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Chronic Hepatitis Cohort Study (CHeCS) publications using data from “real-world” patients with hepatitis C virus (HCV) have described demographic disparities in access to care; rates of advanced liver disease, morbidity, and mortality (2.5%–3.5% per year during 2006–10, although only 19% of all CHeCS decedents, and just 30% of those with deaths attributed to liver disease, had HCV listed on death certificate); substantial comorbidities, such as diabetes, advanced liver fibrosis (29% prevalence), renal disease, and depression, and partial reversal of all these with successful antiviral therapy; patient risk behaviors; and use of noninvasive markers to assess liver disease.

Elimination of Hepatitis C Virus in Australia: Laying the Foundation 269
Gregory J. Dore and Behzad Hajarizadeh

Australia is on track to achieve World Health Organization hepatitis C virus (HCV) elimination targets. An active HCV screening program led to 82% of HCV-infected population being diagnosed. An unrestricted direct-acting antiviral (DAA) program, launched in March 2016, resulted in an estimated 58,500 individuals (26% of total HCV-infected population, including 70% of those with cirrhosis) initiating treatment through 2017. Treatment uptake was high among subpopulations at greater HCV transmission risk, with 22% of people injecting drugs and >60% of those with HIV/HCV coinfection initiating DAA treatment in 2016. A monitoring and evaluation program will inform strategies required to achieve HCV elimination targets.

Hepatitis C Care in the Department of Veterans Affairs: Building a Foundation for Success 281
Pamela S. Belperio, Maggie Chartier, Rachel I. Gonzalez, Angela M. Park, David B. Ross, Tim R. Morgan, and Lisa I. Backus

The Department of Veterans Affairs (VA) has made significant progress in treating hepatitis C virus, experiencing more than a 75% reduction in veterans remaining to be treated since the availability of oral direct-acting antivirals. Hepatitis C Innovation Teams use lean process improvement and system redesign, resulting in practice models that address gaps in care. The key to success is creative improvements in veteran access to providers, including expanded use of nonphysician providers, video telehealth, and electronic technologies. Population health management tools monitor and identify trends in care, helping the VA tailor care and address barriers.
Localized US Efforts to Eliminate Hepatitis C

Annette Gaudino, Bryn Gay, Clifton Garmon, Mike Selick, Reed Vreeland, Katie Burk, Emalie Huriaux, Shelley N. Facente, Annie Luetkemeyer, Phil Waters, and Camilla S. Graham

The United States has national plans for the elimination of hepatitis C virus, but much of US health care is organized on the state level and requires local solutions. This article describes the plans developed by New York, Massachusetts, and the city/county of San Francisco for hepatitis C virus elimination. Coalitions capitalize on existing resources and advocate for new resources to address barriers in hepatitis C virus care. Although each coalition has distinct plans, all share a commitment to groups that are disproportionately affected and are at risk for being excluded from advances in hepatitis C virus treatment and cure.

New Treatments Have Changed the Game: Hepatitis C Treatment in Primary Care

Shelley N. Facente, Katie Burk, Kelly Eagen, Elise S. Mara, Aaron A. Smith, and Colleen S. Lynch

In the pre–direct-acting antiviral era, hepatitis C virus (HCV) treatments were complex and largely managed by hepatologists, gastroenterologists, and infectious disease physicians. As direct-acting antivirals have driven up demand for treatment, the relative scarcity of these specialists has created a bottleneck effect, resulting in only a fraction of HCV-infected individuals offered treatment. The San Francisco Health Network is a safety net system of care. Its intervention was designed to be sustainable and scalable; with minimal time commitments for training providers, primary care–based HCV treatment increased 3-fold in a period of just over 3 years.

Five Questions Concerning Managing Hepatitis C in the Justice System: Finding Practical Solutions for Hepatitis C Virus Elimination

Anne C. Spaulding, Madeline G. Adee, Robert T. Lawrence, Jagpreet Chhatwal, and William von Oehsen

An estimated 30% of Americans with hepatitis C virus (HCV) pass through a jail or prison annually. About 1 in 7 incarcerated persons is viremic. Screening and treatment is cost-effective and beneficial to society as a whole. Yet at current (2018) levels of funding for HCV management, prisons are not aggressively seeking cases; few incarcerated persons with HCV actually receive treatment. This article explores barriers to screening for and treating hepatitis C in state prisons and ways that states may overcome these barriers, such as nominal pricing. Although high prices for direct-acting antivirals discourage treatment, potential strategies exist to lower prices.

Treatment of Chronic Hepatitis C in Patients Receiving Opioid Agonist Therapy: A Review of Best Practice

Brianna L. Norton, Matthew J. Akiyama, Philippe J. Zamor, and Alain H. Litwin

Injection drug use is the most common transmission route for hepatitis C. High rates of infection are observed among individuals on opioid agonist
therapy. Although people who inject drugs carry the highest burden, few have initiated treatment. The authors present a comprehensive review of the evidence on the efficacy of HCV medications, drug–drug interactions, and barriers to and models of care. Studies have demonstrated comparable efficacy for individuals who are on opioid agonist therapy compared with those who are not. We propose that a strategy of treatment and cure-as-prevention is imperative in this population to curb the hepatitis C epidemic.

Strategies to Reduce Hepatitis C Virus Reinfection in People Who Inject Drugs 371
Marianne Martinello, Gregory J. Dore, Gail V. Matthews, and Jason Grebely

Reinfection after direct-acting antiviral therapy may pose a challenge to hepatitis C virus elimination efforts. Reinfection risk is cited as a reason for not offering treatment to people who inject drugs. As treatment scale-up expands among populations with risks for reacquisition, acknowledgment that reinfection can and will occur is essential. Efforts to prevent and manage reinfection should be incorporated into individual- and population-level strategies. The risk of reinfection after successful treatment emphasizes the need for education, harm reduction, and post-treatment surveillance. Reinfection must not be considered an impediment to treatment, if hepatitis C virus elimination is to be achieved.

Understanding and Addressing Hepatitis C Virus Reinfection Among Men Who Have Sex with Men 395
Thomas C.S. Martin, Andri Rauch, Luisa Salazar-Vizcaya, and Natasha K. Martin

Hepatitis C virus reinfection rates among men who have sex with men are high. Factors associated with infection point to varied sexual and drug-related risks that could be targeted for interventions to prevent infection/reinfection. Modeling indicates that tackling increasing incidence and high reinfection rates requires high levels of hepatitis C virus treatment combined with behavioral interventions. Enhanced testing strategies and prompt retreating of reinfection may be required to promptly diagnose reinfections. Behavioral interventions studies addressing reinfection are required. Other interventions include traditional harm reduction interventions, adapted behavioral interventions, and interventions to prevent harms related to ChemSex and other risk factors.

Hepatitis C Virus Elimination in the Human Immunodeficiency Virus–Coinfected Population: Leveraging the Existing Human Immunodeficiency Virus Infrastructure 407
Meredith E. Clement, Lauren F. Collins, Julius M. Wilder, Michael Mugavero, Taryn Barker, and Susanna Naggie

This article considers how existing human immunodeficiency virus (HIV) infrastructure may be leveraged to inform and improve hepatitis C virus (HCV) treatment efforts in the HIV–HCV coinfected population. Current gaps in HCV care relevant to the care continuum are reviewed. Successes in HIV treatment are then applied to the HCV treatment model for coinfected patients. Finally, the authors give examples of HCV treatment strategies for coinfected patients in both domestic and international settings.
The world has embraced the call for global elimination of hepatitis C virus by 2030. The unprecedented speed of therapeutic development and increased access to direct-acting antivirals has made elimination a possibility. We must screen hundreds of millions of people to diagnose and treat those currently infected. Global access to hepatitis C virus diagnostics will be a keystone to success. Key challenges must be overcome and systems optimized to ensure widespread access to existing diagnostics. Although promising technologies may soon transform the landscape, innovative strategies are needed to stimulate investment and accelerate the development of point-of-care hepatitis C virus diagnostics.

This article reviews the core principals of cost-effectiveness and applies them to the rapidly evolving context of hepatitis C virus treatment in the United States. The article provides a foundation of evidence that hepatitis C virus treatment provides good economic value, even though it is expensive, and even when treating people who inject drugs who are at high risk for hepatitis C virus re-infection. The price of medications has decreased, but the high price continues to limit access to care. This wedge between cost-effectiveness and affordability stands front and center as one of the leading obstacles to elimination.

Oral direct-acting antiviral agents have revolutionized the treatment of hepatitis C virus (HCV) infection. Nonetheless, barriers exist to elimination of HCV as a public health threat, including low uptake of treatment, limited budget allocations for HCV treatment, and low awareness rates of HCV status among infected people. Mathematical modeling provides a systematic framework to analyze and compare potential solutions and elimination strategies by simulating the HCV epidemic under different conditions. Such models evaluate the impact of interventions in advance of implementation. This article describes key components of developing a HCV burden model and illustrates its use by simulating the HCV epidemic in the United States.