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Hepatitis C Virus Screening and Treatment

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Hepatitis C: Screening and Education: Executive Summary

Introduction of the Problem

Hepatitis C Virus (HCV) is classified as a contagious liver disease that can be either acute or chronic, and the illness ranges in severity from mild to lifelong (CDC, 2016). It is estimated that 2.7 million people in the United States (US) have HCV, but only half are diagnosed (Fujie, 2015). Based on the current Centers for Disease Control (CDC) guidelines, it is now recommended to screen everyone in the birth-cohort of 1945 to 1965 for HCV, regardless of symptoms or risk factors (CDC, 2016). Despite this sweeping change in the CDC guidelines, screening for HCV remains low and the number of people living undiagnosed with HCV continues to grow (CDC, 2016). The goal of this project was to increase knowledge regarding the need for routine HCV screening at primary care clinics within a midwestern hospital. Through increased screening, it is anticipated the number of patients referred to the attached HCV clinic would increase and the patients living with HCV could subsequently be treated and/or cured.

Literature Review

As of 2017, about 75% of all HCV infections occur in adults in the birth cohort born between 1945 and 1965 (American Association for the Study of Liver Diseases [AASLD], 2017). McGarry et al. (2012) estimated that up to 1.6 million people in the baby boomer generation are currently living undiagnosed with HCV. Of the individuals with acute HCV, 75% to 80% will develop chronic HCV (Ward, 2013). If chronic HCV infection is left untreated, it will lead to cirrhosis in 15-35% of patients, and 1%-3% will develop hepatocellular carcinoma (Ward, 2013). By identifying these individuals with routine HCV screening and providing access to treatment, quality and longevity may be added to their lives (AASLD, 2017).

Data from the National Health and Nutrition Examination Survey 2001–2008 (NHANES) showed only 3.7% of respondents were screened for HCV because neither the patient nor the doctor believed they were at risk for HCV (Falade-Nwulia et al, 2016). Causes of this low screening rate can be multifactorial, with the main influences including primary care providers' limited knowledge about HCV screening recommendations, screening process, treatment, and incidence (Falade-Nwulia et al., 2016).

A cost-effectiveness simulation by Rein et al. (2012) found that screening by birth cohort with a direct-acting antibody (DAA) tests, along with the standard treatment, increased the number of individuals screened for HCV, the amount of cases identified, and increased the number of people being treated versus the risk-based screening alone. McGarry et al. (2012) performed a cost-effectiveness simulation which determined that testing by birth cohort could result in a 25% decline in the amount of advanced liver disease and liver transplants associated with HCV.

Clinical decision support systems (CDSS) can be used in various health care settings to improve patient care by incorporating evidence-based clinical information (Castaneda et al., 2015). Properly equipped CDSS have shown to enhance patient care significantly by helping to diminish provider error and increase provider compliance with current health recommendations (Castaneda et al, 2015). Clinical decision support systems, in the form of EHR pop-ups, can provide primary care providers with an opportunity to pause and review updated guidelines in a quick and efficient manner (Castaneda et al, 2015).

Project Methods

The purpose of this project was to increase awareness of the CDC screening guidelines for HCV in the birth cohort 1945 to 1965. A second purpose was to increase the Hepatitis C

clinic utilization at a Midwestern hospital and to link the identified patients with HCV and subsequently increase referrals from primary care offices affiliated with this hospital. The final purpose of this project was to disseminate information to newly diagnosed patients with HCV in hospital's community regarding treatment options and local resources, including the hospital affiliated HCV clinic. Initially, the project authors planned to meet these goals through implementing a clinical decision support (CDSS) for nurses, medical assistants, and office staff in the hospital-specific electronic medical record (EMR) system. With an increase in the overall screening for HCV in the primary care clinics of this hospital, it was anticipated that the number of patients referred to the hospital-based hepatitis clinic would increase as the patients presented for treatment and/or cures. This project was IRB exempt and classified as quality improvement within the organization.

Evaluation

While a CDSS was not possible to establish, in-services by clinic educators on the topic of HCV screening guidelines for the disease were performed. Following these in-services, primary care office staff focus groups were conducted to assess understanding and application of the education. The success of the educational program presented to the primary care clinics associated with the hospital was measured through focus groups. The focus groups were used to assess knowledge regarding the importance of screening for HCV in the birth cohort 1945 to 1965. All medical assistants and nurses were able to identify the birth cohort 1945 to 1965 when asked as well as the need for screening for HCV. Education about HCV, the hospital-based HCV clinic, and current treatments was placed in local health departments and shared with the Red Cross. The measures for evaluation include HCV screening totals for this Midwestern hospital, hospital-based HCV clinic referrals, and HCV clinic patients per clinic day. Regarding

the hospital-based HCV clinic utilization, the increase in patients seen from six months prior to implementation compared to the three months following implementation was 48%. An increase in the in-network referrals over the same timeframe was 18%, from 58% prior to implementation to 76% post-implementation.

Some of the barriers of the project included limited provider time, CDSS was not implemented because of both disinterest by the providers and resistance from the hospital-based charting system support team, limited communication between the medical assistant and the provider to obtain the order to screen the patient, and no standing orders exist for screening for hepatitis C. There were also barriers to implement sharing of HCV resource information through the American Red Cross due to workflow issues that did not allow for region-specific information to be sent out to newly diagnosed patients

Impact on Practice

The immediate impact on clinical practice at this Midwestern hospital was seen through increased HCV screening, increased clinic utilization, and increased referrals to the HCV clinic for treatment. Additional impacts include increased awareness for the need for screening for HCV in the birth cohort 1945 to 1965 and treatment options at the hospital-based HCV clinic.

The long-term impact of this project includes increased access to hospital-based resources through local health department, increased screening at the hospital-based primary care clinics, increased referrals to the hospital-based HCV clinic, and increased treatment of patients in this Midwestern city.

For ongoing implementation, the project leaders recommend expanding this project to additional hospitals with hospital-based HCV clinics. Ongoing education is recommended for employees of hospital-based primary care clinics. Future research could explore connecting

people who are newly diagnosed with HCV with local resources. The authors recommend extending this education to local clinics with high-risk clients such as methadone clinics, needle exchange programs, and Planned Parenthood as well as clinics that provide care for baby boomers.

Conclusions

After reviewing the literature and meeting with the staff, it is still recommended that the CDSS is implemented for the medical assistants and nurses in the primary care setting. It is also recommended that ongoing training and education is implemented for registered nurses and medical assistants on the necessity of HCV screening and the treatment options available to patients in our area. Education and ongoing training should also be implemented at other hospitals and medical offices to increase HCV screening and subsequent treatment.

Despite the unforeseen EPIC complications, wherein the CDSS for the nurses and medical assistants was not implemented, the clinic was still able to have an increase in the number of patients seen daily. It is noted that the increase happened in congruence with the teaching about HCV screening that took place with the medical assistants and nurses. The number of patients that the clinic was seeing from outside of the hospital did not increase. While inversely, the number of patients that clinic providers were seeing from inside the hospital increased by almost 50%. The clinics that referred patients to the HCV clinic were those that received the teaching.

It is important that providers are aware of both the CDC and AASLD guidelines, which recommend testing for HCV by birth cohort and risk factors (AASLD, 2017; CDC, 2016).

Following these recommendations has been demonstrated in the literature to be cost effective,

improve screening rates, improve treatment, and prevent co-morbidities (Burstow et al., 2017; Coffin, Scott, Golden, & Sullivan, 2012; McEwan et al., 2013).

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