

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

Maralynne D. Mitcham Interprofessional Fellowship Summary

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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

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

Hepatitis C and Pregnancy

- Approximately 1-4% of pregnant women in the US are living with Hepatitis C infection (HCV)^{1,2}
- 5-10% of infants exposed to HCV in utero will develop chronic HCV infection³
- Women and infants who have chronic HCV are at risk of cirrhosis and hepatocellular carcinoma⁴

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 1.5¹
- Low birth weight (LBW), OR 1.9-2.2^{1,2}
- Increased rates of assisted ventilation, OR 2.4¹
- Admission to neonatal intensive care (NICU), OR 2.9¹

Evaluation of HCV-exposed Infants

- All infants exposed to HCV in utero should be tested for HCV infection¹
- In Philadelphia, approximately 16% of HCV-exposed infants were tested and 1% had confirmed HCV infection²

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

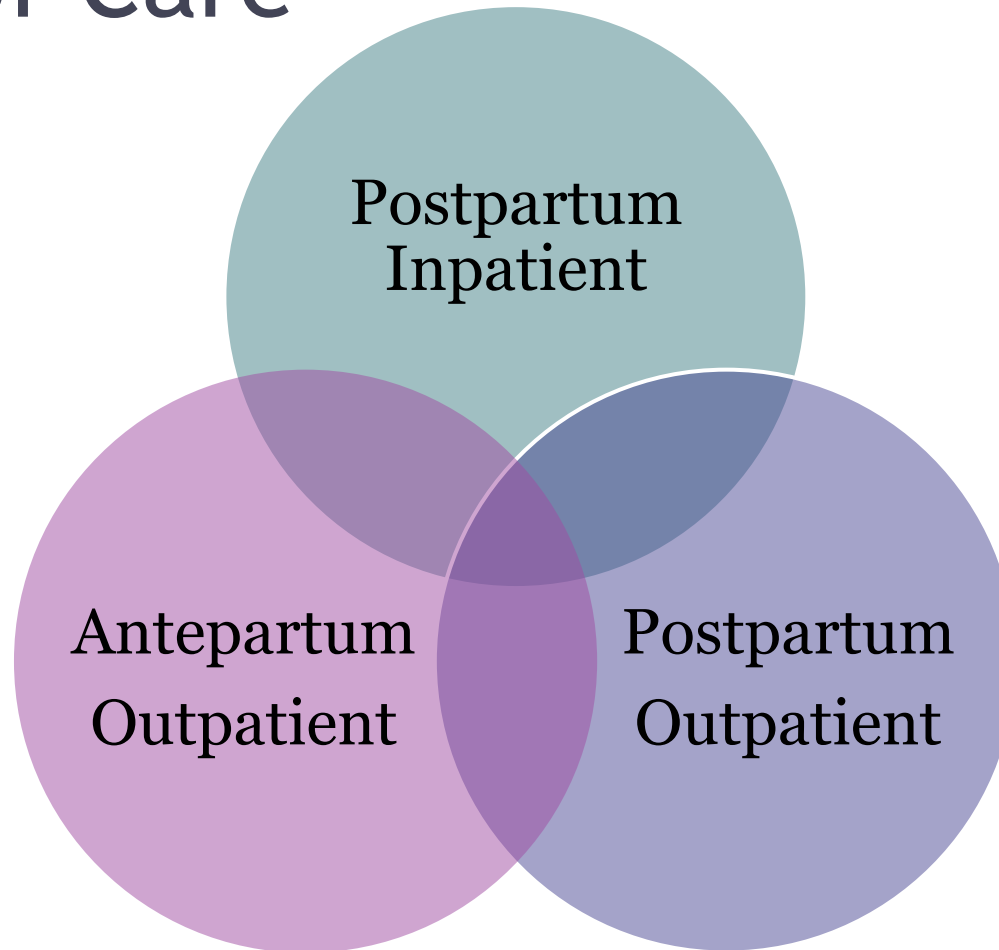
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Creating an Interprofessional Team

- Obstetricians
- Substance abuse psychiatrist and treatment specialists
- Social workers and case managers
- Lactation specialists
- HCV treatment specialists
- Subspecialty pharmacists

Areas of Care



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

December 2018



July - Meeting to discuss MMF expectations and goals

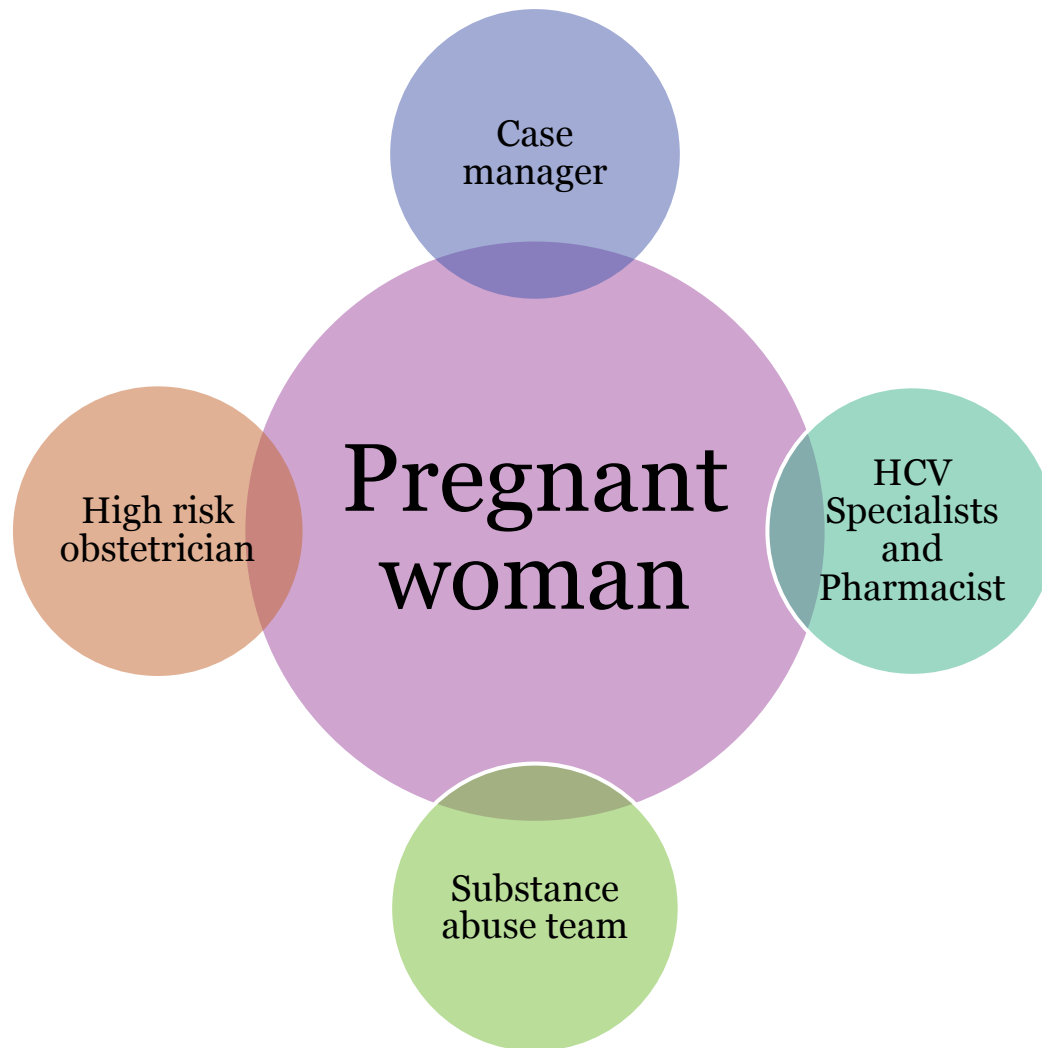
August- Met with medical (physician) stakeholders
Established a contact and began a dialogue with Charleston Center

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



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

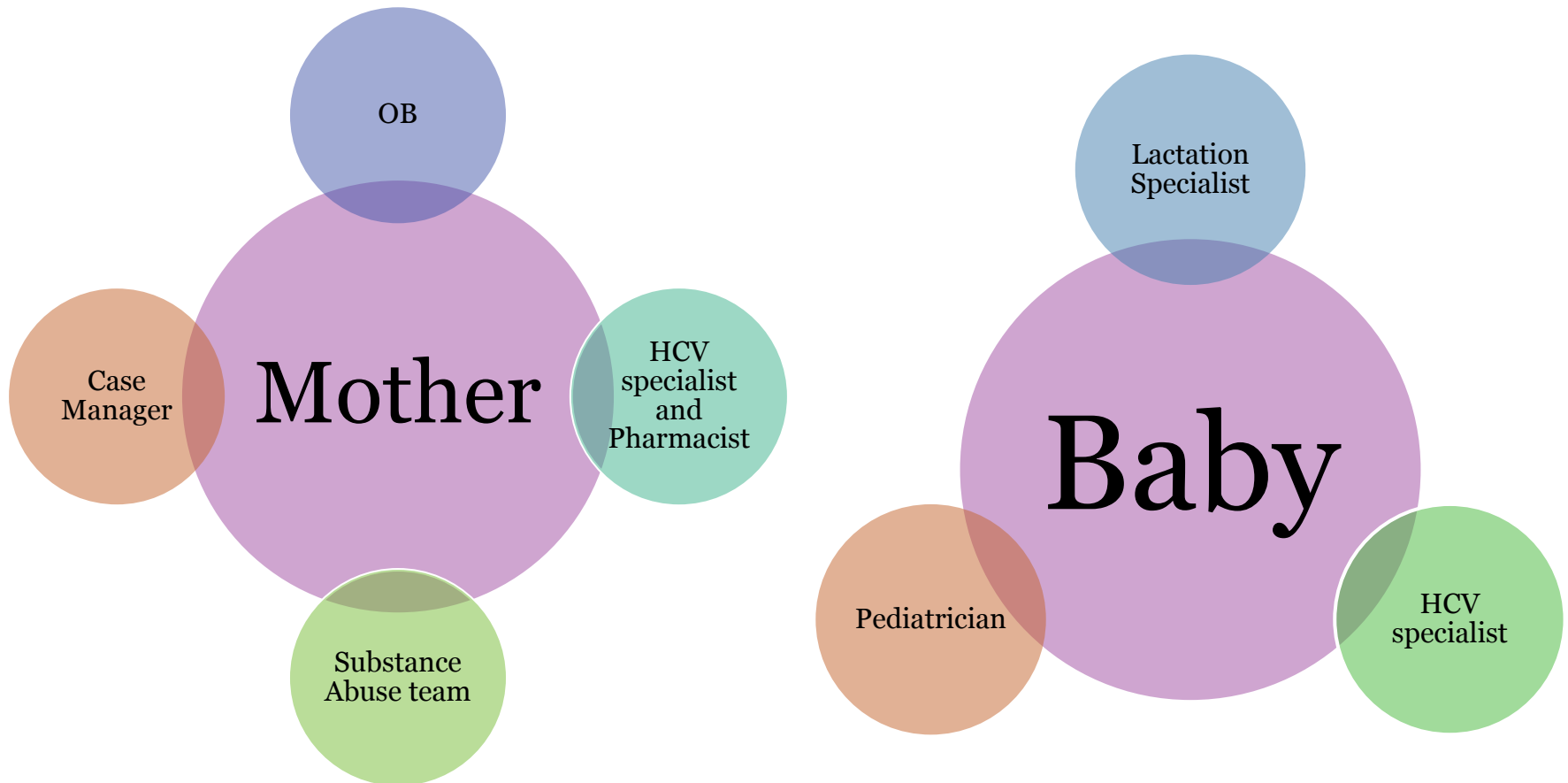
Antenatal List

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

Postnatal List

- Name
- MRN
- Delivery Date
- Next appointment

Postpartum Care for Mother Baby Pair



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

As of May 24, 2018

Recommendation for Universal Hepatitis C Screening in Pregnancy

RECOMMENDED

RATING

All pregnant women should be tested for HCV infection (see [Recommendations for Initial HCV Testing and Follow-Up](#)), ideally at the initiation of prenatal care.

IIb, C

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