Hepatitis C Virus Screening Practices among Primary Care Physicians in Four Large Primary Care Settings

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Background

- In 1998, CDC published Recommendations for Prevention and Control of Hepatitis C Virus (HCV) Infection and HCV-related Chronic Disease
- CDC recommended HCV testing for populations most likely to be infected with HCV
- The implementation of risk-based screening has not been widely adopted in health care settings
- At least 1/2 of infected U.S. adults remain unidentified.

Purpose

- To examine knowledge and attitudes regarding HCV screening and testing practices in four, large primary care settings in the United States.

Methods

- Semi-structured interviews were conducted
  - 4 large primary care settings
    - Henry Ford Hospital
    - Mt. Sinai Medical Center
    - University of Alabama at Birmingham
    - University of Texas at Houston
  - 19 physicians
    - 6 Primary Care Physicians (PCP)
    - 8 Hepatologists
    - 5 Administrators (responsible for primary care policy changes)
- Data analyzed using NVivo 9.0
- Multi-disciplinary team
- Grounded Theory Based Methodology

Results

- The primary emerging themes:
  - Screening and testing practices
  - Screening guidelines
  - Processes involved in linking patients to specialist care
  - Practices involved in decision-making about treatment and delivering long-term care.

Themes and Illustrative Quotes from Interviews with Primary Care Physicians, Hepatologists and Administrators in Large Primary Care Settings

Main Theme	Sub-Theme	Illustrative Quotes
Testing and Screening	Risk-Factor Based Screening and Testing	"Physicians are also uncomfortable talking about hepatitis C risk factors such as drug use, so they don't bring up some of the questions necessary to identify at risk individuals."
	Symptom Based Testing and Screening	"Abnormal Liver Function Tests would trigger me to screen for HCV."
	Anti-body and Follow-Up Testing Practices	"After the first test, I have a quantitative RNA/viral load test done to confirm infection."
	Facilitator to Screening and Testing	"Talks (physician education)…on Hepatitis C have raised some awareness for the disease and have helped doctors be cognizant of which patients to screen."
	Barriers to Screening and Testing	"Many patients are not screened because primary care physicians are too busy."
		"I don't feel comfortable asking patients about their HCV risk history."
Guidelines	Education of Current Screening Guidelines	"(I) haven't had hepatitis C education outside of my preceptor's advice."
	Education of Changes in Screening Guidelines	"I receive updates on the changes to guidelines through paper updates sent to me, email updates, and grand rounds. Heptologists talk during grand rounds to give guideline updates."
	Knowledge of Current CDC Guidelines	"I've definitely seen and heard of them. Could I recite those off the top of my head? You know, probably not."
	Adherence to Current CDC Guidelines	"The CDC guidelines affect my screening practices indirectly, but I usually follow the USPSTF guidelines more closely than the CDC guidelines."
	Perceptions of Current CDC Screening Guidelines	"What am I to do if organizations release recommendations for screening that differ?"
	Opinions of Proposed CDC Screening Guidelines	"Screening simply by age group would be a much simpler recommendation."
		"I'm worried about hepatitis C diagnoses affecting whether insurance will cover a patient."
Linking Patients to Specialist Care	Process of Linking Patients to Specialty Care	"(Referral) depends on the primary care physician's comfort level with the tests associated with hepatitis screening and diagnosis."
	Facilitators Linking Patients to Specialty Care	"There is a referral coordinator in the clinic that connects the patient to a heptologist. He refers then to the Liver Center and usually sets up their appointment when the patient is in the office."
	Barriers Linking Patients to Specialty Care	"Patients are waiting a long time for appointments."
		"Insurance barrier"
Treatment and Long-term Care	Decision Process for Treatment	"The treatment decision ultimately depends on the patient."
		"Contraindications for treatment…would be liver failure, psychiatric issues, comorbidities, and patient social issues."
	Facilitators to Delivering Long Term Care	"For patients who lack insurance, we will often steer them into the clinical trial to receive treatments."
	Barriers to Delivering Long Term Care	"Compliance with treatment is difficult for many patients."
		"Insurance companies may refuse to allow treatment of patients."

Discussion

PCPs are not fully utilizing the current recommended risk-based screening strategies that are supported by CDC, NIH and AASLD.

In this study, PCPs reported that they are not comfortable assessing HCV risks and when they do assess risk; PCPs are not likely to assess all risk factors.

- Only 59% of PCPs reported that they asked all patients about HCV risk factors Shehab, et al
- 92% of patients with a HCV risk factor were not tested for HCV in the primary care setting Almario et al
- 55% of individuals who reported intravenous drug use were screened Trooskin et al
- Among anti-HCV positive persons, only half (49.7%) of the HCV infected people who visited a health care provider in the last 12 months knew they were anti-HCV positive Armstrong et al

This suggests that current CDC recommendations as they are being implemented are failing to identify the majority of infected persons.

The level of provider knowledge about HCV infection and existing screening guidelines may explain variations in the implementation of risk-based HCV screening.

- Increased knowledge of hepatitis C among PCPs was identified as a facilitator to screening and testing
- Resident PCPs reported a reliance on their preceptor's education on screening practices
- Providers in practice for 20+ years had lower knowledge of HCV risk factors Ferrante et al, Providers in academic settings were more likely to screen for HCV Ferrante et al, Family providers have insufficient knowledge about screening and counseling for HCV Ferrante et al
- PCPs in this study reported that education of hepatitis C was limited. Most PCPs did not remember any training of hepatitis C, unless they had gone through a Hepatology rotation during resident training.

PCPs require a better understanding of hepatitis C as an infectious disease as well as resources available for treatment and care.

- In this study, Hepatologists reported that PCPs are treating hepatitis C patients without an adequate level of knowledge.
  - Rocca et al. that found HCV was more commonly diagnosed by generalist providers but these patients were less likely to adhere to treatment in comparison to Hepatologists' patients.
- PCPs reported EMR system automated prompts as facilitators to screening and testing for hepatitis C.
- PCPs reported being too busy to screen for hepatitis C
- No formal system is in place nor do they have adequate knowledge of hepatitis C, PCPs do not screen patients.
- EMR prompts could encourage PCPs to screen by providing reminders. Although, anecdotal evidence from one system that uses EMR prompts stated that PCPs were getting "EMR prompt fatigue," meaning PCPs were frustrated at having to get through multiple screens of prompts before getting to the patient file.

Given the lack of awareness and policies, it stands to reason that physicians with limited amounts of time with a patient overlook the opportunity to screen for hepatitis C.

Even though well recognized organizations support HCV risk based screening for hepatitis C, other organizations, such as United States Preventive Services Task Force do not and therefore creates confusion among PCPs.

- In this study, PCPs were relying on authority figures (either preceptors or administration) to make decisions about screening practices.
- Current HCV screening practices are identifying less than half (49.7%) of the HCV infected (Denniston et al), therefore other strategies should be considered.

Discussion Continued

When PCPs were asked about a proposed birth cohort screening strategy, they liked the simplicity and structure but were concerned about resources, specifically costs to treat and insurance declining payment.

- Hepatologists were not as concerned about resources as PCPs; they reported having resources available for patients such as clinical trials and disability payments.

This study has limitations.

- The interviewees knew ahead of the scheduled interview that they would be asked questions about hepatitis C and a CDC representative would be attending.
  - This may have overestimated the actual knowledge of hepatitis C and awareness of the current CDC recommendations.
- The primary care systems involved in this study are large, integrated systems and are not generalizable to all primary care settings.

PCPs in large primary care systems are not fully utilizing the current recommended risk-based screening strategy.

- PCPs require a better understanding of hepatitis C as well as resources available for treatment and care.
- Future research should include:
  - Evaluating different strategies in primary care settings to identify persons with HCV infection without having to ask questions about stigmatizing behavior.
  - PCP education and training of hepatitis C prevalence and risk factors is necessary to raise awareness of the public health impact of hepatitis C infection.
  - Future recommendations should be clear and consistent to reduce confusion of whom to screen and test for hepatitis C.

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