

2017

Hepatitis C Screening in the Baby Boomer Cohort

Peter Hyson

Follow this and additional works at: <http://scholarworks.uvm.edu/fmclerk>



Part of the [Medical Education Commons](#), [Primary Care Commons](#), and the [Virus Diseases Commons](#)

Recommended Citation

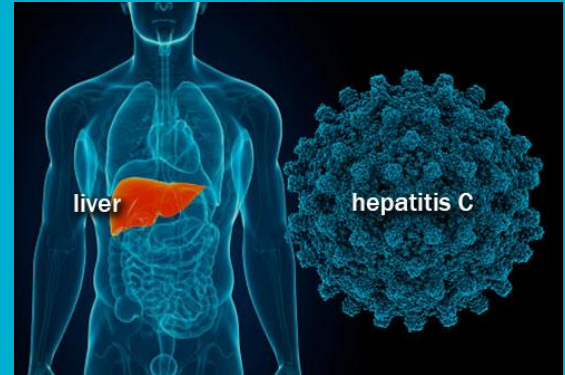
Hyson, Peter, "Hepatitis C Screening in the Baby Boomer Cohort" (2017). *Family Medicine Clerkship Student Projects*. 229.
<http://scholarworks.uvm.edu/fmclerk/229>

This Book is brought to you for free and open access by the College of Medicine at ScholarWorks @ UVM. It has been accepted for inclusion in Family Medicine Clerkship Student Projects by an authorized administrator of ScholarWorks @ UVM. For more information, please contact donna.omalley@uvm.edu.

Hepatitis C screening — in the Baby Boomer cohort

Educating patients in Hinesburg, VT

Peter Hyson, MS3
Family Medicine Clerkship December 216-January 2017
UVMMC Hinesburg Family Medicine
Mentor: Michelle Cangiano, MD



From WebMD.com

Problem ID and Description of Need

-CDC estimates 45-85% of those with hepatitis C (HCV) are unaware of infection- this puts them at risk for further transmission and progression of disease (1)

-While the prevalence of HCV is ~1%(2) in the general population, it is 5x higher in the age cohort born 1945-1965 (1) and targeting this group increases PPV and surveillance efficacy

-CDC recommends a 1x blood test for adults in the above age group irrespective of other risk; this has potential to find 86% of all undiagnosed cases (3)

-The HCV antibody assay is considered to be an accurate test (4); where positive it is followed by confirmatory PCR

-“Patients demonstrate misconceptions about HCV transmission and curability and poor knowledge about the necessity of testing in their age cohort...novel strategies are needed to ensure that...baby boomers are educated about the necessity of HCV screening” (5)

-the stigma of this disease, risk factors of IV drug use and sexual activity, lack of symptoms of HCV can make patients reluctant to consider themselves at risk, thus **patient education is key!**

Public Health cost considerations of HCV

- HCV is the most common blood-borne pathogen; 15-40% of patients with HCV progress to cirrhosis or HCC (2)
- HCV is the leading cause of liver transplant and liver cancer (1)
- in VT Baby Boomer cohort represents 48% of known past or present HCV infection (Belcher 12/16/16)
- Chronic HCV has been independently associated with mortality and resource utilization in both inpatient and outpatient settings for the age cohort(6)
- in 2014 HCV was the second most frequently reported of VT's reportable diseases (Belcher 12/16/16)
- there has been a significant rise in newly reported cases noted in VT with 907 in 2014 up from 541 in 2010 (Belcher 12/16/16)

Public Health costs ctd.

- cost of screening estimated at \$2874/case found (3)
- Screening can prevent 82300 deaths and boost QALYs by 348800 (\$15700/ QALY) (3)
- CDC estimates that cohort screening has potential to save \$1.5-7.1 billion (1)
- treatment reduces risk of HCC by 70% and all cause mortality by 50% (2)
- the recent development of curative antiviral treatment makes the discovery of chronic HCV cases more actionable and therefore imperative

Community Perspective on HCV Screening

Roy Belcher, HIV surveillance coordinator, VT Dept of Health

— Interview 12/16/16

“In 2014 there were more new reports of HCV in Vermont than any other year since the Health Department began HCV surveillance in 1998.”

“When considering HCV in Vermont, the populations that are of increased focus are people who inject drugs and those born between 1945 and 1965 (baby boomers).”

“HCV disease often progresses slowly. Therefore, patients and providers need to be proactive about screening those with current or past risk.”

“HCV is distinguished from other communicable disease, such as HIV, by challenges like a lack of general public awareness of the virus and limited available funding for screening and treatment.”

“The Health Department in Vermont has a strong record of leveraging available funds, cross-divisional collaborations, and a valuable network of community based organizations and medical providers to surveil the burden of disease.”

Community Perspective Ctd.

Michael Sirois, MD, Provider at UVMHC Hinesburg Family Medicine

Interview 1/10/17

- “[when confronted with HCV screening] the vast majority of patients say ‘Huh?... I’m not at risk because I don’t do IV drugs.’”
- “Patients are agreeable to screening... 10% of the time there is worry about cost... but HCV screening is covered by most insurance if it is part of a Health Maintenance Exam.”
- “We’ve been aggressively screening for Hep C and I’ve not yet had 1 positive case.”
- “It is important that this poster make clear that chronic HCV is often asymptomatic... I also think it would be useful to have these posters at clinics outside of the UVMHC system where screening is not being undertaken as systematically.”

Intervention and methods

- Project Aim: to educate patients in the Baby Boomer Age cohort about the need for one-time HCV screening in order to promote awareness of the disease and willingness to undertake testing among this population
 - A literature review was conducted regarding the utility of HCV screening in general and screening in the age cohort in particular and the awareness of the age cohort about HCV infection and screening
 - An 8.5” x 11” poster was created using Microsoft Powerpoint 2013
 - poster addresses basic facts about HCV infection, the natural history of disease, the importance of and justification of one-time screening for the age cohort
 - the poster was displayed in examination rooms at Hinesburg Family Medicine clinic starting in January 2017
 - poster intended to inform patients about this aspect of preventive care while they are waiting for their providers during appointments. Can serve to provoke a conversation or to be a reference for providers who are recommending screening.

Results

Exam room poster



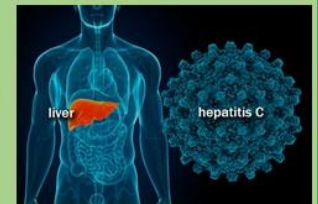
Born between 1945 and 1965?

Get screened for Hepatitis C!

- ⌘ Hepatitis C is a bloodborne viral infection of the liver that is often chronic and without symptoms
 - It can cause long term inflammation of the liver leading to cirrhosis and cancer
- ⌘ It is the most common cause of liver transplant and liver cancer
- ⌘ People in the “Baby Boomer” age group are **5x** more likely to be infected
 - It is uncertain why this age group is most affected; one theory is that many were exposed to contaminated blood products before widespread testing of the blood supply was adopted
- ⌘ The CDC estimates that $\frac{1}{2}$ of those with Hepatitis C do not know that they are infected- **You Might Not Know You’re Sick.**

Ask your doctor if you should be screened.

Modern therapy cures Hepatitis C infection >97% of the time!



Data from the CDC.

For more information go to <http://healthvermont.gov/disease-control/hep-c>

graphic from WebMD.com

Effectiveness and Limitations

- The poster was given approval by Michelle Cangiano, MD the medical director at Hinesburg clinic and it received a good reaction from nurses and providers at Hinesburg when it was presented on 1/16/17
- The poster could not be displayed until late in the rotation thus ability to gauge effectiveness limited by time, lack of post-intervention assessment tool
- Given fire code the poster was mandated to hang on a bulletin board on a wall behind patient chairs, thus effectiveness limited by poster's not being visible to seated patients
- The amount of space allocated on this bulletin board for the poster was also quite small (8.5 x 11 ") so the amount of attention the poster could attract was necessarily limited by its small size. HCV is a complicated disease and it is difficult to communicate appropriate and nuanced information in a simple way that minimizes the quantity of writing on such a poster.
- Had time allowed it would have been useful to survey patients about their prior knowledge of HCV and screening, their impression of the posters, whether or not they were ultimately screened for HCV if eligible

Future Projects

- Wider circulation of these posters to other primary care clinics in the state of VT; display of posters in waiting rooms as well as exam rooms

- Survey of patients regarding their understanding of the need for HCV screening, their concerns about it, how they would prefer to be approached about a 1x screening

My interviews with Dr. Sirois and Mr. Belcher revealed A) that Dept of Health doesn't track the number of screening tests administered/case identified and B) that at the clinic level it can appear that screening yield is quite low. Both of these factors are problematic for the future of HCV screening. Future projects to address this include:

- A survey of VT providers about their perceptions of their patient populations' HCV risk, their perception of utility of screening at their clinic, screening yield, screening cost-effectiveness

- A study regarding number of patients screened in a given year in VT and the actual yield in terms of new HCV cases identified and treated; could be further analysed on a clinic by clinic basis with consideration of different patient populations and risks

References

1. "People Born 1945-1965 & Hepatitis C." <http://www.cdc.gov/hepatitis/populations/1945-1965.htm>
2. Wray, Charlie M., Davis, Andrew M. Screening for Hepatitis C. *JAMA*. 2015; 313(18): 1855-1856.
3. Voelker, Rebecca. Birth cohort screening may help find Hepatitis C cases. *JAMA*. 2012; 307(12): 1242.
4. Chou, Roger, Cottrell, Erika B., Wasson, Ngoc, et al. Screening for Hepatitis C Virus Infection in Adults: A Systematic Review for the U.S. Preventive Services Task Force. *Annals of Internal Medicine*. 15 January 2013. 158(2): 101-107.
5. Waridibo, Allison E., Chiang, William, Rubin, Ada, et al. Knowledge About Hepatitis C Virus Infection and Acceptability of Testing in the 1945-1965 Birth Cohort (Baby Boomers) Presenting to a Large Urban Emergency Department: A Pilot Study. *The Journal of Emergency Medicine*. 2016. 50(6): 825-831.
6. Sayiner, M., Wymer, M., Ford, J., et al. Presence of hepatitis C (HCV) infection in Baby Boomers with Medicare is independently associated with mortality and resource utilization. *Aliment Pharmacol Ther*. 2016. 43:1060-1068.
7. Interview: Roy Belcher, MPA, HIV Surveillance & Testing Coordinator, VT Department of Health.. December 16, 2016
8. Freke, Zuure R., Urbanus, Anouk T., Langendam, Miranda W., et al. Outcomes of hepatitis C screening programs targeted at risk groups hidden in the general population: a systematic review. *BMC Public Health*. 2014. 14:66. Biomed central
9. Galbraith, James W., Franco, Ricardo A., Donnelly, John P., et al. Unrecognized Chronic Hepatitis C Virus Infection Among Baby Boomers in the Emergency Department. *Hepatology*. 2015. 61(3): 776-782.