Improving Maternal Engagement in Care of Women living with Hepatitis C and Postpartum Infant Evaluation

Maralynne D. Mitcham Interprofessional Fellowship Summary

Gweneth Bratton Lazenby, MD MSCR
Associate Professor
Departments of Obstetrics and Gynecology and Internal Medicine
Hepatitis C

- Hepatitis C (HCV) kills more Americans than any other infectious disease

- Approximately 1-2% of the U.S. population
  - ~ 3.4 million people living with HCV

- South Carolina
  - ~ 65,000
  - ~ 4,000 new cases per year

Ahuja, D. HCV Update. S.C. HIV/AIDS, Hepatitis, and STD Annual meeting presentation. 2017
The Impact of the National Opiate Epidemic and Crisis

- 2006-2012, review of opiate use and HCV infection diagnosis in Appalachia
- 21% increase in admissions for treatment related to opiate dependency
- 17% of persons abusing opiates report intravenous drug use (IVDU)
- 364% increase in the diagnosis of acute HCV infection

Zibbell et al. MMWR. 2015
Hepatitis C and Pregnancy

• Approximately 1-4% of pregnant women in the US are living with Hepatitis C infection (HCV)\textsuperscript{1,2}

• 5-10% of infants exposed to HCV in utero will develop chronic HCV infection\textsuperscript{3}

• Women and infants who have chronic HCV are at risk of cirrhosis and hepatocellular carcinoma\textsuperscript{4}

HCV and Opiate Use among Pregnant women at MUSC

• Since 1999, we have seen an increase in HCV infection AND opiate abuse among pregnant women

• HCV, 70% increase in last 10 years

• Opiate use, 130% increase

• HCV and opiate use, 210% increase
Effects of Hepatitis C on Neonatal Outcomes

• Small for gestational age (SGA) infants, OR 1.5\textsuperscript{1}

• Low birth weight (LBW), OR 1.9-2.2\textsuperscript{1,2}

• Increased rates of assisted ventilation, OR 2.4\textsuperscript{1}

Evaluation of HCV-exposed Infants

• All infants exposed to HCV in utero should be tested for HCV infection\(^1\)

• In Philadelphia, approximately 16% of HCV-exposed infants were tested and 1% had confirmed HCV infection\(^2\)

Hepatitis C Treatment

• 2011, Directly Acting Anti-virals (DAAs) were approved for treatment of HCV

• Treatment duration is 8-16 weeks

• Treatment with DAAs has resulted in cure for ~ 95% of HCV patients*

• Treatment is not recommended during pregnancy or lactation

• Children with HCV can and should be treated
Identified Gaps in Care Continuum

• Pregnant women with HCV frequently have a history of or are currently abusing opiates

• Infants exposed to HCV are not getting tested to determine HCV status

• Women and children living with HCV are not getting treated
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Creating an Interprofessional Team

• Obstetricians
• Substance abuse psychiatrist and treatment specialists
• Social workers and case managers
• Lactation specialists
• HCV treatment specialists
• Subspecialty pharmacists
Areas of Care

- Postpartum Inpatient
- Antepartum Outpatient
- Postpartum Outpatient
Ob/Gyn HCV Screening Recommendations

ABSOLUTE

• Intravenous drug users, current or former
• Intra-nasal drug users, current or former
• Blood transfusion recipients (before 1987) and solid organ transplant recipients (before 1992)
• HIV infection
• Hemodialysis, current or former
• Abnormal liver enzymes (ALT)

RELATIVE

• Body piercings
• Tattoo(s)
• HCV+ sexual partner or birth mother
• High risk sexual behavior
• Sexually transmitted infections, current or past
• Incarceration
• Health care workers with a recent exposure (needle stick, sharp laceration)
Time Line

July 2017
- Meeting to discuss MMF expectations and goals

August
- Met with medical (physician) stakeholders
- Established a contact and began a dialogue with Charleston Center

September
- Met with Charleston Center counselor to obtain list of case managers
- Met with hospital outpatient and inpatient social workers

October
- Developed a patient navigation plan for pregnant women living with HCV
- Revised Action plan based on feedback from HCV team
- Involved MUSC lactation specialist team and subspecialty pharmacist

November
- EPIC smartphrase for HCV evaluation and referral instructions for pregnant women and infants
- EPIC patients lists and shared with stake holders
Care Coordination for Pregnant Mother

- Pregnant woman
- Case manager
- High risk obstetrician
- HCV Specialists and Pharmacist
- Substance abuse team
Navigation Plan

- Summary for the interdisciplinary team members
- Outlined of the responsibilities of all team members
- Patient treatment plan through continuum of pregnancy and postpartum care
EPIC Smartphrase

ANTENATAL CARE
• Date of HCV Diagnosis, genotype
• Partner’s HCV status
• Updated labs
  ▫ HCV DNA viral load (s)
  ▫ Liver function tests (AST, ALT, Total bilirubin, albumin)
  ▫ PTT
  ▫ Hepatitis A and B Antibodies
• Immunization Reminder for HAV and/or HBV
• Substance abuse screening
  ▫ Recommendation for referral prn
  ▫ Reminder to fax clinic notes to correspond with Charleston Center

POSTPARTUM CARE
• Lactation consult
• HCV Treatment plan
  ▫ Referral to HCV specialist
• Infant HCV evaluation planning
  ▫ Referral to Pediatric I.D. team
  ▫ Fax copy of discharge summary to infant’s pediatrician
EPIC Patient Lists

Antenatal List
- Name
- MRN
- Gestational age
- Estimated date of delivery
- Next appointment

Postnatal List
- Name
- MRN
- Delivery Date
- Next appointment
Postpartum Care for Mother Baby Pair

Mother:
- OB
- HCV specialist and Pharmacist
- Substance Abuse team
- Case Manager

Baby:
- Lactation Specialist
- Pediatrician
- HCV specialist

Specialist roles for mother and baby postpartum care.
Maternal Evaluations for HCV Treatment

August 2017 to May 2018

HCV identified
- 10 women living with HCV have delivered
- 9 women are pregnant

Maternal HCV Treatment
- 10 women referred for treatment postpartum
- 5/10 have arrived for HCV treatment consultation
- 2 have received treatment
Infant Evaluations

- August 2017
  - 16 referrals
    - 7 evaluations (HCV RNA)
    - 9 no shows
<table>
<thead>
<tr>
<th>RECOMMENDED</th>
<th>RATING</th>
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<tbody>
<tr>
<td>All pregnant women should be tested for HCV infection (see <a href="#">Recommendations for Initial HCV Testing and Follow-Up</a>), ideally at the initiation of prenatal care.</td>
<td>IIb, C</td>
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Future Directions

• Increase awareness and testing for HCV in pregnant women

• Improve rates of postpartum treatment for women

• Improve rates of postpartum HCV testing in infants
Thank you