

Quality improvement in hepatitis C screening and treatment in a primary care resident clinic

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ABSTRACT

Quality improvement projects are an important part of education for residents and outcome-based projects, and data are required by ACGME. Our resident clinic conducted a quality improvement project regarding screening and treatment for hepatitis C. We improved our screening rate per CDC guidelines and found a prevalence of 1.9% in our clinic population, higher than the national prevalence. We, as internal medicine specialists, have also successfully treated several patients with TennCare (the equivalent of Medicaid) and uninsured through improvement in our case identification, follow-up and use of specialty pharmacies and standardized order sets.

ARTICLE HISTORY

Received 29 June 2019
Accepted 8 November 2019

KEYWORDS

Screening; Hep C; resident clinic; quality improvement

1. Introduction

Hepatitis C screening has been recommended for all patients born between the years of 1945 and 1965 by the USPTF since June 2013 [1]. This guideline is also recommended by the CDC [2]. This is to be done without a need for risk assessment prior to screening. Additionally, it is recommended that all patients with hepatitis C be treated if possible, with the goal of preventing cirrhosis and possibly hepatocellular carcinoma. Data are just beginning to accumulate in this regard [3].

The setting for the study was a resident internal medicine clinic in urban Nashville, serving mainly indigent patients with multiple comorbidities.

2. Methods

Residents have previously been exposed to the ABIM performance improvement module as part of our monthly Continuous Quality Improvement (CQI) meeting. This was similar to our HIV screening project in 2014 [2]. Emphasis was placed on capturing those patients who were already known to be positive and were not on treatment and those in the screening age range who had not been screened.

This study took place from July 2016 until December 2018. Residents were provided with their baseline data, and we reviewed this periodically at CQI. Hepatitis screening does fall under our quality tool in our EMR and this is what the residents were to use to identify patients who needed to be screened. Data were also collected from the inpatient charts, where some screening had already been taken place.

Twenty-six residents participated and 221 patients were screened.

3. Results

Our baseline rate was 35% at the start off the quality improvement project. We improved to a rate of 63% in December 2018, with gradual increases seen over the study time (Table 1). A total of 221 patients were screened during this time with 4 positive results obtained. Our prevalence in the resident clinic was found to be 1.8%. Some of these patients are now in treatment, and we have successfully treated other previously identified patients.

We continue ongoing screening and treatment.

4. Discussion

In our previous QI project for HIV screening, we achieved a higher percentage screened than in the current Hep C QI project [4]. In that project, the preceptor prompted each resident at the sign out of the patient. In this QI project, we directed the residents to use our quality tab in our electronic medical record without specific prompting from the preceptor. The quality tab showed a need for hepatitis C Ab screening for patients born between 1945 and 1965. Thus, we relied on the residents checking this tab as they saw patients. The quality tab was mentioned in our monthly CQI conferences also. This method, although successful to 63% (from a starting point of 35%), was not as successful as preceptor prompting in our past screening endeavor for HIV. This will likely

Table 1.

	July 2016	November 2016	February 2017	May 2017	December 2018
Hep C screening	35%	43%	51%	54%	63%

lead us to use preceptor prompting, in addition to other measures, for any screening improvement projects in the future.

We noted the prevalence rate is higher than the estimated national prevalence. However, Tennessee is one of the Appalachian states, which have shown a higher prevalence compared with other areas [5].

The CDC has recommended treatment for all with hepatitis C, and we attempted to treat every patient that screened positive. Many insurance companies are requiring more than just a positive viral load, and requesting fibrosis scores before treatment will be approved. We have successfully navigated the requirements to treat the uninsured through specialty pharmacies and charity care but do meet some barriers for the insured with low fibrosis scores, despite positive viral loads. We have developed a streamlined order set which captures the necessary information for applications for medications. The order set is: *Chronic hepatitis C (B18.2: Chronic viral hepatitis C)*

- Hepatitis C liver status biomarker panel, serum
- Drug screen, urine
- Hepatitis C genotype, serum or plasma
- CMP, serum or plasma
- CBC
- HBsAg (hepatitis B surface Ag), confirmation, serum
- Hepatitis B core Ab, total, serum
- FibroSure*

The fibrosis stage was obtained through a noninvasive blood test. We did not use elastography. The components of the blood test include ALT, alpha-2 microglobulin, apolipoprotein A1, total bilirubin, GGT, haptoglobin and patient's age and sex.

Data are beginning to accumulate on the reduction of mortality and hepatocellular carcinoma with treatment [3]. Therefore, we need to treat as many patients as possible with direct-acting antivirals, to prevent cirrhosis, and potentially hepatocellular carcinoma.

Disclosure statement

No potential conflict of interest was reported by the authors.

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