Challenges and barriers to completing the HCV clinical care cascade

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Perinatal HCV care cascade

• All persons, including those with opioid use disorder, should be screened for HCV in pregnancy.
  • HCV antibody with reflex to RNA

• There are currently no FDA-approved medications for the treatment of chronic HCV in pregnancy.

• Thus, individuals with chronic HCV are referred to treatment in the postpartum period.

• Inherent discordance between diagnosis and treatment.
How well has this approach been working?

- We utilized a multi-state Medicaid data research network (MODRN) to evaluate the perinatal HCV cascade of care among pregnant persons with OUD.
  - Diagnosis → treatment

- Medicaid Outcomes Distributed Research Network (MODRN)
  - Medicaid administrative healthcare data: 6 states (DE, KY, NC, PA, WV)

- Females with an ICD-10-CM diagnosis of OUD, live or stillbirth delivery ≥ 24 weeks between Oct 2016 - Oct 2019 were included.
How well has this approach been working?

- Included participants had to be enrolled in Medicaid for at least 6 months during pregnancy
  - Allow enough time to observe HCV screening

- All women were followed through 60 days after delivery
  - Mandated Medicaid enrollment under federal law

- A subgroup of women remained continuously enrolled in Medicaid for 6 months after delivery.
  - MODRN includes ACA era Medicaid expansion states except for NC
  - BUT, analysis was pre-Medicaid postpartum coverage expansions

- Final analytic sample
  - 23,780 patients → 19,697 (83%) were continuously enrolled in Medicaid and followed for up to 6 months after delivery
HCV testing and evaluation in pregnancy

- HCV testing – binary +/-
  - Any antibody and RNA testing laboratory procedure code between estimated date of conception (EDC) and data of delivery

- HCV diagnosis – binary +/-
  - Any ICD-10 diagnosis code for chronic or acute HCV infection between EDC and data of delivery

- Administrative data lacks laboratory results
  - Dates for HCV testing and diagnosis were compared to understand which patients had a pre-existing diagnosis.
Postpartum follow-up

- Postpartum follow-up visit for HCV – binary +/-
  - Visit in an outpatient setting with a provider whose subspecialty was hepatology, infectious disease, or gastroenterology.
  - Visit with a primary care provider (including ob/gyn) in which HCV was the primary diagnosis code recorded for the visit.

- Postpartum HCV treatment
  - Any outpatient prescription fills in the 60-day or 6-month follow-up period for medications that could be used to treat HCV.
  - Included all FDA-approved DAAs

- Analyses were adjusted for demographic and clinical characteristics associated with OUD or HCV infection
  - Urban vs. rural, mental health conditions, co-occurring substance use disorders, MOUD utilization, other infectious complications, liver dz
Population characteristics

• Race: white - 86%, black - 7%, Hispanic – 2%

• MOUD during pregnancy – 55%

• Co-occurring non-OUD substance use disorders – 60%

• Cirrhosis or liver disease – 5%

• Infectious sequelae of injection drug use (e.g., endocarditis) – 5%
## Prevalence estimates of HCV care cascade

<table>
<thead>
<tr>
<th>State</th>
<th>HCV test, %</th>
<th>HCV diagnosis, %</th>
<th>HCV diagnosis before test, %</th>
<th>HCV diagnosis after test, %</th>
<th>HCV diagnosis without test, %</th>
<th>Follow-up visit, %</th>
<th>HCV medication, %</th>
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<td>10.0</td>
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</tr>
</tbody>
</table>
State-specific average predicted probabilities

A

F

J

D

I

L

Testing  Diagnosis  Any Follow-Up

Testing  Diagnosis  Any Follow-Up

60 day  6 month
Global average predicted probabilities

- Testing
- Diagnosis
- Any Follow-Up

60 day vs 6 month
Gaps and barriers

• **Provider-level**
  - How do we communicate the need for HCV screening and educate patients regarding risk factors for infection?
  - Once diagnosed, how do we communicate the need to treat HCV and educate patients regarding sequelae from untreated disease?
  - How to we link patients to treatment? Passive recommendation vs. active coordination of care?
  - How to we create a provider workforce that is more comfortable with providing HCV treatment?

• **Patient-level**
  - How do patient’s prioritize HCV infection when recovery is unstable?
  - What motivates patients to pursue treatment when they are largely asymptomatic at the time of initial diagnosis?

• **System-level**
  - How do we integrate HCV treatment into obstetric, primary care, and community settings?
Thank you