

UNIVERSAL HEPATITIS C VIRUS SCREENING IN A TENNESSEE TERTIARY CARE EMERGENCY DEPARTMENT

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DISCLOSURES

- Chastain: Research/grant support from Gilead Sciences, Inc.
- Self: Research/grant support from Gilead Sciences, Inc.

BACKGROUND

- HCV screening guidelines include risk factor and age cohort recommendations
- Prior ED screening programs have identified high rates of HCV prevalence
 - 13.8% antibody (Ab) positive among baby boomers in Baltimore, MD
 - 11.1% Ab positive among baby boomers in Birmingham, AL
 - 13.9% Ab positive in Cincinnati, OH
 - 13.2% Ab positive in Boston, MA
- Universal, opt-out programs successfully implemented in other ED programs
- Evolving opioid epidemic across US and notably in Appalachia related to HCV

METHODS

- Universal screening in tertiary care center emergency department
- All patients age 18 or older who had blood obtained for clinical care eligible for opt-out testing
- Patients age <18, without phlebotomy as part of clinical care, and/or inability to participate in opt-out testing excluded from initiative

Patient presents to Vanderbilt University Medical Center Emergency Department

Triage

No labs obtained

Labs required

Nurse discusses HCV screening with patient with opt-out option

Patient opt-out

1. Phlebotomy
2. Lab request completed
3. HCV-related phlebotomy tube and form stored

1. Results communicated to patient
2. Patient provided linkage to care if desired

1. Linkage coordinator reviews results
2. Disposition of patient reviewed

HCV test results uploaded in electronic dashboard

HCV ab test picked up by External Lab Twice Daily

VUMC

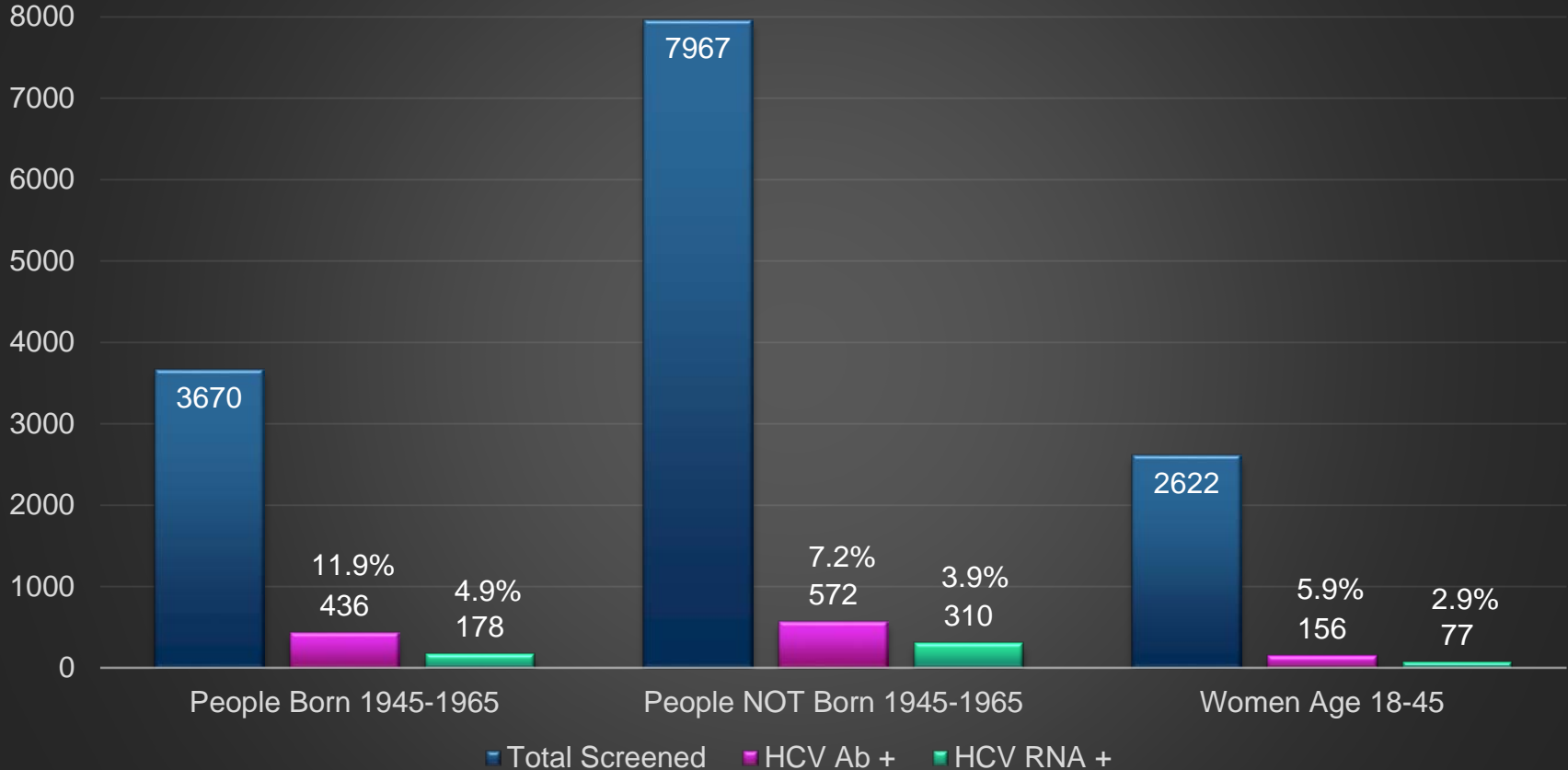
External Lab

Patient

RESULTS

- Program roll out 12/2016 with evolution to standard protocol by start of report period
- Report period 4/1/17 – 3/31/18 (12 month)
- 11,637 screening tests performed
 - 1,008 (8.7%) HCV Ab positive
 - 488 (4.2%) HCV RNA positive
 - 81 (0.7%) HCV Ab positive, RNA unknown
 - Some samples with inadequate volume for reflex RNA testing
- NOTE: Some data missing for individual entries (i.e. gender, age, risk factors, etc.). Data reported reflects known populations.

Figure 1: Notable Groups Screened for HCV (N=11,637)



RESULTS CONT.

Table 2: Demographics Among HCV RNA + (n=488)

<u>Demographics</u>	<u>N (%)</u>
People Born 1945-1965	178 (36.5%)
People Not Born 1945-1965	310 (63.5%)
Women Age 18-45	77 (15.8%)
Reported / Known Injection Drug Use	154 (31.6%)
People Not Born 1945-1965 With No Known Injection Drug Use	179 (36.7%)

DISCUSSION

- Universal emergency department screening produced high yield of HCV Ab + tests
 - 8.7% Ab positive
- Presumed spontaneous clearance rate of HCV higher than in historical reports and more consistent with more recent literature
 - 4.2% RNA positive
 - 0.7% with indefinite HCV RNA status
- While rate of HCV in non-baby boomers lower, rate detected in non-baby boomer emergency department patients relatively high and represented the majority of positive tests
 - 7.2% Ab positive
 - 3.9% RNA positive
- Women 18-45 had clinically relevant rates of HCV
 - 5.9% Ab positive
 - 2.9% RNA positive
- Relying on age cohort screening and known injection drug use status would have missed >1/3 of HCV RNA positive individuals
 - 36.7% of all HCV RNA positive cases

DISCUSSION CONT.

- Conclusions
 - Universal HCV screening in a Tennessee tertiary care emergency department identified a high rate and volume of HCV + individuals, though less than noted in other urban settings
 - Screening in emergency departments may yield outcomes that differ from general population or outpatient clinic screening
 - Screening in emergency departments may assist in identifying certain at-risk groups that may not be screened in other settings
 - Optimal screening criteria in non-traditional settings may differ from historic, guideline-recommended criteria
 - Spontaneous clearance rate in population diagnosed in emergency department is likely higher than reported in historical estimates
- Future Directions
 - Further study underway regarding reason for presentation to ED, additional characteristics that can maximize yield from more focused screening
 - Additional study of linkage to care and impact of screening program on outcomes ongoing to optimize best practice

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