Effective Health Care
Hepatitis C Screening and Treatment Nomination Summary Document

Results of Topic Selection Process & Next Steps

- Hepatitis C screening and treatment will go forward for refinement as an update to or expansion of an existing systematic review. The scope of this topic, including populations, interventions, comparators, and outcomes, will be further developed in the refinement stage.
- Adherence to hepatitis C treatment will go forward for refinement as a systematic review. The scope of this topic, including populations, interventions, comparators, and outcomes, will be further developed in the refinement phase.
- When key questions have been drafted, they will be posted on the AHRQ Web site and open for public comment. To sign up for notification when this and other Effective Health Care (EHC) Program topics are posted for public comment, please go to http://effectivehealthcare.ahrq.gov/index.cfm/join-the-email-list1/.

Topic Description

Nominators: 1 public payer, 1 government agency

Nomination Summary:

From public payer:
The nominator questions what factors predict response to and outcomes for antiviral treatment (specifically pegylated interferon and/or ribavirin) in patients with chronic hepatitis C. Some possible predictors named by the nominator include adherence to treatment and hepatitis C genotype. The nominator states that they are interested in the point at which you can discontinue hepatitis C treatment when patients are not adhering or responding to treatment protocols.

Population(s): Adults (>18 years) with chronic hepatitis C including all genotypes and varying treatment groups (treatment naïve, treatment non-responders, and patients who relapse after successful treatment)
Intervention(s): Pegylated interferon (or interferon) and ribavirin with varying levels of treatment adherence; For genotypes 1 & 4: Pegylated interferon (or interferon) and ribavirin for 48 weeks; For genotypes 2 & 3: Pegylated interferon (or interferon) and ribavirin for 24 weeks
Comparator(s): Good (e.g., >80%) vs. suboptimal adherence; different interferon-based regimens (with or without interferon) vs. one another
Outcome(s): Viral response at 12, 24, and 48 weeks, sustained viral response, cirrhosis, hepatocellular carcinoma and death

From government agency:
The nominator questions whether screening for hepatitis C virus infection in asymptomatic adults reduces the risk or rates of harm and premature death and disability. The nominator questions the effectiveness and adverse outcomes of antiviral

treatments for hepatitis C. Other interventions of interest to the nominator include counseling and immunization for patients who screen positive for hepatitis C. One population of interest to the nominator is pregnant adults. The nominator questions whether there are interventions that could reduce rates of harm to the mother, fetus, or newborn. In addition, they question what interventions may decrease the transmission of hepatitis C before or during delivery.

Population(s): Asymptomatic adults (excluding HIV-positive persons, transplant recipients, and patients with renal failure) and asymptomatic pregnant women, treatment differences by hepatitis C genotype
Intervention(s): Screening activities for hepatitis C, diagnostic tools for hepatitis C, antiviral treatment (pegylated interferon plus ribavirin treatment), counseling or immunization
Comparator(s): Current standard of care without active patient screening activities; a potential comparator for treatment-related questions may include pegylated interferon alfa-2a therapy vs. pegylated interferon alfa-2b
Outcome(s): Intermediate health outcomes (liver function, remission, histologic changes); behavior changes to reduce the spread of hepatitis C; morbidity and mortality from cirrhosis, hepatocellular carcinoma; reduction in transplants, reduction in deaths related to hepatitis C, reduction in the spread of the disease; reduction in vertical transmission of the disease from mother to child; adverse effects of screening (including labeling, anxiety, and impact on partner relationships); adverse effects related to antiviral treatment

Key Questions from Nominator:

From public payer:

1. Is there an association between adherence to treatment (pegylated interferon and/or ribavirin) for chronic hepatitis C and treatment outcomes (e.g., cirrhosis, hepatocellular carcinoma, death, early viral response, sustained viral response)?
2. Are there other predictors of treatment outcomes?
3. What guidance is available from technology assessments and guidelines for treatment length and monitoring of patients with chronic hepatitis C in the following subgroups?
    a. Genotypes 2 and 3 (more responsive to treatment)
    b. Genotypes 1 and 4 (less responsive to treatment)
    c. Treatment naïve patients with chronic hepatitis C
    d. Patients who are not responsive to initial treatment, especially if initial treatment is with pegylated interferon or ribavirin
    e. Patients who relapse after initial response, especially if initial treatment is with pegylated interferon and ribavirin

From government agency:

1. Does screening for hepatitis C virus (HCV) infection reduce the risk or rates of harm and premature death and disability?
2. What are the test characteristics of the work-up for active disease?
3. What are the harms associated with the work-up for active HCV disease?
4. Are there additional data on the adverse effects of screening, such as anxiety, labeling and impact on partner relationships?
5. In patients found to be positive for HCV antibody, what proportion of patients would

qualify for treatment?
6. How well does antiviral treatment reduce the rate of viremia, improve aminotransferase levels, and improve histology?
7. How well does antiviral treatment improve health outcomes in asymptomatic patients with HCV infection?
8. Are there data to support and estimate the benefit from counseling or immunization?
9. Have improvements in intermediate outcomes (liver function tests, remission, histologic changes) been shown to reduce the risk or rate of harm from HCV infection?
10. In pregnancy: Does routine screening during pregnancy reduce the risk or rates of harm to the mother, fetus, or newborn?
11. In pregnancy: What interventions would decrease the transmission of HCV before or during delivery?

Considerations

- The topic meets all EHC Program selection criteria. (For more information, see http://effectivehealthcare.ahrq.gov/index.cfm/submit-a-suggestion-for-research/how-are-research-topics-chosen/.)

- Hepatitis C is the most common blood borne infection in the United States and is a leading cause of complications from chronic liver disease. Although the number of new cases of acute HCV has declined, a substantial disease burden still exists as a result of chronic infection. Given the high prevalence of hepatitis C, a review on this topic could have significant impact on the treatment and management of these patients. The nominations center on two main issues:
  1. Hepatitis C Screening and Treatment
  2. Adherence to Hepatitis C Treatment

- The addition of two new subpopulations of interest (HIV co-infected patients and pregnant women) indicates that an update of the 2004 AHRQ report titled *Screening for Hepatitis C: Systematic Evidence Review for the U.S. Preventive Services Task Force* is warranted. Since there is interest in an up-to-date review of the evidence for treatment of HCV, the updated report will cover both screening and treatment. Key questions of the 2004 report are listed below.

  1. Does screening for hepatitis C reduce the risk or rates of harm and premature death and disability?
  2. Can clinical or demographic characteristics identify a subgroup of asymptomatic patients at higher risk for HCV infection?
  3. What are the test characteristics of hepatitis C virus antibody testing?
  4. What is the predictive value of a positive screening test and what are the harms associated with screening for hepatitis C virus?
  5. a) What are the test characteristics of the work-up for active disease?
     b) In patients found to be positive for hepatitis C virus antibody, what proportion of patients would qualify for treatment?
  6. What are the harms associated with the work-up for active hepatitis C virus disease?
  7. a) How well does antiviral treatment reduce the rate of viremia, improve transaminase levels, and improve histology?
     b) How well does antiviral treatment improve health outcomes in asymptomatic patients with hepatitis C?

c) How well do counseling and immunizations in asymptomatic patients with hepatitis C improve clinical outcomes or prevent spread of disease?

8. What are the harms (including intolerance to treatment) associated with antiviral intervention?
9. Have improvements in intermediate outcomes (liver function tests, remission, histologic changes) been shown to reduce the risk or rate of harm from hepatitis C?

- A significant number of patients exhibit poor adherence to hepatitis C treatment protocols. This important topic will be addressed in a separate review of interventions to improve adherence to hepatitis C treatment.