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Strategies and Approaches for Developing and Implementing Hepatitis C Medical Case Management

Findings from the Literature Review

Molly Feder, MPH
Shailey Klinedinst, MPH
Kimberly Aumack Yee

August, 2018

BACKGROUND

Hepatitis C virus (HCV) is a blood-borne infection that can inflame or damage the liver. Although HCV may be a mild infection for some people, it becomes a chronic, long-term illness for 75-85% of those who contract it.[1] In the U.S., over 3.5 million people have chronic HCV[2]. Acute cases of HCV increased about 3.5-fold from 2010-2016[3] reflecting the highest rates among people who inject drugs.[3,4] Most people newly infected with HCV had exposure to infectious blood through injection drug use suggesting that increases in HCV are related to the U.S. opioid epidemic and corresponding increases in injection drug use and sharing of drug equipment.[4] Currently, HCV causes more deaths than the 60 other reported infectious diseases combined[5] and is the leading cause of liver disease, liver cancer, and liver transplants in the US. With currently available therapies, over 90%[3] of HCV infected individuals can be cured with an 8- to 12-week oral therapy[6]. Some studies now show cure rates approaching 100%.[7]

There is growing interest in interventions to improve the proportion of clients who are successfully linked to care and treated for HCV, and one intervention of interest is medical case management (MCM). MCM contributes to engaging and retaining clients in care throughout the continuum of care process.[8] Medical case managers support clients with HCV by increasing awareness of the need for and access to testing, diagnosis, linkage to care, treatment uptake, adherence to treatment, and, ultimately, viral suppression and cure. This support is critical for vulnerable clients, including people who inject drugs, are marginally housed or homeless, have mental health challenges, are living with HIV, are uninsured or under-insured, and are (or have been recently) incarcerated. Whether delivered in a clinic or community-based organization, MCM and other related services have been used successfully to support people with HCV in overcoming barriers to HCV care and treatment.[9] Strategies include addressing a client's mental health, housing, food benefits, transportation, financial or legal needs, substance use, and other possible barriers to accessing care throughout their movement along the HCV continuum of care.

APPROACH

Cardea reviewed published literature and reports from 2012 through 2018 to identify effective interventions to address HCV, especially case management approaches. Cardea searched PubMed and other databases, as well as search engines such as Google, using the following search terms: hepatitis C, case manager, social worker, patient navigator, care coordination, integrated care, multidisciplinary teams, harm reduction, models of care, drug users, and people who inject drugs (PWID). Due to limited published research on the role and impact of HCV case management, Cardea also explored the role of support staff in HCV care and HIV case management approaches. This review revealed five key themes:

1. Case management increases linkage, engagement, and retention in care, especially among vulnerable individuals
2. Integrated care improves HCV treatment outcomes for clients with complex health needs
3. Public sector support is key to establishing successful, large-scale HCV elimination strategies
4. Use of multidisciplinary models of care supports HCV treatment for PWID
5. Blending and braiding funding for HCV and HIV can improve sustainability of HCV elimination efforts

KEY THEMES

Case management increases linkage, engagement and retention in care, especially among vulnerable individuals

HIV case management is demonstrated to contribute to improved client linkage, engagement and retention in care. In a randomized controlled trial in four urban cities in the U.S., contacting newly diagnosed HIV clients up to five times in a three-month period using strengths-based case management led to an increase in client linkage to care for vulnerable and marginalized people living with HIV[10]. In a 12-month national study among urban facilities, contacting clients at-risk for non-retention nine or more times in their first three months of care substantially reduced gaps in HIV primary care, and accompanying clients to HIV primary care appointments further reduced gaps in care[11]. Case management approaches to clients who were lost to follow-up and support re-engagement in care have also been effective. Udeagu et al successfully used New York City HIV surveillance data and coordinated case management between health departments and providers to locate HIV-positive clients and re-engage them in care through phone calls, letters, and home visits[12]. In this study, staff offered to arrange provider appointments and transportation for clients who agreed to be re-engaged in care, further increasing the success of these outreach efforts. Lessons learned from case management interventions among HIV positive individuals may be applicable to those with hepatitis C[13].

Integrated care improves HCV treatment outcomes for clients with complex health needs

The literature indicates that using integrated care models for individuals with hepatitis C and additional co-morbidities can lead to improved treatment outcomes. In a randomized trial conducted at three Veterans Affairs medical centers, integrated care—including multidisciplinary care coordination and client case management—led to an increase in the number of hepatitis C positive clients who initiated treatment and achieved sustained viral response (SVR) among those who were at-risk for psychiatric and/or substance use co-morbidities.[14]

Public sector support is key to establishing successful, large-scale HCV elimination strategies

State and local efforts to eliminate hepatitis C have highlighted the importance of public sector support in developing effective HCV elimination strategies. In New York, support from the Governor led to the initiation of a task force to develop recommendations to eliminate hepatitis C in the state.[15] Through this task force, efforts were made to define New York's strategy for HCV elimination, develop tangible reduction targets, and mobilize resources to work towards those targets.[15] In Massachusetts, a hepatitis C coalition was formed with the goal of increasing awareness about barriers to HCV care and treatment and identifying strategies to reduce those barriers.[15] The coalition was successful in securing buy-in from the state's Attorney General to remove insurance restrictions for HCV treatment and develop strategies to identify undiagnosed individuals.[15] Finally, a city-wide initiative among public health organizations, research institutions, and civic groups in San Francisco led to buy-in from the Mayor and subsequent establishment of a hepatitis C task force.[15] The task force recommended strategies, including conducting education and outreach for key populations, increasing community-based testing, establishing hepatitis C navigation services, and developing models of hepatitis C care and treatment outside of specialty care.[15] These large-scale examples illustrate that public sector support is key to successful HCV elimination efforts.

Use of multidisciplinary models of care supports HCV treatment for PWID

Recent studies demonstrate that multidisciplinary models of care, including integration of HCV and addiction treatment programs and team-based care, lead to improved HCV treatment outcomes. A systematic review and meta-analysis of 36 studies found that paralleling HCV and addiction treatment services coincided with higher HCV treatment completion rates.[16] This review also revealed a positive correlation between sustained virologic response (SVR) rates and involvement of a multidisciplinary team.[16] Similarly, Bruggman et al and Zeremski et al outlined the importance of multidisciplinary teams for addressing barriers to HCV care for PWID.[17,18] Linking HCV care with general medical care and substance abuse treatment within primary care settings and using teams composed of internal medicine specialists, psychiatrists, nurses, substance abuse counselors, infectious disease specialists, and hepatologists, supported HCV treatment delivery, as well as client acceptance, engagement, and retention in care.[17,18] Collaboration between providers through multidisciplinary teams also supported improved HCV-related knowledge among providers and clients, reducing misconceptions that can lead to differences in HCV care and treatment for PWID.[18] Multidisciplinary models of care encourage provider-level teamwork that supports client HCV-related outcomes, especially for PWID.

Blending and braiding funding for HCV and HIV can improve sustainability of HCV elimination efforts

Although limited, the literature shows that blending and braiding funding for HCV and HIV supports sustainable HCV elimination efforts. The National Alliance of State and Territorial AIDS Directors (NASTAD) has reported that addressing HCV among HIV co-infected individuals by allowing coverage of HCV treatment under AIDS Drug Assistance Programs (ADAPs) and the Ryan White HIV/AIDS Program would support sustainability and cost-effectiveness of treatment needed for co-infected clients to achieve SVR.[19] Lasser et al similarly found that a safety net hospital was able to support multidisciplinary models through a primary care treatment program to deliver HCV care and treatment to its clients, using revenue generated through its 340b program.[20]

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