HIV and Hepatitis C diagnoses among injection drug use related hospitalizations in Oregon, 2008–2018

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Oregon Health Authority

Objectives:

- Recognize trends in Injection Drug Use (IDU)-related hospitalizations
- Illustrate the syndemic relationship of IDU-related hospitalization and communicable infectious disease
- Identify interventions that address substance use and the risk of increased transmission of disease
- Discuss the effect of COVID-19 on current interventions

Background:

- Problems identified by providers working with People Who Inject Drugs
  - A PWID in Eugene with repeated admissions in 2013 due to disseminated candidemia
  - Hospitalizations with long lengths of stay without any intervention
  - Difficulty linking patients to substance use treatment and care for infection.
- Observed increases in IDU-related hospitalizations and cost
- Question:

  What intervention opportunities exist during and after an IDU-related hospitalization for disease prevention and linking people to care?

Methods

- Data sources:
  - HIV and Hepatitis C surveillance data
  - Hospital discharge data: excludes Veterans Hospitals and specialty/rehabilitative care
- Matched surveillance data to hospital discharge data using MatchPro
- Definition of 'IDU-related hospitalization'

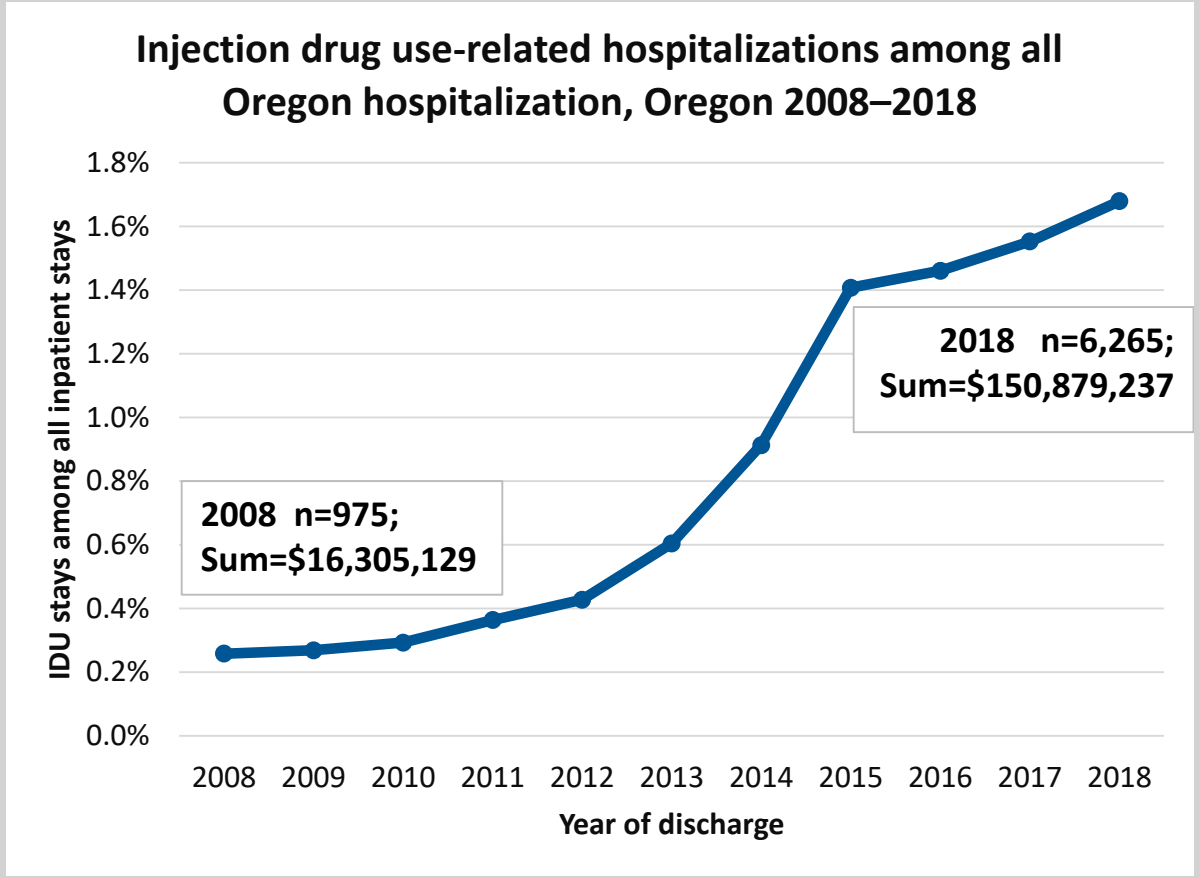
  ≥ 1 codes for drug mis-use: opiates, cocaine, amphetamines, sedatives, or other drugs
  and

  ≥ 1 codes IDU-related infections: endocarditis, bacteremia\sepsis, osteomyelitis, or skin\soft tissue infections

* Conservative definition: (1) under-coding of specific drug-use common, (2) exclusion of drug codes for overdose and remission, and (3) exclusion of infections not IDU-specific.

Trend of IDU-related hospitalizations

- 6-fold increase in the number IDU-related hospitalizations and as a proportion of all hospitalizations, 2008—2018
- Increase began in 2011 prior to the Affordable Care Act
- Introduction of ICD-10 diagnostic coding in Oct. 2015
- 65% of patients were never re-admitted with an IDU-related hospitalization, 2008–2018 (22,353 unique people/34,340 stays)
- Proxy measure for the increase in the number of unique persons who inject drugs



*Sum of charges adjusted by Cost-to-Charge ratios and adjusted to 2018 dollars

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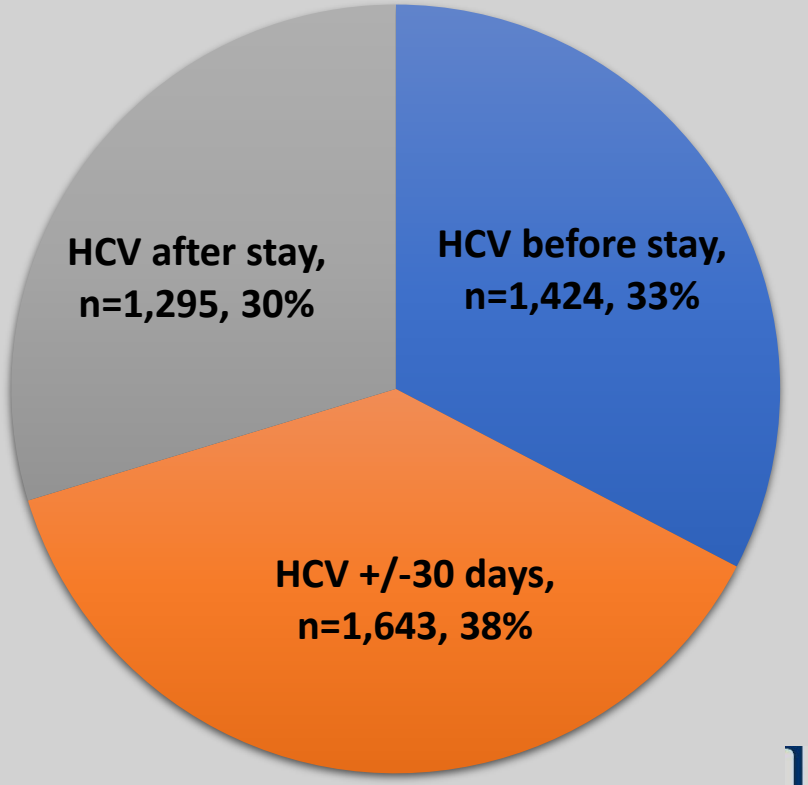
Hepatitis C diagnosis relative to first IDU-related hospitalization

- By-person analysis
- Relative to the first IDU-related hospitalization:
  - 1/3 HCV diagnosed before
  - 1/3 +/- 30 days of hospitalization
  - 1/3 HCV diagnosed >30 days after
- HCV testing done based on risk rather than symptoms of infection
- 3,067 patients need linkage to curative treatment
- 1,295 patients might have prevented HCV infection with help*

**Limitation: Not able to determine if patient tested negative for HCV infection*

Number and proportion of patients with HCV reported relative to their first IDU-related hospitalization, Oregon 2008–2018, n= 4,362



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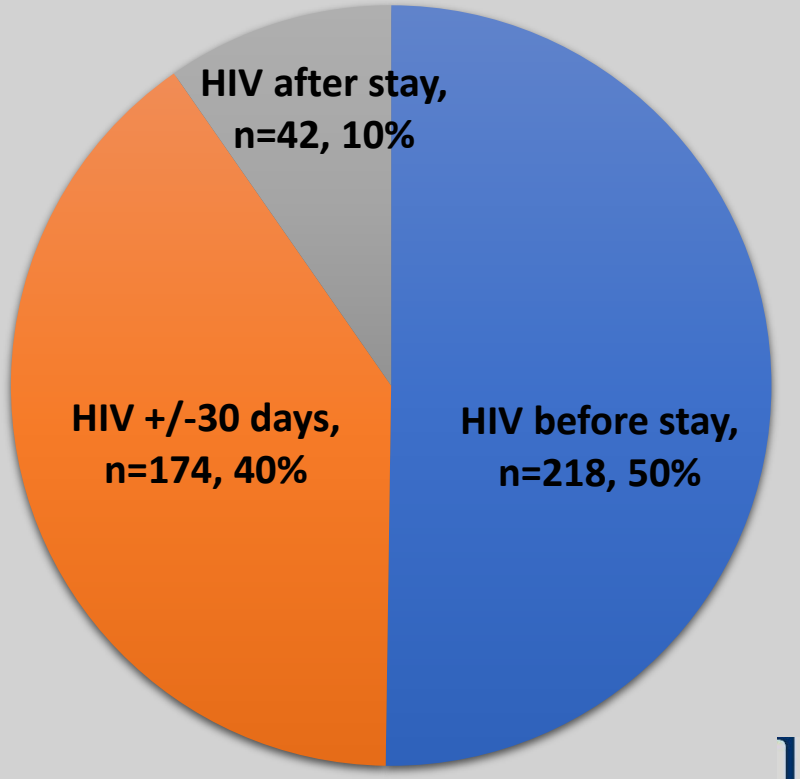
HIV diagnosis relative to first IDU-related hospitalization

- Relative to first IDU-related hospitalization:
  - 50% HIV diagnosed before
  - 40% +/- 30 days of hospitalization
  - 10% HIV diagnosed >30 days after
- 40% of patients diagnosed with HIV +/- 30 days of hospitalization – rather than before acute care need
- 50% of patients already diagnosed with HIV actively injecting drugs

**Limitation: Not able to determine if patient tested negative for HIV infection*

Number and proportion of patients with HIV reported relative to their first IDU-related hospitalization, Oregon 2008–2018, n= 434



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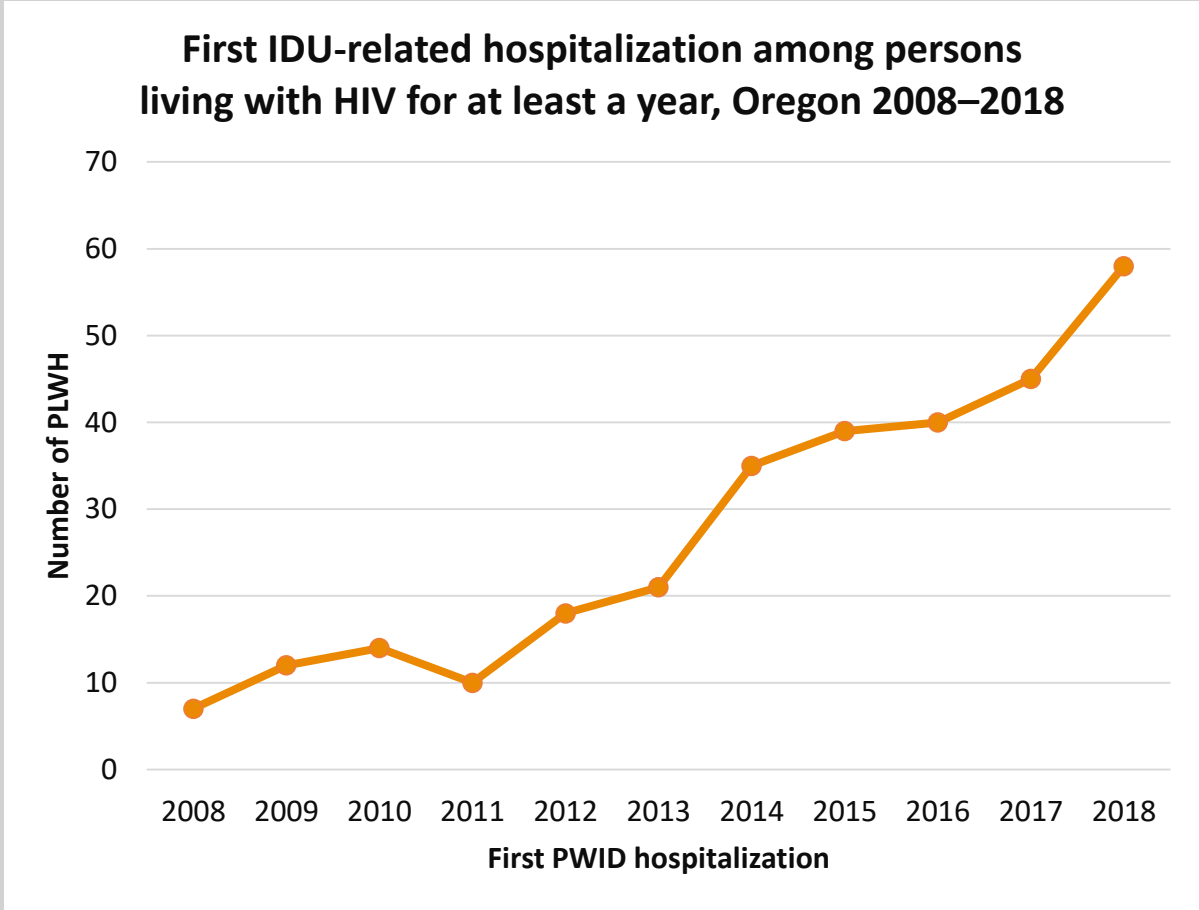
IDU-related hospitalizations among People Living with HIV

- The number of PLWH ever reporting injection drug use hospitalized for any reason increased from 1,158 to 1,309 (2008–2018)*
- The number of PLWH with an IDU-related hospitalization increased from 7 to 58 (2008–2018)
- 42% of HIV patients at the time of their IDU-related hospitalization were HIV virally suppressed
- 23% (70/299) patients died in a median of 16.4 months from their first IDU-related hospitalization



*Oregon HIV prevalence: 4,826 in 2008 and 7,622 in 2018

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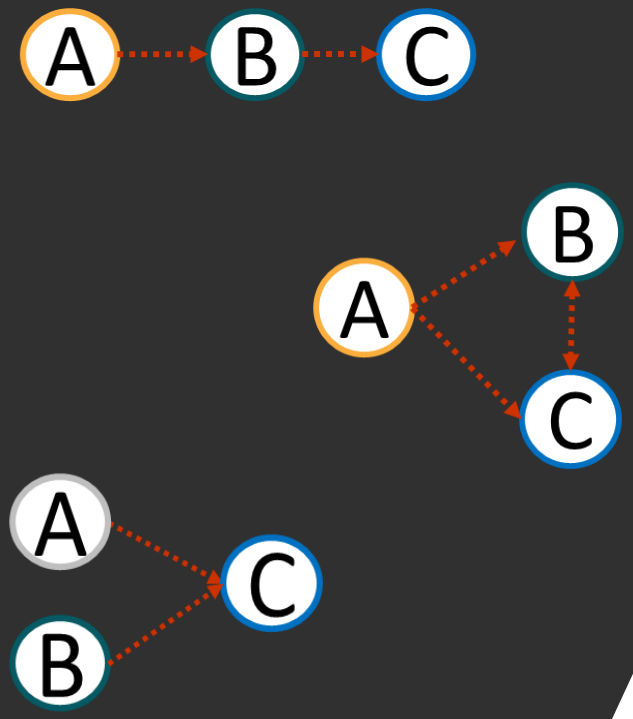
Discussion

- Injection drug use related infections are part of a Substance Use Disorder (SUD) centered syndemic
- Intervention considerations
- Effect of COVID-19 on interventions for people who use drugs

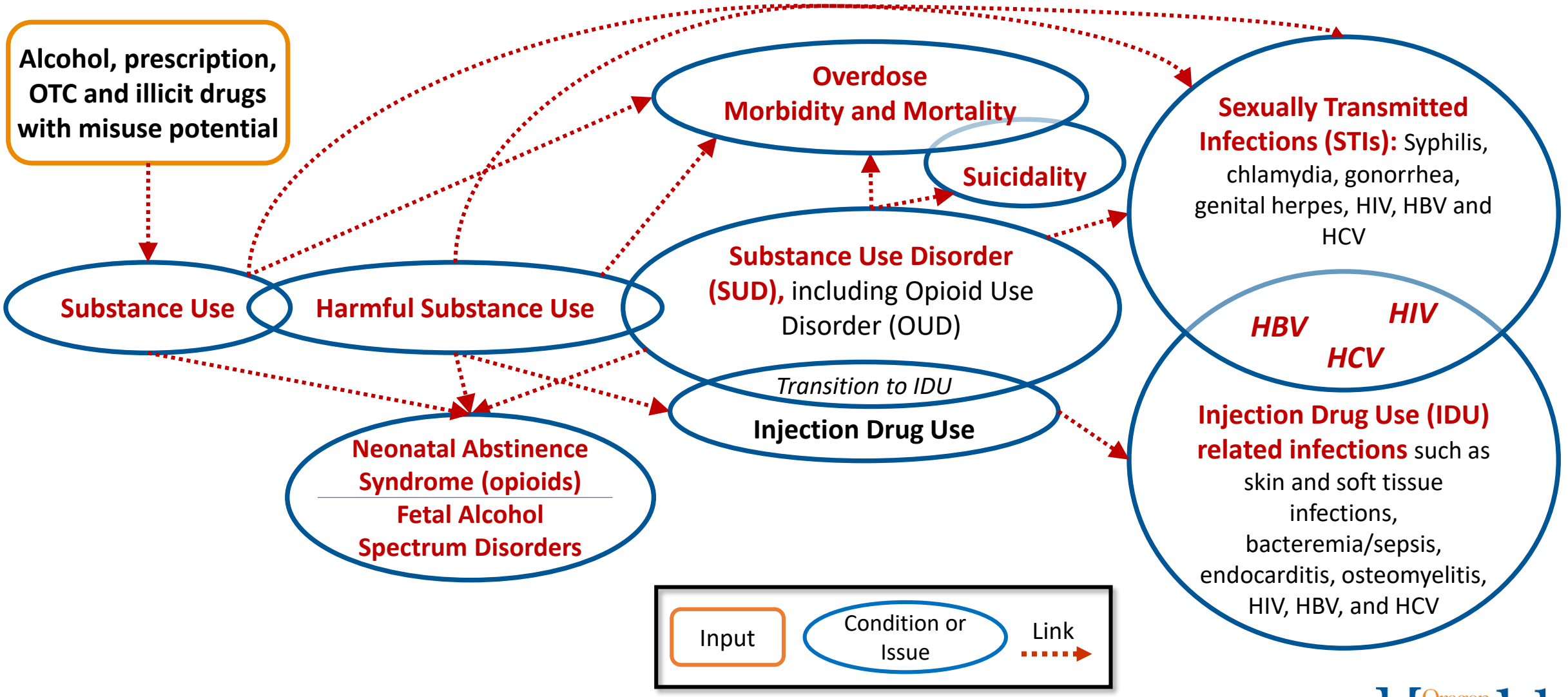
What is a syndemic?

Synergistic Epidemics



- Population-level cluster of health conditions or issues
- Syndemic ≠ co-morbidity
- Each condition or issue has its own epidemiologic trajectory
- Conditions or Issues interact at the level of
  - Cause
  - Consequence, or
  - Needed response
- The burden from the interaction is greater than the sum

Substance Use, Overdose, STIs, Associated Conditions and Injection Drug Use-related Infections



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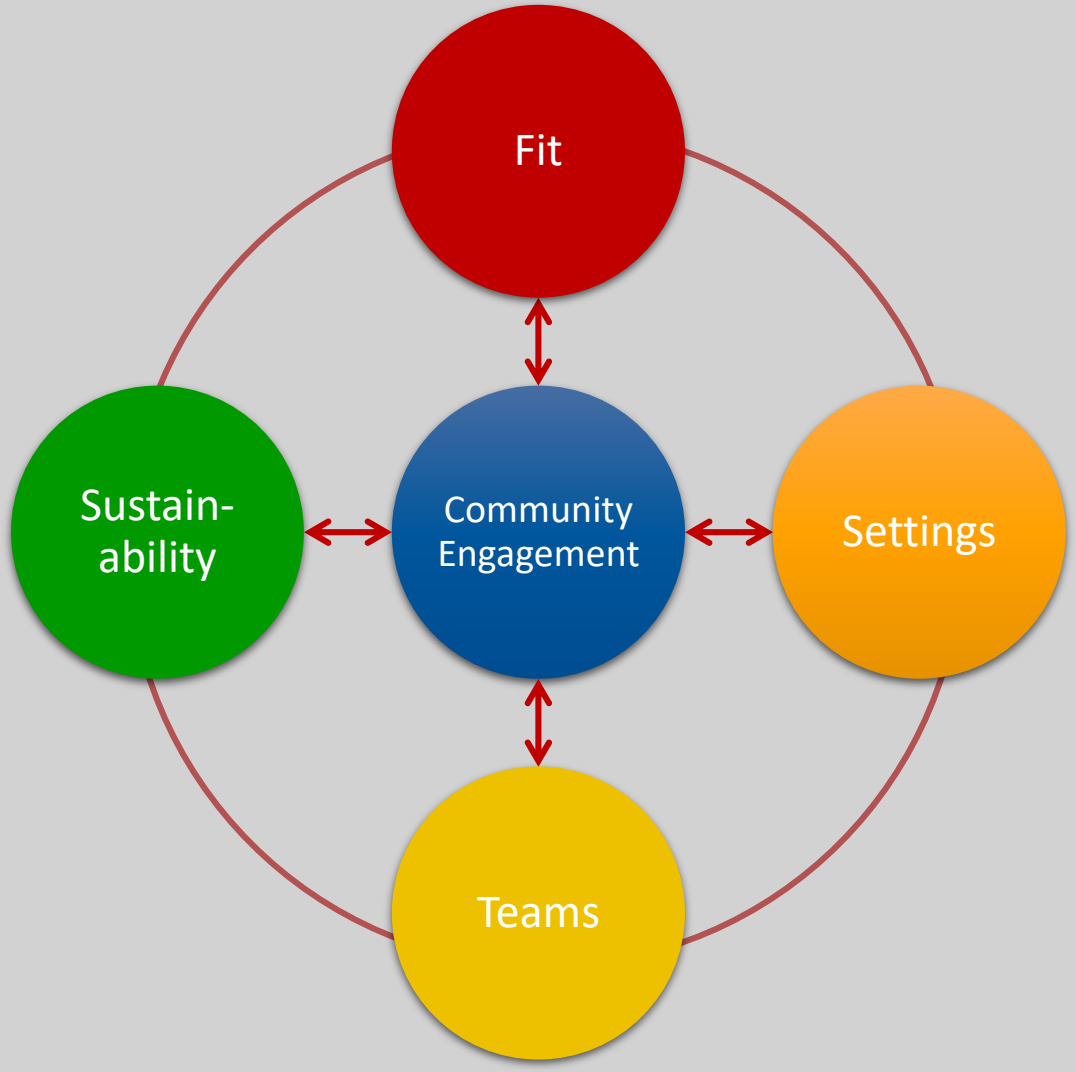
Intervention Considerations

Community Engagement…

Process of working collaboratively with and through groups of people affiliated by geographic proximity, special interest, or similar situations to address issues affecting the wellbeing of those people.

Often involves partnerships and coalitions that help mobilize resources and influence systems, change relationships among partners, and serve as catalysts for changing policies, programs, and practices.

CDC



Example Interventions

Intervention	Setting	Team	Sustainability
ANCHOR-ED	Emergency Department and aftercare in the community	Peer team gets participant referral from emergency department staff	Mixed funding: Federal SAMHSA/CDC and foundation (Lead: Providence Center)
ANCHOR-MORE	Fixed locations in community	Peers reach out and engage people at community-based agencies	Mixed funding: Federal SAMHSA/CDC and foundation (Lead: Providence Center)
NC-PORT	Aftercare in the community	Cross-sector team includes EMS/social worker and peer	Suggests community sites develop mixed funding sources
Oregon Project Impact	Hospital inpatient and aftercare in the community	Multidisciplinary addiction medical consultation team that includes peers initiates services during hospitalization	Mixed funding: CCO and OHSU (Lead: OHSU)
Oregon- HOPE	Fixed community locations and public spaces	Peer team works in partnership with community stakeholders to engage people who use drugs	Federal research grant (Lead: OHSU)
Oregon-PRIME+	Emergency Department, hospital inpatient, health clinic, fixed community locations, and public spaces	Peer team works in partnership with community stakeholders to engage people who use drugs	CDC Division of Viral Hep Federal SAMHSA grant (Lead: Oregon Health Authority)

Effect of COVID-19 on Interventions for People who use drugs

- COVID-19 has caused wide-reaching and uneven disruptions in the day-to-day life, services and programs used by people who use drugs
- Harm reduction relies on connections and trusting relationships – which had mostly been in-person

Program Adaptations to COVID-19

Programs serving people who use drugs have had to:

- Adapt in ways that maintain existing connections and trust with current participants
- Develop ways to reach out, connect and develop trust with new participants
- Support participants to cope with the on-going changes COVID-19 is forcing on their day-to day life, services and relationships
- Assist participants to remain connected with their support systems and loved ones

Conclusions

- Oregon has seen a dramatic increase in IDU-related hospitalizations
  - 71% of patients infected with HCV and 90% of those infected with HIV were positive at their first IDU-related hospitalization;
  - Hospitalization is an opportunity to initiate interventions to link patients to SUD, HIV, and HCV care
- IDU-related hospitalizations are one consequence within the Substance Use Disorder-centered Syndemic.
- An effective sustainable response to the Substance Use Disorder Syndemic requires community engagement, cross-sector and system collaborations

Thank you

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