**Outline**

- Picture of a practice: BHCHP and its patient population
- Harm reduction and SPOT (Supportive Place for Observation and Treatment)
- Harm reduction in the US: next steps?
- Conclusions

**Picture of a Practice**

- Overdose is the leading cause of death
- Located in Boston’s South End across from BMC — epicenter of crisis
- Overdoses frequent in our main building (2-5 each week)
- Not effectively engaging high risk people with SUD, despite significant existing addictions programming

**Mortality Among Homeless Adults in Boston**

*Shifts in Causes of Death Over a 15-Year Period*

Tara F. Baggett, MD, MPH; Stephen W. Huang, MD, MPH; James J. O’Connell, MD; Rameca C. Perreira, MD; Erin J. Strawbridge, MSW; E. John Ousley, PhD; Daniel E. Sanger, MS; Nancy A. Biggs, MD

- Cohort of 28,033 adults seen at BHCHP in 2003-2008
- Drug overdose was the leading cause of death
- Opioids implicated in 81% of overdose deaths

**Tobacco-, Alcohol-, and Drug-Attributable Deaths and Their Contribution to Mortality Disparities in a Cohort of Homeless Adults in Boston**

- Follow up study using same cohort
- Estimated proportion of deaths attributed to substances using population-attributable fractions
- Over half of all deaths attributable to substances
Harm Reduction and SPOT

Supportive Place for Observation and Treatment (SPOT)

OBJECTIVE

Implement a harm reduction program within a health care setting, in order to:

1. Prevent fatal overdose
2. More effectively connect highest-risk individuals with treatment
3. Tackle stigma

Harm reduction refers to a range of services and policies that lessen the adverse consequences of drug use and protect public health. Unlike approaches that insist that people stop using drugs, harm reduction acknowledges that many people are not able or willing to abstain from illicit drug use, and that abstinence should not be a precondition for help.¹

### Need Spot Operations Results Current Research Future Research Conclusion

**Program Concept**

**Services Offered**
- Medical monitoring
- Treatment of overdose
- Counseling about safer injection techniques
- Connection to primary care
- Naloxone rescue kit distribution

**Staffing Model**
- Registered nurse specializing in addiction
- Harm reduction specialist builds relationships and links people to treatment
- Peers who are in recovery offer support
- Rapid response clinician (MD/NP/PA) available for emergency

### Staffing Model

- **Registered Nurse** specializing in addiction
- **Harm Reduction Specialist** builds relationships and links people to treatment
- **Peers in Recovery** offer support
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### Need Spot Operations Results Current Research Future Research Conclusion

**WHAT WE’RE LEARNING IN SPOT (SUPPORTIVE PLACE FOR OBSERVATION & TREATMENT)**

- Cohort using the program is extremely high risk
- Substance use is layered with “cocktail”
- Overdose “syndrome” is complex and different from pure opioid OD: bradycardia and hypotension often out of proportion to respiratory depression
- Very different relationship with participants

### Staffing Roadmap

1. Environment
   - Consumer willingness to use harm reduction program
2. Participant Population
   - Community perceptions of SPOT
3. Impact
   - Evaluating public order, pre-/post-SPOT (first 12 weeks)

### Spot Research Roadmap

1. Environment
   - Consumer willingness to use harm reduction program
2. Participant Population
   - Community perceptions of SPOT
3. Impact
   - Evaluating public order, pre-/post-SPOT (first 12 weeks)

### Polysubstance Overdose Syndrome

Vital signs monitoring in SPOT often shows bradycardia and hypotension, in addition to sedation and respiratory depression, thought to be a result of polysubstance use.

### Harm Reduction in the US: Next Steps?
Harm Reduction: Next Steps in the US?

- People who use drugs more involved in advocacy, policy, program-design, research, engagement, services
  - History of harm reduction: communities stepping up to take care of their own
  - Expansion of needle exchange programs
  - More integration of harm reduction in health care settings
  - Continued advocacy for SIF
  - Peer-run pop-up “OD prevention sites”
  - Reforms in MAT: low-threshold bupen
  - US trial of DAM or HDM IV treatments
  - Harm reduction housing models
  - Public education campaigns
NEED  SPOT OPERATIONS  RESULTS  CURRENT RESEARCH  FUTURE RESEARCH  CONCLUSION

- Disproportionate effect of overdose deaths among homeless population
- Harm reduction services play a crucial and complementary role in SUD treatment continuum
- Trusting relationships with people who inject drugs
  - Offer promise of discovering or tailoring interventions that have high impact
  - Yet also present challenges with conducting formal research

Synopsis of Key Studies on Supervised Consumption

(For reference)

Assessing the evidence for Supervised Consumption Sites: Synopses of key studies

1. SCs reduce overdose mortality

Methods: Population-based overdose mortality rates were examined in the 500m surrounding the SIF before and after its opening and compared with before and after rates in the rest of the city of Vancouver.

Results: In the area around the SIF, overdose mortality decreased 35%, compared with a 0.3% reduction in the rest of the city.

Researchers mapped fatal overdose rates before (left) and after (right) the opening of Vancouver’s SIF (●) in city blocks within 500m of the facility. All shaded blocks are within 500m of the SIF. Rates are given in units of 100,000 person-years: Darker shading represents higher OD death rates. The figure is showing reduced OD death rate around the SIF in the ~2-year period after opening. Looking at the table above, you can see that the OD death rate decreased more for this 500m area (35% reduction) than for Vancouver as a whole (9.3%).

2. SCs increase access to substance use disorder treatment

Methods: A random sample of 1,289 participants of the Vancouver SIF prospective cohort study were analyzed to examine factors associated with the time to the cessation of injecting for a minimum of six months.

Results:
- Factors independently associated with drug use cessation included:
  - Use of methadone maintenance therapy
  - Other addiction treatment
- Factors independently associated with the initiation of addiction treatment included:
  - Regular SIF use at baseline
  - Having contact with the addiction counselor within the SIF
  - Aboriginal ancestry

Note the scale showing 500m. In the figure, all shaded blocks are within 500m of the SIF. The lighter green is 100% overdose rates, darker shading represents higher OD death rates. The figure is showing reduced OD death rate around the SIF in the ~2 year period after opening. Looking at the table above, you can see that the OD death rate decreased more for this 500m area (35% reduction) than for Vancouver as a whole (9.3%).
Assessing the evidence for Supervised Consumption Sites: Synopses of key studies

2. SCSs increase access to substance use disorder treatment

<table>
<thead>
<tr>
<th>Variable</th>
<th>Unadjusted Relative Hazard (95% CI)</th>
<th>P Value</th>
<th>Adjusted Relative Hazard (95% CI)</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homelessness (yes vs. no)†</td>
<td>1.43 (1.07–1.91)</td>
<td>0.02</td>
<td>1.42 (1.06–1.90)</td>
<td>0.02</td>
</tr>
<tr>
<td>Binge drug use (yes vs. no)†</td>
<td>1.44 (1.05–1.97)</td>
<td>0.02</td>
<td>1.35 (0.98–1.82)</td>
<td>0.06</td>
</tr>
<tr>
<td>Ever in treatment (yes vs. no)</td>
<td>2.70 (1.56–4.65)</td>
<td>&lt;0.001</td>
<td>2.43 (1.43–4.22)</td>
<td>0.002</td>
</tr>
<tr>
<td>Weekly use of SIF (yes vs. no)</td>
<td>1.84 (1.34–2.52)</td>
<td>&lt;0.001</td>
<td>1.72 (1.23–2.38)</td>
<td>0.005</td>
</tr>
<tr>
<td>Addictions counselor (yes vs. no)†</td>
<td>2.41 (1.55–3.77)</td>
<td>&lt;0.001</td>
<td>1.98 (1.26–3.10)</td>
<td>0.003</td>
</tr>
</tbody>
</table>

In multivariate analysis, an average of at least weekly use of the SIF and any contact with the facility’s addictions counselor were both independently associated with more rapid entry into a detoxification program.

Vancouver, Canada — SESO cohort study

Methods: The authors conducted a cost-benefit analysis by integrating local health data (23 sites) and data on the impact of SCS within a hypothetical SCS in Baltimore, modeled on financial and health costs and benefits of a SCS in Vancouver.

Results:
- Every year, would bring $5.98M Net savings
- $4.35 saved for every dollar spent

3. SCSs reduce neighborhood burden of drug use

Preliminary data from unsanctioned SCS in the United States

A social service agency in an undisclosed urban location in the U.S. opened an unsanctioned SCS in Sept 2014. This is what they’ve found so far.

Methods: A 12-question quantitative survey was distributed before each time a program participant injected drugs at the SCS in a two-year period.

Results:
- White, male, homeless majority
- 2 OD’s on site, both reversed by staff/Narcan
- No incidents of violence
- No instances of crime
- Site averted over 3,300 instances of public injection in the neighborhood over 2 years
- 1,725 episodes of averted unsafe disposal
- Full benefits cannot be realized or evaluated until sanctioned

Assessing the evidence for Supervised Consumption Sites: Synopses of key studies

4. SCSs are cost-effective

A 2017 cost-benefit study evaluated the financial and health costs and benefits of a hypothetical SCS in Baltimore, modeled on Insite in Vancouver.

Methods: The authors conducted a cost-benefit analysis by integrating local health data (23 sites) and data on the impact of SCS within a hypothetical SCS in Baltimore, modeled on financial and health costs and benefits of a SCS in Vancouver.

Results:
- Net savings $354,417
- $5.66 saved for every dollar spent


Assessing the evidence for Supervised Consumption Sites: Synopses of key studies

SCSs don’t:

- Encourage people to initiate injection drug use
- Act as a barrier for attendees to seek employment
- Attract drug dealers to the area
- Increase relapse rates or decrease rate of stopping injection drug use
- Increase the likelihood of overdose

Further Reading