

## The Opiate Epidemic in Maine: Implications for Infectious Disease

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### Heroin related overdose deaths, Maine vs. Nation: 2002-2013

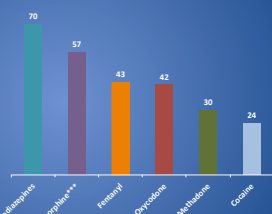


Source: National Data | CDC, Multiple Cause of Death Files from the National Vital Statistics System, 2002-2013. Source: Maine Data | Maine Department of Health and Human Services, Office of Research, Data and Vital Statistics

### Number of drug deaths involving specific drug types\*: 2014\*\*

More than **one in three** overdose deaths involved benzodiazepines.

More than **one in four** overdose deaths involved heroin/morphine.



\*Some deaths may be caused by more than one drug.  
\*\*2014 results are preliminary.  
\*\*\*Deaths caused by known pharmaceutical morphine removed from total.

Source: Mariel Seng, Margaret Chase Smith Policy Center at University of Maine, Office of the Chief Medical Examiner

### Overview

- Health risks of injection drug use can be as dangerous as the physiological effects of the drugs themselves.
- Injection drug users (IDUs) are at high risk for direct exposure to a variety of blood-borne bacterial and viral infections.
- IDUs are more likely than non-IDUs to contract a variety of infectious diseases and, when infected, to progress to serious illness and death.

- Injection drug use has been responsible for **more than one-third** of all adult and adolescent AIDS cases reported in the U.S. since the beginning of the AIDS epidemic.
- Non-injection drug users who trade sex for drugs or who engage in unprotected sex while under the influence of drugs also **increase** their risk of infection.

### HIV

- In 2013, 7% (3,096) of the estimated 47,352 diagnoses of HIV infection in the United States were attributed to IDU.
- Another 3% (1,270) attributed to male-to-male sexual contact/IDU.



- The high-risk practice of sharing syringes and other injection equipment is common among people who inject drugs (PWID).
- HIV (and Hep B/C) can be transmitted by sharing needles, syringes or other injection equipment (e.g., cookers, rinse water, cotton) that were used by a person living with HIV.

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- Young people (aged 15-30 years) who inject drugs have many of the same risk factors for HIV found in older PWID, including a significant risk of sexual HIV transmission among:

- MSM who inject drugs
- PWID who exchange sex for money or drugs

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#### Prevention Interventions for PWID include both:

- Sexual risk reduction
- Injection risk reduction

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#### Stigma

- Stigma related to drug use may prevent PWID from seeking HIV testing, care and treatment.
- Studies have shown that people treated for substance abuse are more likely to:
  - **Start** and **remain** in HIV medical care
  - **Adopt** safer behaviors
  - **Take** their HIV medications correctly than those not receiving such treatment

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#### Hepatitis

- Hepatitis B (HBV) and Hepatitis C (HCV) are viral diseases that destroy liver cells and can lead to cirrhosis and liver cancer.



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#### Research Shows:

- People can become infected with HBV through sexual intercourse with an infected person or through exposure to an infected person's blood, as may happen when IDUs share needles.
- Blood transfusion and needle sharing are the most common routes of infection with HCV.

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- NIDA-supported research shows the risk of infection by HBV and HCV is extremely high in the first year after beginning injection drug use.
- One study found overall HCV and HBV prevalence of 76.9 percent and 65.7 percent, respectively, in a group who had been injecting drugs for 6 years or less.

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### Impacted Populations:

- Drug user population is much younger than in the past
- Relatively even split between males and females.
- As a result, we are seeing more women of child bearing age with chronic hepatitis C, raising the risk of mother-to-infant transmission.

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### Impact on Children:

- There is no treatment or post-exposure prophylaxis (PEP) for HCV.
- Infected babies are monitored until they reach an age where treatment can occur.
- This age group (18-30) is largely vaccinated for HBV, though that is also a risk.
- Younger a person is when infected, greater likelihood they will go on to have a chronic HBV infection.

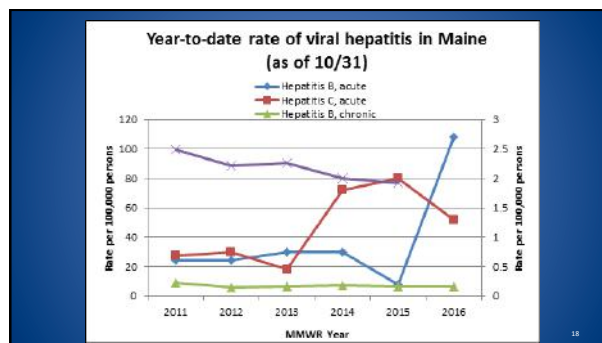
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### Maine's Hepatitis story...

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Age	2011	2012	2013	2014
0-4	0	0	0	0
5-9	0	0	0	0
10-14	0	0	0	0
15-19	0	0	0	0
20-24	0	0	0	0
25-29	0	0	0	0
30-34	0	0	0	0
35-39	0	0	0	0
40-44	0	0	0	0
45-49	0	0	0	0
50-54	0	0	0	0
55-59	0	0	0	0
60-64	0	0	0	0
65-69	0	0	0	0
70-74	0	0	0	0
75-79	0	0	0	0
80-84	0	0	0	0
85-89	0	0	0	0
90-94	0	0	0	0
95-99	0	0	0	0
100+	0	0	0	0
Total	0	0	0	0

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### Take home messages from our Viral Hepatitis Program:

- There is high concern for infection with HBV and HCV.
- Both viruses are incredibly resilient, heat resistant and are spread efficiently by contaminated injection equipment or even the drugs themselves.
- Study shows transmission risk is highest with usage of contaminated cotton filters and water, rather than any other injection equipment.

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### Transmission:

- Hepatitis B is **100 times more infectious** than HIV, and in addition to blood-to-blood transmission, is efficiently spread via sexual activity.
- Hepatitis C is exclusively spread via blood, and thus sexual risk is low.
  - Unless there is a co-infection with HIV or other STIs.

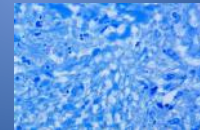
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- Both HBV and HCV can survive outside of the body for up to a week, and up to 3 months in closed containers.
- HBV is preventable by vaccination.

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### Tuberculosis

- Tuberculosis (TB) is transmitted from person to person by airborne bacteria, and is most prevalent in crowded low-income areas with substandard health conditions.



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- Drug users are **two to six times** more likely to contract TB than nonusers.
- IDUs are more likely to develop the disease in multiple organs and sites, rather than only in the lungs.

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### Other Infectious Diseases Associated with Drug Use

- Drug users have a high incidence not only of HIV/AIDS but also of other sexually transmitted diseases including syphilis, chlamydia, gonorrhea and genital herpes.

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- Among IDUs, the most common cause for medical treatment is skin infection at the site of injection.
- Complications range from:
  - skin ulcers and localized abscesses to stroke, botulism, tetanus, destruction of lung tissue and infection of the heart valves.



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### To Do Checklist for your patients who may be using IV drugs

- |   |  |
|---|--|
| <input type="checkbox"/> Counsel regarding prevention of diseases, including not sharing needles or paraphernalia | <input type="checkbox"/> Consider testing for HIV/Hepatitis/TB/STDs                  |
| <input type="checkbox"/> Counsel regarding safe sex practices   | <input type="checkbox"/> Monitor for skin infections                                 |
| <input type="checkbox"/> Counsel regarding treatment options for SUD  | <input type="checkbox"/> Ask our HIV/STD/Hepatitis/TB programs for more information! |

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