Hepatitis C Care Cascade
At the Dallas County Jail
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Hepatitis C Virus (HCV) prevalence is up to 10 times higher among the incarcerated population compared to the community.¹

Approximately 30% of those with HCV infection have spent time in a correctional facility.¹

Identifying and notifying incarcerated individuals with HCV is a unique opportunity to initiate the HCV care cascade.
Background – HCV Care Cascade (Yehia, 2014)

* Chronic HCV-Infected; $N=3,500,000$.
† Calculated as estimated number chronic HCV-infected (3,500,000) x estimated percentage diagnosed and aware of their infection (49.8%); $n=1,743,000$.
‡ Calculated as estimated number diagnosed and aware (1,743,000) x estimated percentage with access to outpatient care (86.9%); $n=1,514,667$.
§ Calculated as estimated number with access to outpatient care (1,514,667) x estimated percentage HCV RNA confirmed (62.9%); $n=952,726$.
‖ Calculated as estimated number with access to outpatient care (1,514,667) x estimated percentage who underwent liver biopsy (36.4%); $n=581,832$.
¶ Calculated as estimated number with access to outpatient care (1,514,667) x estimated percentage prescribed HCV treatment (36.7%); $n=555,883$.
** Calculated as estimated number prescribed HCV treatment (555,883) x estimated percentage who achieved SVR (58.8%); $n=326,859$.

Note: Only non-VA studies are included in the above HCV treatment cascade.
Background

- What is the prevalence of HCV at the Dallas County Jail?
- What are the demographics of those with HCV at the Dallas County Jail?
- What is the HCV care cascade for those incarcerated in jail?
- How does implementation of best practices impact the care cascade?
Methods – April to July 2017

Opt-out HCV antibody screening offered at time of routine blood draw

If HCV antibody positive, confirmatory HCV RNA test ordered and drawn

If HCV RNA positive, then nurse navigator provided:
- disease education
- prevention counseling
- linkage to care information
July – November 2017:
- HCV antibody and HCV RNA drawn simultaneously
- HCV RNA stored and run if HCV antibody was positive

Methods – July to November 2017

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If HCV RNA positive, then nurse navigator provided:
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- prevention counseling
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Methods

- Demographics and testing results were extracted from electronic medical records.
- Patient self-reported HCV risk factor and health insurance were recorded by a nurse navigator.
- Data analyses were completed using Stata 14.
## Results

<table>
<thead>
<tr>
<th>Total Number Tested: 4089</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total HCV Ab+ : 714</td>
</tr>
<tr>
<td>HCV Ab+ Prevalence: 17.5%</td>
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<tr>
<td>Estimated Percent HCV RNA+: 13.0%</td>
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</tbody>
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<table>
<thead>
<tr>
<th>HCV RNA + N=413</th>
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</thead>
</table>

| Age (mean, SD) | 49.0 (11.6) |
|---------------|
| Birth Cohort (born 1945-1965) | 204 (49.4%) |
| Gender | Male 332 (80.4%) |
|        | Female 80 (19.4%) |
| Race & Ethnicity | White 161 (39.0%) |
|                   | Black 191 (46.3%) |
|                   | Hispanic 60 (14.5%) |
|                   | Other 1 (0.2%) |
Results – Race and Ethnicity by Birth Cohort

HCV RNA+ Patients' Race and Ethnicity by Age Cohort

<table>
<thead>
<tr>
<th></th>
<th>Non-birth Cohort</th>
<th>Birth Cohort</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unknown</td>
<td>0.5</td>
<td>67.0</td>
</tr>
<tr>
<td>White</td>
<td>51.0</td>
<td>27.2</td>
</tr>
<tr>
<td>Black</td>
<td>25.7</td>
<td>5.8</td>
</tr>
<tr>
<td>Hispanic</td>
<td>22.8</td>
<td></td>
</tr>
</tbody>
</table>

n=413
Results - Risk factor

HCV RNA+ Patient Self-Reported Risk Factor (n=350)

- IV Drug Use: 47.7%
- Unknown: 23.3%
- Tattoo: 18.7%
- Blood Exposure: 5.2%
- Sexual Contact: 4.0%
- Other: 0.0%
Results – Insurance Type

HCV RNA+ Patient Self-Reported Insurance (n=350)

- Charity: 81.8%
- Medicaid: 3.8%
- Medicare or Dual: 4.9%
- VA: 9.5%

UT Southwestern Medical Center
Results – Time from Antibody Result to Patient Education

Median Time
Separate Collection: 16.6 days
Combined Collection: 6.6 days
Results – Patient Retention Through HCV Care Cascade

HCV Antibody+ Patients Progression Through Care Cascade

- HCV Antibody Positive: 100% (Separate Sample Collection) 100% (Combined Sample Collection)
- HCV RNA Ordered: 85.7% (Separate) 95% (Combined)
- HCV RNA Done: 66.6% (Separate) 94% (Combined)
- HCV RNA Positive: 50.1% (Separate) 68.9% (Combined)
- Patient Educated: 41.8% (Separate) 58.9% (Combined)

UT Southwestern Medical Center
Results - Antibody Prevalence by Release

- HCV antibody prevalence varied by release location
  - TDCJ: 232/965 = 24.0%
  - Community: 178/1,029 = 17.3%
  - Agency: 38/404 = 9.41%
Conclusions

- HCV has a 17.5% antibody positive prevalence in our population.
- HCV screening in jails should be offered regardless of age or reported risk factors.
- The majority of patients with HCV did not have health insurance, posing challenges for HCV treatment coverage after release.
- Combining HCV Ab and HCV RNA into a single blood draw:
  - Increased identification and notification of HCV disease by 40%
  - Decreased the time to disease education, prevention counseling, and preparation for linkage to treatment by 60.2%
Future Directions and Questions

- Follow Up Post-Release – Nurse Navigator:
  - Calls patient after release to community
  - Assists patient in setting up medical financial assistance
  - Assists patient in scheduling appointment at liver clinic

- Future Directions:
  - Incorporate data from linkage to care at the liver clinic and clinical outcomes
  - Examine linkage to care processes

- Questions?
The incredible Parkland team:
- **Dr. Esmaeil Porsa**, PHHS EVP & Chief Strategy & Integration Officer
- **Patrick M. Jones**, PHHS Vice President
- **Tina M. Hill**, PHHS Correctional Health Administrator/Population Health Contract Administrator
- **Jacqueline Sullivan**, Sr Integration Consultant
- **Michelle Zhao**, PHHS Associate Director of Performance Improvement
- **Samsher Rawal**, PHHS Correctional Health Lab Section Supervisor
- **Merilyne Aguwa**, PHHS Correctional Health Nurse Navigator
- **Leah Esseltine**, PHHS Medical Assistant
- **Jeanette Hill**, PHHS Phlebotomy Specialist II
- **Ulysses Prioleau**, Phlebotomy Specialist II
- **Ken Dobbs**, PHHS Departmental Systems Manager
- **Kyung Tae Kim**, PHHS Departmental Systems Administrator

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**Works Cited:**