

Measuring trends in hepatitis C testing with commercial laboratory data

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Objective

Using the two largest commercial laboratory data sources nationally, we estimated the annual rates of hepatitis C testing among individuals who were recommended to be tested (i.e., baby boomer cohort born between 1945 and 1965) by the CDC and United States Preventive Services Task Force. This panel will discuss strengths and weaknesses for monitoring hepatitis C testing using alternative data sources including self-reported data, insurance claims data, and laboratory testing data.

Introduction

Hepatitis C virus (HCV) infection is a leading cause of liver disease-related morbidity and mortality in the United States. Approximately 75% of people infected with chronic HCV were born between 1945 and 1965. Since 2012, the CDC has recommended one-time screening for chronic HCV infection for all persons in this birth cohort (baby boomers). The United States Preventive Services Task Force (USPSTF) subsequently made the same recommendation in June 2013. We estimated the rate of HCV testing between 2011 and 2017 among persons with commercial health insurance coverage and compared rates by birth cohort.

Methods

Hepatitis C virus testing data were obtained from Quest Diagnostics (Quest) and Laboratory Corporation of America (LabCorp), two large U.S. commercial laboratories serving clinicians and hospitals in all 50 U.S. states and the District of Columbia. Analysis was based on de-identified person-level data from HCV antibody immunoassay tests ordered by clinicians in the U.S. between 2011 and in 2017 (with LabCorp data in 2017 limited to January through October). HCV antibody testing rates were calculated and defined as: the number of unique individuals who received their first HCV antibody test during a particular month per 100 unique individuals who had any laboratory test performed by the commercial laboratory during the same month, presented as an annual average (mean) testing rate. Persons born between 1945 and 1965 were classified as baby boomers and compared to persons born in all other years.

Results

In 2011, prior to the CDC recommendation change, rates of HCV antibody testing relative to overall testing with each cohort were higher for the non-baby boomer cohort served by both Quest and LabCorp. In contrast, from 2012 through 2017, testing was more frequent among baby boomers than among non-baby boomers as a proportion of overall testing in each cohort. The rate of testing among baby boomers served by Quest rose from 1.7 per 100 test requests in 2011 to 3.8 per 100, an increase of 131%, while the rate of testing among non-baby boomers rose from 2.3 per 100 to 3.1 per 100, a 35% increase. Changes among patients served by LabCorp were nearly identical; a 132% increase among baby boomers (1.7 per 100 in 2011 to 4.0 per 100 in 2017) and a 31% increase among non-baby boomers (1.7 per 100 in 2011 to 3.2 per 100 in 2017).

Conclusions

This study demonstrates the utility of commercial laboratory data for assessing changes in HCV testing, as well as the potential impact of national recommendations supporting HCV testing of baby boomers. The study also highlights a prominent, the increase in HCV antibody testing in 2017 relative to 2011, prior to the recommendation change.



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| | | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | % Change (2011-2017) |
|---------|----------|------|------|------|------|------|------|------|----------------------|
| Quest | Baby | 1.7 | 1.7 | 1.8 | 2.1 | 2.2 | 2.5 | 3.8 | 131% |
| LabCorp | Boomers | 1.7 | 1.9 | 2.2 | 2.2 | 2.3 | 2.6 | 4.0 | 132% |
| Quest | Non Baby | 2.3 | 2.1 | 2.2 | 2.4 | 2.6 | 2.8 | 3.1 | 35% |
| LabCorp | Boomers | 2.5 | 2.5 | 2.6 | 2.7 | 2.9 | 3.0 | 3.2 | 31% |

Table 1. HCV Antibody Testing relative to Overall Testing in Baby Boomers and Non-Baby boomers from 2011 to 2017 by Two Commercial Laboratories



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