Linkage to Care For HCV-infected Detainees Following Release from the New York City Jail System

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National Hepatitis C in Corrections Network
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Outline

• Introduction
  – HCV in correctional settings
  – Jail vs. Prison

• Linkage to HCV care following release from jail

• Conclusions/Future directions
HCV in Corrections

- Detainees bear disproportionate burden of HCV
- Interrelationship between high risk behaviors and incarceration
- National prevalence 17.4%

Jails vs. Prison

• 1/3 of incarcerated adults reside in jails
• 12 million admissions to US jails per year
  – 19 times the number in state and federal prisons
• There are more than 3,000 jails in the US holding 731,000 people at any given time

HCV in Jail

• 4 studies outlining HCV prevalence
  – RI $\rightarrow$ 10% $^1$
  – NC/SC $\rightarrow$ 12% $^2$
  – SF (10%), Chicago (14%), Detroit (15%) $\rightarrow$ 13% overall $^3$
  – Saint Louis $\rightarrow$ 16% $^4$

• Dynamic environment
• Recidivism rates are high
• Opportunity to provide HCV screening, linkage and engagement in care

Linkage to HCV Care

• So what do we know about linkage to HCV care following release from jail?
• Majority of work has been done on linkage to HIV care
Linkage to HCV Care

- Rhode Island Rapid HCV testing initiative
- Intervention: Questionnaire, informational video, referral to community care
- 4/23 (17%) linked to HCV care after release

Linkage to HCV Care

- North Carolina/South Carolina Testing and Linkage to Care initiative
- 2012-2014 – 893 detainees screened
- Intervention:
  - NC: posttest counseling, referral, patient navigation
    - 10/18 (56%) attended their first appointment
  - SC: posttest counseling, referral, appointment scheduling
    - 2/7 (28%) attended their first appointment

Linkage to HCV Care

- Wisconsin Prison System
- Linked administrative prison data, medical records, and public health surveillance database
- Linked = HCV RNA or genotype <6 months after release
- 2011-2016: 1605 released from prison
- 138 (9%) individuals engaged in HCV care

New York City Jail System

- 10 facilities on Rikers Island
- 4 borough facilities
- Average daily population of ~10,000
- More than 60,000 admissions per year
Linkage to HIV Care

- Transitional Health Care Coordination (THCC) – HIV
  - 2005 Correctional Health Services review
    - Many organizations, variety of services
    - Uncoordinated system
    - No centralized tracking
    - Duplication of effort, fragmented service delivery, and unknown outcomes.
  - 2006
    - Responsibility for transitional care coordination centralized
      - a) Know HIV status prior to release
      - b) Receive community HIV standard of care during jail stay
      - c) >1 face-to-face transitional services session prior to release
      - d) Be linked to a community health provider within 30 days of release from jail

Jordan AO et al. 2013. AIDS Behav.
Over 70% of HIV patients who receive a discharge plan are linked to care after incarceration.

Jordan AO et al. 2013. AIDS Behav.
HCV and linkage to care

Linkage rates for HCV are anecdotal and unknown.
Objectives

• To assess the impact of a transitional care coordination intervention on linkage to HCV care
• To understand barriers to and facilitators of linkage to HCV care
Methods

• One armed clinical trial
• Enrolment 5/2015-4/2017
• Inclusion criteria:
  – ≥18 years old
  – Chronic HCV infection
  – Anticipated release date permitting follow up within study period
• Exclusion criteria:
  – Unable or unwilling to sign consent
  – Anticipated transfer to prison
Methods

• Care Coordination Intervention
  – Needs assessment
  – HCV education
  – D/c planning by jail-based transitional care coordinator
  – Appointment scheduling
  – Study coordinator contact number
  – Reminder calls
  – Appointment accompaniment by a community patient navigator after reentry
Tracking Protocol

• Release date <2 weeks after enrollment
  – Apt made for within 2 weeks after release

• Release date >2 weeks after enrollment
  – Study team met with patient on a 2\textsuperscript{nd} occasion <2 weeks prior to release
  – Apt scheduled as above

• No known release date
  – Incarceration status monitored by study team
  – If release date assigned, schedule attempt was made
  – If released prior to study team contact, post-release contact was attempted
Tracking Protocol

• Participant contact information, NOK, and other relevant entities (i.e. Drug treatment centers), “hang outs”, ascertained prior to release from index incarceration

• Phone, text, or email - to engage with participants immediately after release
Tracking Protocol

• Levels of Contact:
  – Calling (texting, emailing) a contact that is:
    • 1. Disconnected or no longer belonged to expected individual
    • 2. With no response +/- leaving a voicemail
    • 3. Confirmed that respondent has contact with the participant → Message left for the participant with NOK or other relevant individual
    • 4. Making contact directly with the participant

Increasing level of engagement
Tracking Protocol

• 3 attempts to make contact
• If no success or progression, participant was categorized as unreachable
  – >3 attempts often made within the first 30 days post-release
  – Study team periodically attempted to engage unreachable participant within 180 days post-release
Tracking Protocol

• Other methods of reaching participants lost to follow up post-release:
  – NYC DOC Inmate lookup system
  – Department of Homeless Services database
  – CASES – CBO working with mentally ill
  – Drug treatment programs
  – Other community patient navigation programs
Methods

• Primary outcome:
  – Linkage to HCV care

• Secondary outcomes:
  – HCV treatment initiation
  – HCV treatment completion
  – SVR
  – Impact of addiction medicine and mental health services on linkage and retention
Methods

• Predictors of linkage using the Addiction Severity Index at enrolment
  – Medical, employment/support, drug/alcohol use, legal status, family/social support, mental health

• Statistical significance was determined using Chi-square / Fisher’s exact tests ($p<0.05$)

• EventFlow - visually inspect data and identify relevant temporal event sequences
Map of HCV Re-entry in NYC
185 Approached for Eligibility

105 Enrolled

5 Excluded (HIV+)

100 Followed

3 HCV Tx pre-release
1 HCV VL cleared
1 Death pre-release
8 Transferred to prison or other jurisdiction
4 Remain in jail

83 Released from index incarceration

21 Ineligible
13 Pending transfer or sentence > 1 yr
5 Already on HCV Tx
2 Unable to give consent
1 HCV RNA negative

59 Refused
24 Interested in HCV Tx, not in study (alternative provider specified)
8 Interested in HCV Tx, not in study (no alternative provider specified)
5 Not currently interested in HCV Tx
4 Time constraint
1 Will be treated in jail
17 Did not specify

100 Followed

5 Excluded (HIV+)

105 Enrolled

185 Approached for Eligibility
Results

- Mean duration of time between enrollment and release was 70.5 days (SD=101.6)
- 3.6 (SD=4.3) participant contacts attempted
  - 42 participants successfully contacted
- 2.6 (SD=1.9) NOK contacts were attempted
  - 53 participants’ NOK successfully contacted
Results

Primary Outcome:

• 26/83 (31%) participants linked to HCV care within a median of 25 days
  – 17 (20%) initiated HCV treatment
  – 15 (18%) completed treatment
  – 7 (8%) out of 9 (78%) w/ 12 week follow-up had SVR
Correctional-community continuum of care

*outcome may increase as intervention is ongoing*
Correctional-community continuum of care

How to narrow this gap?

outcome may increase as intervention is ongoing
Correctional-community continuum of care

How to narrow this gap?

Intervention?

outcome may increase as intervention is ongoing

*Correctional-community continuum of care

100%

83%

42%

31%

20% 18%

8%

0%

10%

20%

30%

40%

50%

60%

70%

80%

90%

100%
Correctional-community continuum of care

**How to narrow this gap?**

- Intervention?
- Retention?

- Outcome may increase as intervention is ongoing

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>100%</td>
</tr>
<tr>
<td>Released</td>
<td>83%</td>
</tr>
<tr>
<td>Reincarcerated</td>
<td>42%</td>
</tr>
<tr>
<td>Linked</td>
<td>31%</td>
</tr>
<tr>
<td>Tx Initiation</td>
<td>*20%</td>
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<tr>
<td>Tx Complete</td>
<td>*18%</td>
</tr>
<tr>
<td>SVR</td>
<td>*8%</td>
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Results

• Reincarceration was the most common *initial* event for 30 (36%) participants
• 3 participants were linked to care following reincarceration
<table>
<thead>
<tr>
<th>Cohort Characteristics</th>
<th>Total N = 83 (%)</th>
<th>Linked to care N=26 (%)</th>
<th>Unlinked to care N=57 (%)</th>
<th>P value</th>
</tr>
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<tbody>
<tr>
<td>Age, mean (SD)</td>
<td>44 (13)</td>
<td>47 (11)</td>
<td>44 (12)</td>
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<tr>
<td>Female Male</td>
<td>35 (43) 48 (57)</td>
<td>9 (35) 17 (65)</td>
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<td>Race/ethnicity</td>
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<td>Hispanic</td>
<td>45 (54) 15 (18)</td>
<td>15 (58) 5 (19)</td>
<td>30 (53) 10 (18)</td>
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<tr>
<td>NH Black</td>
<td>19 (23) 4 (5)</td>
<td>5 (19) 1 (4)</td>
<td>14 (25) 3 (5)</td>
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<td>NH White</td>
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<tr>
<td>Other</td>
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</tr>
<tr>
<td>Homeless§</td>
<td>22 (27)</td>
<td>5 (19)</td>
<td>17 (30)</td>
<td>0.11</td>
</tr>
<tr>
<td>Graduated high school§</td>
<td>47 (57)</td>
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<td>0.19</td>
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<tr>
<td>Mental illness</td>
<td>48 (58)</td>
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<tr>
<td>Ever injected</td>
<td>58 (70)</td>
<td>22 (85)</td>
<td>36 (63)</td>
<td>0.22</td>
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<tr>
<td>Alcohol to intoxication§</td>
<td>31 (37)</td>
<td>5 (19)</td>
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<td>0.02</td>
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<tr>
<td>On opioid agonist therapy§</td>
<td>53 (64)</td>
<td>20 (77)</td>
<td>33 (58)</td>
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<tr>
<td>Feel supported socially§</td>
<td>69 (83)</td>
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<td>44 (77)</td>
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Study Conclusions

• Integrated jail and community-based care coordination program may be effective in improving timely linkage to care

• Significant barriers remain

• Multicomponent intervention aimed at increasing social support, linkage to OAT, and primary care could lead to improvement in linkage

• Reincarceration - opportunity to reengage individuals who have not yet linked to care
Remaining Questions

- Type of incarceration (e.g. parole violation)
- Known date of release
- Contact log data (number of contacts, phone calls vs. texting)
- OAT during incarceration
- Impact of linkage to community services
  - OAT
  - Mental health services
Next steps: HCV-ACCELERATE

• The *HCV-ACCELERATE Trial*
  – Advanced Care Coordination and Enhanced Linkage and Retention Among Transitional re-Entrants
• Aim 1: To assess barriers & facilitators to linkage to HCV care
  – Qualitative study
• Aim 2: To tailor the existing intervention to create an enhanced care coordination intervention.
  – Address the barriers & facilitators identified in Aim 1
  – Use peer mentors
• Aim 3: To pilot test the feasibility and effectiveness of *HCV-ACCELERATE* in an RCT.
  – *HCV-ACCELERATE* vs. control condition (HCV education, standard referral, and appointment scheduling)
Disproportionate HCV prevalence in correctional settings

Jails provide opportunity to screen and link to HCV care

Strong partnerships between corrections, care coordination team, and community partners essential

Wrap around services - addiction medicine, social support, primary care may be critical
Acknowledgments

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  – Alain Litwin, MD, MPH, MS
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  – Alison Jordan, LCSW
  – Zach Rosner, MD
  – Moonseong Heo, PhD
  – Alison Karasz, PhD

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  – Ellie Carmody, MD, MPH
  – Ben Eckhardt, MD

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References