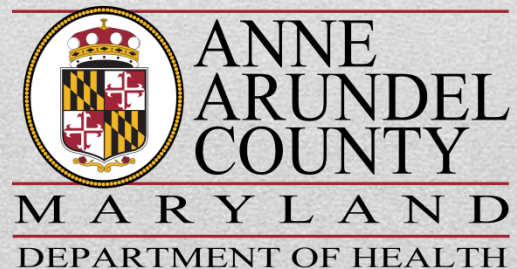


What You Need to Know



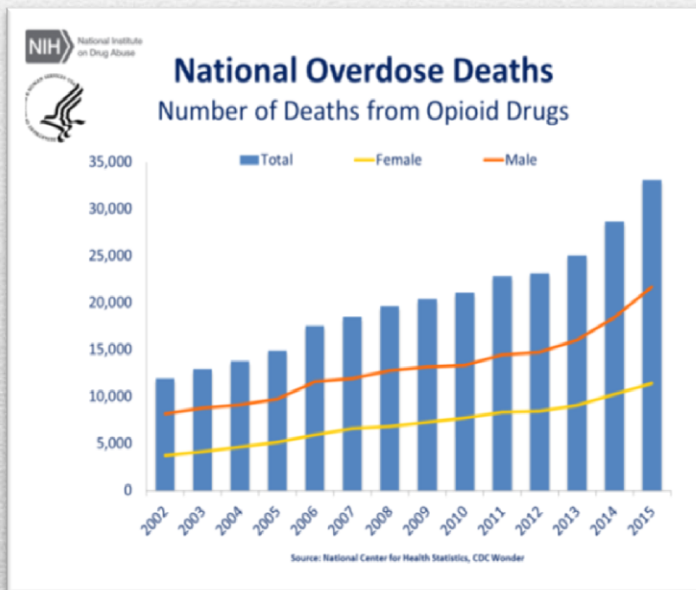
Young Athletes and Substance Abuse



Anne Arundel County School Health Services

Responding to an Epidemic

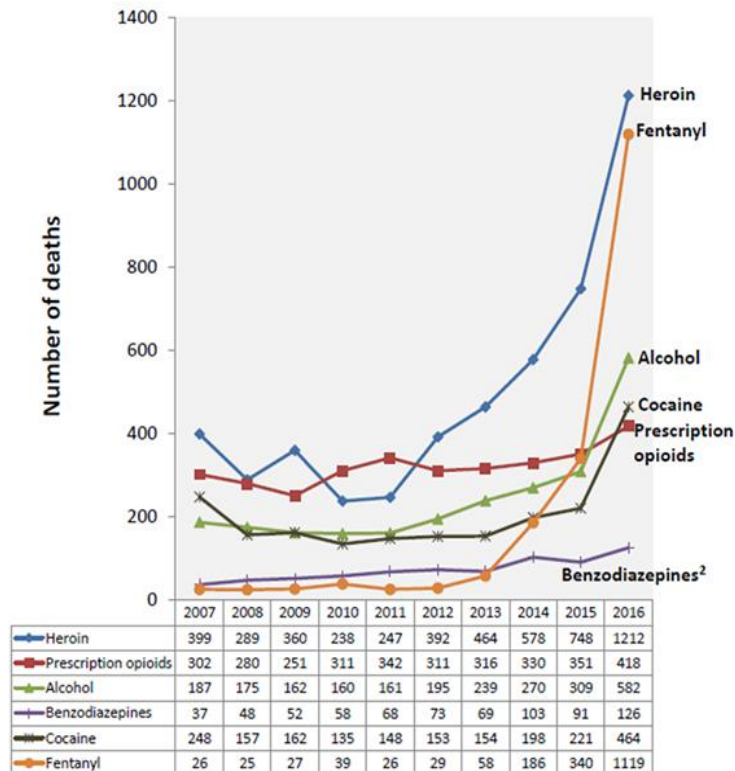
National Opioid Overdose Rates



- Nationally, the largest increases in fatal heroin-related overdoses have been among younger age groups.
 - 53% increase among ages 15-24.
- Even though Americans only make up 4.6% of the world's population, we consume 80% of the global opioid supply.

Maryland Opioid Overdose Rates

Figure 5. Total Number of Drug- and Alcohol-Related Intoxication Deaths by Selected Substances¹, Maryland, 2007-2016.



¹Since an intoxication death may involve more than one substance, counts of deaths related to specific substances do not sum to the total number of deaths.

²Includes deaths caused by benzodiazepines and related drugs with similar sedative effects.

Overdose
Death Rates
on the Rise



Anne Arundel County

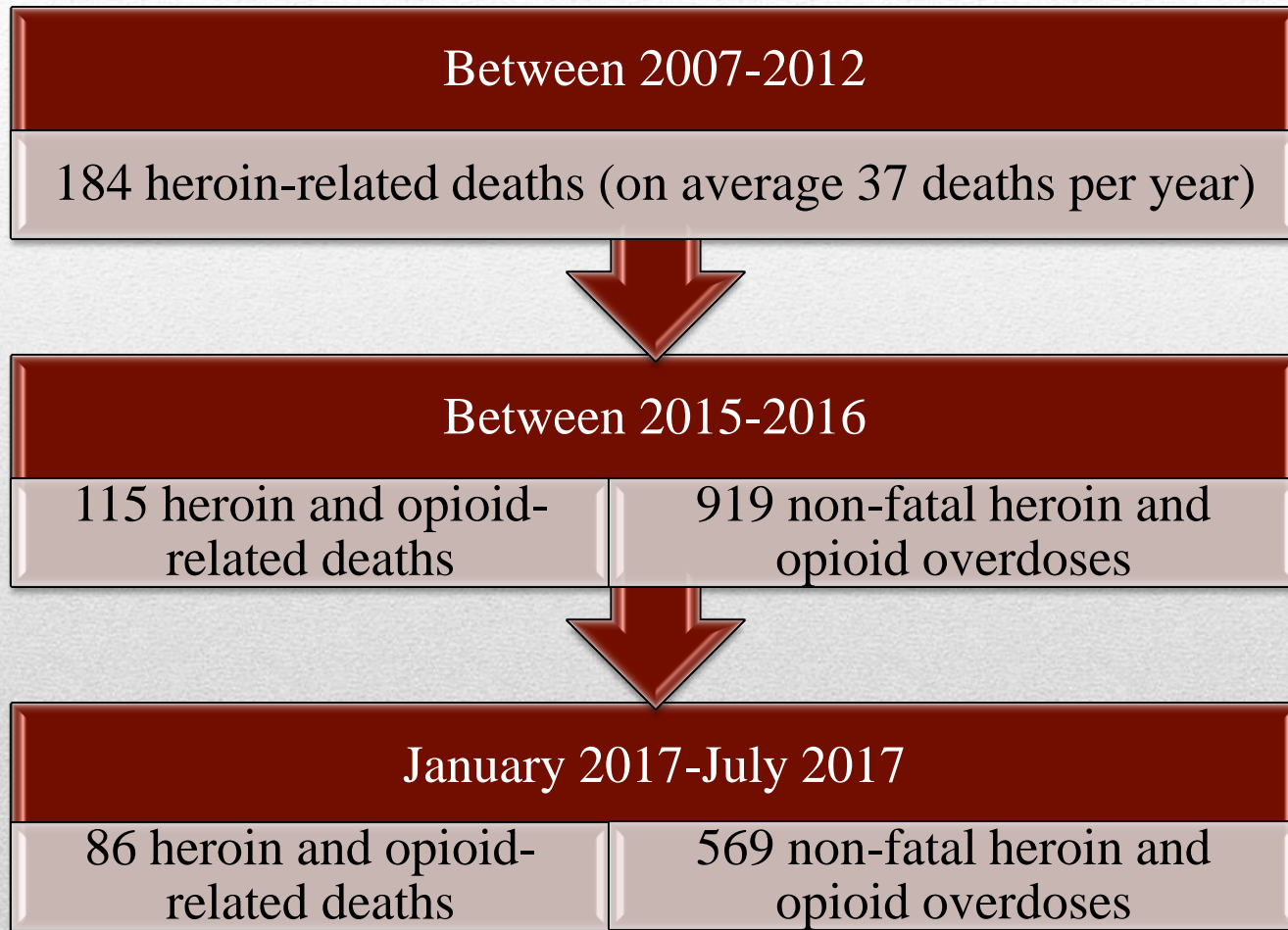


Anne Arundel County is the third highest jurisdiction in opioid overdoses and opioid deaths in Maryland.

Source: Anne Arundel County Police Department

The Problem

Anne Arundel County



Source: Anne Arundel County Police Department

Anne Arundel County

In March 2017, there were 3 deaths and 16 opioid overdoses in 24 hours.

In June 2017, the Office of the Chief Medical Examiner reported 83% of all fatal overdoses in Anne Arundel County were due to a heroin/fentanyl mix.

The Problem



Opioids are prescription painkillers and illegal drugs such as heroin.

Examples of some commonly prescribed opioids are:

- Morphine
- Oxycodone (OxyContin)
- Hydrocodone (codeine)
- Demerol
- Percocet
- Vicodin



What is an Opioid?

- **Fentanyl** is a powerful synthetic opioid analgesic that is similar to morphine but is 50 to 100 times more potent.
- **Carfentanil** is also a powerful synthetic opioid analgesic that is 10,000 more potent than morphine. Carfentanil is used to tranquilize large animals.

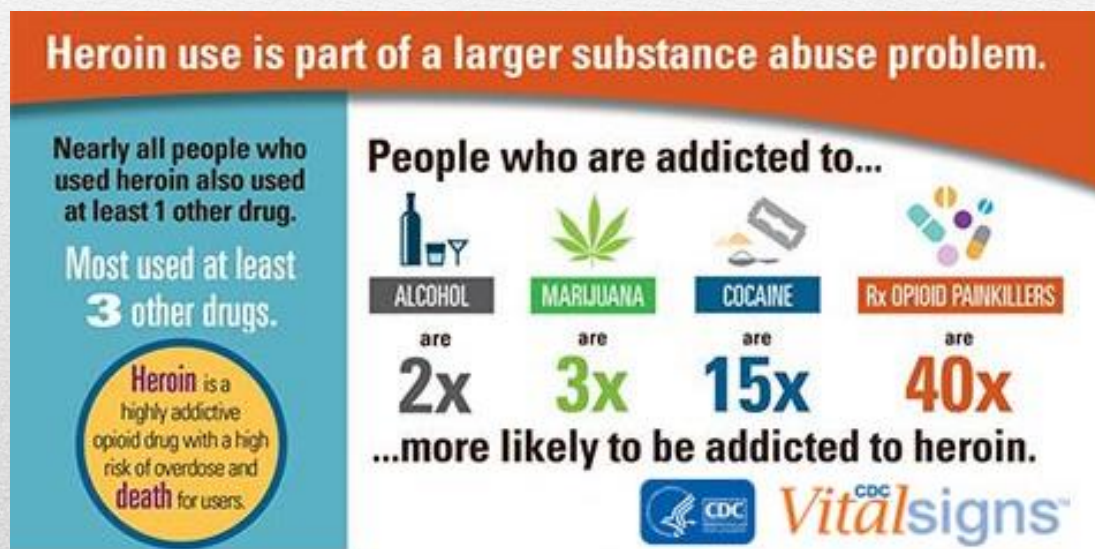
Fentanyl



- **Opioids** and **heroin** are **chemically related** and interact with opioid receptors on nerve cells in the body and brain.
- Opioid pain relievers are **generally safe** when taken for a **short time** and as prescribed by a doctor.
- Since opioids produce **euphoria** in addition to pain relief, they can be **misused**.

Opioids

- 80% of all heroin users switched to heroin after abusing prescription painkillers.



Opioids

Source: Centers for Disease Control and Prevention, *Prescription Opioids: What You Need to Know*.
U.S. Substance Abuse and Mental Health Services Administration (SAMHSA)

Two Paths to Addiction

Risk-taking
behaviors and use
of **gateway drugs**.

Misuse of a
prescription pain
medication.

Addiction

2014 Youth Risk Behavior Survey (YRBS)

- 27.6% of Anne Arundel County high school students reported using a tobacco product including cigarettes, smokeless tobacco, cigars or electronic vapor in the past 30 days.
- 52.3% reported ever using alcohol.
- 18.8% reported ever using marijuana.
- 14.2% reported ever using prescription drugs without a doctor's prescription.

Gateway Drugs

Changes in Potency over the Last 2 Decades

- There are two main cannabinoids from the marijuana plant that are of medical interest.
 1. **THC**- *delta-9-tetrahydrocannabinol*, marijuana's main mind-altering ingredient that makes people "high".
 - The amount of THC in marijuana has been increasing steadily over the past few decades. Was <1% now up to 37%-50%
 - Higher THC levels may explain the rise in emergency room visits involving marijuana use. Psychological effects.
 - Anxiety and paranoia
 2. **CBD**- a *cannabidiol* ingredients that doesn't make people get "high." Non-psychological effects.

Changes in Marijuana

- **20%** of youth between the ages of 12-17 have used prescription drugs for **nonmedical reasons**.
- **83.4%** of adolescents prescribed medications in the previous six months had **unsupervised access** to them.
- The most prevalent source of controlled medications for **nonmedical use** among adolescents are **from their own prescriptions and peers**.

Misuse of Prescription Medications



Young people seem to move quickly through the stages of addiction.

Stages are:

- Experimental Use
- Regular Use
- Problem or Risky Use
- Addiction



Pathway to Addiction

*The brain is still
developing until
the age of 25.*



The Brain Development



Brain development during adolescent and young adulthood encompasses

- logical reasoning, formulating strategies, allocating attention and controlling impulses (prefrontal cortex).
- processing abstract information and understanding rules, laws and codes of social interaction (outer mantle of the brain).

Substance abuse disrupts brain development and can prime the brain for addiction later in life.

Substance Abuse and the Brain

The majority of all opioid prescriptions for children and adolescents were prescribed for injuries.

Dentists and oral surgeons were the second highest opioid prescribers for children ages 10-19 (wisdom teeth extractions).

Opioid Prescriptions for Youth

Source: *Trends in opioid prescriptions among children and adolescents in the United States, a nationally representative study from 1996 to 2012*, PAIN, 2016

- Teen athletes benefit in many ways from participating in sports.
- There is also a risk involvement in athletics, as evidenced by the 2 million high school athletes injured each year.
- Boy's football has the highest injury rate followed by boy's wrestling.



Teen Athletes

Source: *Painfully obvious: Longitudinal study of medical use and misuse of opioid medication among adolescent sports participants.* Journal of Adolescent Health

Acute Pain Management

- Prescription opioids can be used to help relieve **moderate to severe pain**.
 - After surgery or injury
- Prescription opioids carry **serious risks of addiction** and overdose, especially with **prolonged use**.
- **Long-term opioid** use often begins with treatment of **acute pain**.

Opioids

- The chance of **long-term opioid use** starts increasing with each additional day supplied, starting after the **third day**, and it increases substantially after someone is prescribed **five or more days**.
- Opioids should only be used **when necessary** and only for **as long as necessary**.
- Generally, for **acute pain** this is often **three days or less**; more than **seven days is rarely needed**.
- Many have “**unrealistic expectations**,” and believe surgery and recovery should be painless.

Opioids

Acute Pain Management

Source: CDC, *Characteristics of Initial Prescription Episodes and Likelihood of Long-term Opioid Use- United States, 2006-2015*, March 17, 2017/66(10);265-269.

- Properly managed, **short-term medical use** of opioid analgesics **rarely causes addictions**.
- 67% to 92% of patients reported **unused opioids** after surgery.
- 73% to 77% reported their prescription opioids were **not stored in locked containers**.

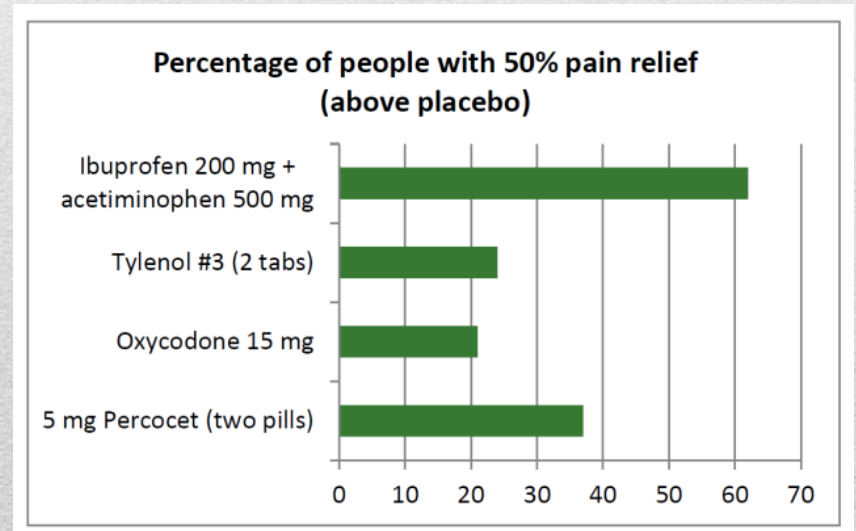


Prescription Opioids

Signs of Misuse:	Signs of Addiction:
Anxiety/Irritability	Change in personality
Change in sleep patterns	Change in appearance
Loss of appetite/nausea/constipation	Change in academic/athletic performance
Itching or flushed skin	Increased need for privacy
Slurred speech	Unexplained need for money
Confusion/Disorientation	Unable to keep commitments
Nodding off	Missing medications

Signs and Symptoms of Substance Abuse

- Many **non-opioid treatments** have been shown to control pain effectively with **fewer side effects**.
- In 2013, the Journal of the American Dental Association published an article addressing the treatment of dental pain after wisdom tooth extractions.
 - Concluded that 500 mg of acetaminophen (Tylenol) taken with 200 mg of ibuprofen (Motrin/Advil) provided better pain relief than oral opioids.



Other Options?

Source: The Journal of the American Dental Association, *Combining ibuprofen and acetaminophen for acute pain management after third-molar extractions*, August 2013, Volume 144, issue 8, 898-908, and National Safety Council, *NSAIDs are stronger pain medication than opioids, A Summary of Evidence*, <http://www.nsc.org/RxDrugOverdoseDocuments/evidence-summary-NSAIDs-are-stronger-pain-medications-than-opioids-with-IFP.pdf>

Management of Dental Pain: Evidenced-Based Guidelines

- **For mild pain:**
 - 200-400 mg ibuprofen (Motrin/Advil) every 4-6 hours as needed
- **For mild to moderate pain:**
 - 400-600 mg ibuprofen (Motrin/Advil) every 6 hours for 24 hours
- **For moderate to severe pain:**
 - 400-600 mg ibuprofen (Motrin/Advil) with 500 mg acetaminophen (Tylenol) every 6 hours for 24 hours, then
 - 400 mg ibuprofen (Motrin/Advil) with 500 mg acetaminophen (Tylenol) ever 6 hours as needed

***Studies show that these two medications work better to suppress pain when they are given together rather than alone.**

Source: *Combined acetaminophen and ibuprofen for pain relief after oral surgery in adults: a randomized controlled trial, Prescribing Recommendations for the Treatment of acute pain in Dentistry and Evidence for the efficacy of pain medications*

RICE- Rest, Ice, Compression and Elevation

Rest- Rest and protect the injured or sore area. Stop, change or take a break from any activity that may be causing your pain or soreness.

Ice- Cold will reduce pain and swelling. Apply an ice or cold pack right away to prevent or minimize swelling. Apply the ice or cold pack for 10 to 20 minutes, 3 or more times a day. After 48 to 72 hours, if swelling is gone, apply heat to the area that hurts.

Injury Management

Compression- Compression, or wrapping the injured or sore area with an elastic bandage (such as an Ace wrap), will help decrease swelling. Talk to your doctor if you think you need to use a wrap for longer than 48 to 72 hours; a more serious problem may be present.

Elevation- Elevate the injured or sore area on pillows while applying ice and anytime you are sitting or lying down. Try to keep the area at or above the level of your heart to help minimize swelling.

Injury Management

- Work with your doctor to **create a plan** on how to manage your pain.
 - Have **realistic expectations** after surgery or an injury. You won't be totally pain free.
- **Know your options** and consider ways to manage your pain that **do not include opioids**.
- Make the most **informed decisions** with your doctor.
- **Follow up** regularly with your doctor.

Prevent Opioid Misuse

Prescription Pain Medication:

Discuss with your physician:

- **Obtain specific information** about the medication prescribed
- **Discuss benefits** of the medication
- **Possible side effects** of the medication
- **Suspected time** for injury recovery
- **Warning signs** that would require immediate medical attention

Plan of Care

If You Are Prescribed an Opioid

- Parents need to **control all prescription opioids**.
- **Never take more** than prescribed or more often than prescribed.
- **Store** prescription opioids in a secure (**locked**) location and out of reach of others.
- **Safely dispose** of all unused prescription opioids.

Prevent Opioid Misuse

- **M**onitor all prescription and over the counter drugs in your household.
- **E**nsure that your children and loved ones know the risks of prescription medicine abuse.
 - Children who learn about the risks of drugs at home are at least 20% less likely to use drugs.
- **D**ispose of expired, unwanted and unused medicine safely.
- **S**ecure and seal your medicine to avoid misuse.

Mind Your MEDS

aahealth.org/MEDS

Every School has a School Nurse:

- Please call the school nurse if your child has been injured or having surgery.
- The school nurse will work with you to setup a plan of care for the school setting, which may include:
 - Medications management for school
 - Assistance with accessing the child's education
 - Elevator use for students using crutches or in a wheelchair

School Nurse

- **Narcan:** A nasal spray that can restore the breathing of an opioid overdose. Each school has been supplied with Narcan since March 2015.



- Maryland's **Good Samaritan Law:** Provides criminal immunity from certain crimes to encourage bystanders to call 911 in the event of a medical emergency due to drugs or alcohol.

Overdose Prevention

- Safe Stations: Access to Treatment 24/7
- 24/7 Crisis Warmline: 410-768-5522
- 24/7 Maryland Youth Crisis Hotline: 1-800-422-0009
- Anne Arundel County Department of Health Substance Abuse Treatment Referral and Resource Information Line:
410-222-0117
www.DENIALisDEADLY.org
- “Not My Child” Resource Guide:
www.AAcounty.org/heroin

Resources for Treatment

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