

## Expanding care for patients infected with Hepatitis C through community partnership in Delaware

Deborah Kahal, MD;<sup>1</sup> Neal D. Goldstein, PhD, MBI;<sup>2</sup> Arlene Bincsik, RN;<sup>3</sup> Tom Stephens, MD;<sup>4</sup> Karla Testa, MD;<sup>5</sup> Susan Szabo, MD<sup>6</sup>

1. HIV Program Physician, Christiana Care Health System
2. Infectious Disease Epidemiologist, Christiana Care Health System; Assistant Research Professor, Department of Epidemiology & Biostatistics, Dornsife School of Public Health, Drexel University
3. Director, HIV Program, Christiana Care Health System
4. Family Medicine, Westside Family Healthcare
5. Primary Care, Westside Family Healthcare
6. Medical Director, HIV Program, Christiana Care Health System

### Abstract

**Background:** Hepatitis C virus (HCV) is the most common blood-borne pathogen in the U.S., and Delaware has one of the highest sero-prevalence rates in the country. As a cause of significant morbidity and mortality, it is a public health priority to identify and link individuals with HCV to care. The demand of patients with HCV far exceeds the current availability of providers in Delaware that offer HCV management. **Objective:** To propose a framework for enabling non-specialist providers within Westside Family Healthcare to manage patients with HCV. **Methods:** As a recipient of a Harrington Value Institute Community Partnership grant, the HIV Community Program of Christiana Care Health System (CCHS) started working together with the NE Wilmington pilot site of Westside in July 2018 to: 1) provide HCV education to Westside, 2) implement an HCV care model at Westside, and 3) conduct programmatic evaluation of this framework's effectiveness. Our goal is to improve Westside rates of HCV knowledge amongst patients and staff, as well as to improve the HCV care continuum, starting with universal HCV screening. **Results and Conclusions:** Results from the first year of collaboration will be available in August 2019. Implementation of this partnership will enable future expansion and continuation of HCV management amongst Westside sites.

### Introduction

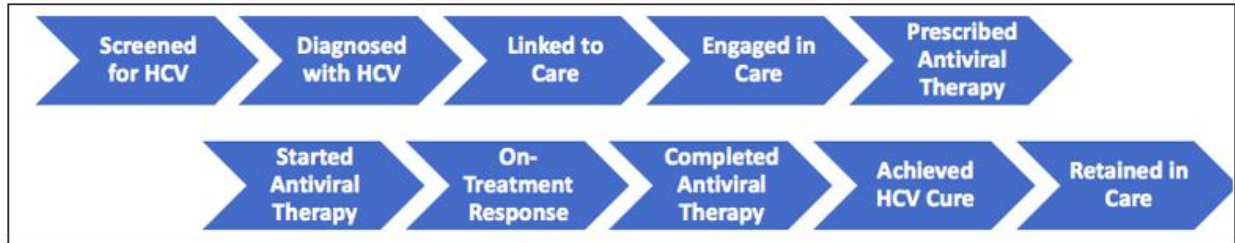
Hepatitis C virus (HCV) is the most common blood-borne infection in the United States and represents a significant cause of morbidity and mortality.<sup>1</sup> The prevalence of chronic HCV in this country is estimated to be 1.0% of the general population, or approximately 2.7 million individuals – without accounting for high-risk, institutionalized individuals, including those who are homeless, undocumented, or incarcerated.<sup>2</sup> More recent estimates suggest that upwards of 2-4 million people in the United States have HCV<sup>3</sup> with HCV accounting for more deaths in our country than 60 other infectious diseases combined, including human immunodeficiency virus (HIV) and tuberculosis.<sup>4</sup> Despite the high national prevalence of HCV, nearly half of HCV-infected persons are unaware of their HCV status<sup>2</sup> and less than 10% of HCV-infected persons have been effectively treated and cured of HCV.<sup>5</sup>

In Delaware, there is an estimated statewide HCV sero-prevalence rate of 13,600 individuals, or approximately two infected persons per 100 population (95% confidence interval: 1.76-2.33 per 100 population). This prevalence is one of the highest in the country.<sup>6</sup> While the Delaware Division of Public Health is actively working to increase acute and chronic HCV case reporting, there remains sub-optimal statewide HCV screening and reporting. Consequently, the reported HCV sero-prevalence rate is likely a gross underestimate of the true burden of HCV in the state. HCV is unfortunately a growing international, national and local epidemic, paralleling the striking rise in opioid-associated deaths and overdoses.<sup>7</sup> Given the alarming and only increasing community burden of HCV, there is a far greater community need for HCV care than there is availability of specialists to provide this care in Delaware, New Castle County, and the city of Wilmington in particular.

At the same time, HCV treatment has revolutionized, allowing for short-courses of pan-genotypic, very well tolerated therapies (12 or, often times, 8 weeks in treatment duration) with extremely high clinical and real-world cure rates exceeding 95%.<sup>8,9</sup> Moreover, Delaware Medicaid insurance restrictions on HCV treatment approval have been lifted as of 2018, allowing for patients with HCV and little to no accompanying liver damage (all the way to patients with advanced liver disease, or cirrhosis) to be approved for HCV treatment known as direct acting antiviral (DAA) therapy. HCV screening, evaluation and treatment guidelines for all patients, including patients with all HCV genotypes (1-6), cirrhotics and non-cirrhotics, compensated and decompensated cirrhotics, and HCV treatment-experienced and treatment-naïve patients are clearly delineated in frequently updated specialty guidelines.<sup>10</sup>

In light of the growing HCV epidemic, improved HCV treatment options, expanded HCV management guidelines and access to HCV treatment, as well as limited availability of specialists to care for patients with HCV, there is an increasing demand for primary care providers (PCPs) and patients' pre-existing medical homes to provide the full range of HCV care along the HCV care continuum (Figure 1), spanning all the way from HCV screening through HCV treatment and cure. There is a growing body of evidence that appropriately trained PCPs are able to treat and cure HCV as successfully as specialists.<sup>11</sup> Additionally, the utilization of patient navigation – an intervention employed in chronic and infectious disease management to improve health outcomes by addressing patient- and systems-level barriers to care and treatment – is demonstrated to be particularly effective in improving health outcomes in high-need populations, including low-income and minority populations.<sup>12</sup> Regional HCV patient navigation programs, such as the “Check Hep C” program in New York City and the “C a Difference” program of Philadelphia FIGHT, serve as prime illustrations of highly successful patient navigation programs resulting in improved HCV treatment outcomes. Real-world data supports that “on-site clients” who are able to receive wrap-around, integrated HCV care within their medical home lead to improved clinical outcomes.<sup>11-13</sup>

**Figure 1.** Hepatitis C care continuum



With support from the Harrington Value Institute Community Partnership Fund, Westside Family Health Care and Christiana Care Health System (CCHS) HIV Community Program have undertaken a community-based collaboration to expand Westside's ability to care for patients with HCV throughout the care continuum in order to improve HCV-related health outcomes. These health outcomes extend beyond the full HCV care continuum, additionally including post-treatment follow-up and surveillance, ongoing targeted risk reduction counseling, recommended vaccinations and referral for hepatocellular carcinoma (HCC) and/or variceal screening when clinically indicated. The attainment of improved HCV health outcomes also mandates patient linkage, engagement and retention in HCV care, and ensuring that clinically complex patients, such as those patients who are HCV treatment-experienced, prior HCV treatment failures, HCV re-infections, suffering from compensated or decompensated cirrhosis or concomitant HCC, et al. are appropriately referred and linked to specialty care.

As the largest federally qualified health center in Delaware, Westside cares for approximately 31,000 patients at five sites throughout the state. This partnership will focus on the 16,000 adult patients served at Westside's two Wilmington clinical sites. The Westside Northeast clinical site, serving as the pilot site during the first year of collaboration, has an active adult patient panel of nearly 4,000 unique individuals which equates to an extremely conservative estimate of 80 adult patients with HCV. This community-based partnership will build upon pre-existing strong ties between CCHS and Westside and provide the necessary support to educate, train, and empower Westside to provide HCV care in the familiar and trusted environment of patients' pre-existing medical home. The timing of this partnership also coincides with Westside instituting on-site medication assisted therapy (MAT) for patients with opioid dependence in addition to increasing on-site services for patients with substance use disorders. This collaborative effort represents the first concerted effort to train PCPs in Delaware to deliver HCV specialty care within patients' pre-existing primary care home.

There are three major components to this partnership: 1) education surrounding HCV infection, treatment, and management, 2) implementation of the HCV care continuum with universal HCV screening, and 3) data collection for program evaluation. The education component provided to Westside staff, including a designated HCV patient navigator, includes in-person didactic sessions, clinical preceptorships and mentoring, site-specific reference materials, as well as real-time access to Infectious Diseases specialist consultation (by providers within the CCHS HIV Community Program). The HCV patient navigator will work closely with Westside pilot site patients with HCV to ensure they are adequately linked, engaged and retained in appropriate HCV care. Concomitantly, Westside patient education includes visuals such as posters and infographics which emphasize the importance of HCV screening. Tandem with the provision of HCV education and the utilization of a designated HCV patient navigator, Westside and the HIV Community Program are working towards improving electronic medical record prompts,

implementation of universal HCV screening among adult patients, and movement through the HCV care continuum.

Evaluation of this community-based partnership is ongoing and includes a mixed-methods approach of quantitative and qualitative data. We will examine changes from pre- and post-intervention focusing on rates of HCV screening and diagnosis, staging, treatment, cure and post-treatment care, as well as characterization of external HCV referrals. Along with quantitative data, Westside patients' and staff HCV knowledge will be tracked with regular administration of a validated HCV questionnaire.<sup>14</sup> Administration of qualitative interviews of Westside providers will provide a richer understanding of how this partnership affects providers' subjective experiences and feelings surrounding the provision of HCV care.

This partnership aims to improve rates of HCV knowledge amongst Westside patients and providers as well as improve the HCV care continuum, starting with universal HCV screening. The engagement of a HCV patient navigator to aid in educational efforts and help patients with HCV to navigate their HCV care will further bolster our goal of improving HCV knowledge and linkage to and through care. As Westside PCPs are able to provide highly-competent HCV evaluation, care, treatment and post-treatment follow-up, we expect this program to not only succeed in decreasing the community burden of HCV and strengthening Westside and CCHS's existing relationship, but also to increase the capacity of the HIV Community Program to provide HCV specialty care, thereby improving the overall health of the populations served by these healthcare providers.

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