FEDHEALTH CONFERENCE 2019

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THOUGHT LEADERSHIP COMPENDIUM

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CONTEXT

A syndemic is defined as a network of linked health problems, especially ones that share common social underpinnings and cause an increased public health burden.[1] The HIV, hepatitis C virus (HCV), and opioid use disorder (OUD) epidemics constitute a syndemic of crisis proportions in the United States today. The Centers for Disease Control and Prevention (CDC) estimates that there are 1.1 million people living with HIV in the U.S., 2.4 million people living with chronic HCV infection and, from 1999 to 2017, almost 400,000 people have died from an overdose of prescription and illicit opioids.[2,3,4] With nearly 130 people in the U.S. dying every day from an opioid overdose,[5] federal officials are urging substance use disorders treatment providers to also address HIV and HCV.[6]

HIV, HCV and OUD do not occur in isolation from each other. People living with HIV, who also inject opioids and other drugs, are at higher risk for contracting HCV. This HIV/HCV/OUD syndemic is overwhelming a public health system deeply engaged in managing pressing infectious diseases such as influenza and measles; chronic diseases such as heart disease, diabetes and cancer; unintentional injuries from accidents and violence; and the environmental consequences of lead contamination, toxic waste and natural disasters.

HISTORICAL PERSPECTIVE

Syndemics are not new. Prior to the 19th century, when there was no public health system in the United States, diseases such as smallpox, yellow fever, polio, diphtheria and cholera were widespread. Isolation and quarantine were the main disease containment practices. By the mid-1800s, the "growth of scientific knowledge about sources and means of controlling disease and the acceptance of disease control as a possibility and public responsibility" led to the development of public health systems to control disease.[7] Hospitals expanded to care for more sick patients and the mentally ill; and, importantly, state and local public health agencies were established to conduct disease surveillance, record vital statistics, enhance public sanitation, and monitor water supplies. In the late 1800s, scientists discovered that bacteria cause specific diseases such as anthrax, tuberculosis, yellow fever, diphtheria, and typhoid. These scientific discoveries transformed public health practice by leveraging the perspectives and capacities of engineers, chemists, biologists, physicians, and nurses. In 1889, Congress established the United States Public Health Service Commissioned Corps to help with these new public health efforts and care for hospitalized patients.[8] As a result of these investments and implementation of public health measures at state and local levels, the old syndemics disappeared. Smallpox was eradicated and yellow fever, diphtheria, polio, measles, mumps and rubella became rare events among people who were properly vaccinated. (The serious consequences of "opting out" of vaccination are evident in the recent surge of childhood measles cases in certain areas of the U.S.)

Throughout the 20th century, Congress appropriated funding to further strengthen the public health system. These funds supported scientific discovery (National Institutes of Health), laboratory practice and disease surveillance (CDC), drug and food safety (Food and Drug Administration), health care financing (Centers for Medicare and Medicaid Services), care for specific populations (Indian Health Service, Health Resources and Services Administration [HRSA], Substance Abuse and Mental Health Services Administration), and health provider education (HRSA). Despite many successes of public health measures and despite spending almost 17 percent of the GDP on health care, new syndemics have contributed to the United States ranking 26th in life expectancy among 35 other developed nations.[9]

THE WAY FORWARD

There are several challenges that must be acknowledged and addressed if we are to achieve public health success in eliminating HIV, HCV and OUD.

Enhancing the Public Health Workforce - We need a diverse workforce to address the needs of diverse populations. Among the strategies to consider are: expanding health care professional training sites outside of hospitals to include health centers and health departments; increasing the employment of community health workers; hiring people living with HIV, HCV, or in recovery from OUD as part of the clinical team; and innovating education methods to increase online and weekend options that appeal to non-traditional students.

Reimagining Health Care "Sites" – Health care for people living with HIV, HCV or OUD must be accessible to them. While health centers, clinics and departments may expand their night and weekend hours, many who need it will not enter a building for clinical care or social services. Rather, using mobile vans and mobile applications, the new public health workforce must take services to the clients on the streets, under bridges, in barber shops and beauty salons, at bars/clubs, in rural areas and remote locations, and other places where people live, recreate or worship.

Implementing Data-driven Actions and Policies – Employing new technologies, including artificial intelligence, to collect and analyze data in real time is critical to identifying "hot spots" of HIV and opioid use. Specifically, we know the 20 states that report higher rates of death among adults who abused opioids. We also know the areas of the country where most new HIV infections occur. If we overlay these data and target funds and treatment to affected people in those areas, we have a real opportunity to decrease significantly the OUD epidemic and end the HIV epidemic in the U.S. by 2030, as proposed in the new federal plan Ending the HIV Epidemic.[10] Having and sharing data among all agencies, service providers caring for people directly affected by the HIV/HCV/OUD syndemic, and the public is critical to assuring public health interventions are implemented quickly and effectively.

Maximizing Technology and Telehealth Communications – Traditional public health practice has generally been limited to health agencies and departments and to people trained in public health sciences. With advancements in telehealth and mobile technologies, we can expand the definition of a public health provider to include lay community health workers and other allied health professionals. Doing so allows new information to be communicated in real time and services to be provided in rural and other communities where facilities and clinicians are in short supply.

Addressing Health Disparities – HIV, HCV and opioid use differentially impact segments of society. For example, in 2017, racial and ethnic minorities accounted for 74 percent of all new HIV infections. In addition, 91 percent of people living with HIV who obtained care from a Ryan White HIV/AIDS program lived at or below 250 percent of the federal poverty level.[2,11] Those at highest risk for HCV are injection drug users, people living with HIV, and chronic hemodialysis patients. Adults aged 25–54 had higher rates of drug overdose deaths in 2017 than those in other age groups. Health disparities must be addressed so that all of us have an equitable chance for improved quality of life.

Demanding Effective Collaboration – Ending the HIV/HCV/OUD syndemic requires partnership and collective assets of many sectors including:

- Community members – where people living with the syndemic diseases live, work and play;
- Industry – innovators and early adopters of new technologies, including personal screening and diagnostic applications, to make public health management more efficient and personally immediate;
- Business – whose demonstrably effective processes may be adapted to make clinical care processes more efficient and produce better outcomes;
- Academia – to educate clinicians and public health practitioners;
- Foundations – to fund and test new models of care;
- Governments – to fund care, treatment, research, and health provider training; and change policies to reduce or eliminate inequities in disease prevention and healthcare access;
- Clinicians/Public Health Practitioners - to treat patients and provide public health services; and
- Social service agencies – to provide the services that enable people living with HIV, HCV and OUD to obtain and be retained in care.

Strategic and well-informed practices can solve complex public health challenges. Ending the HIV/HCV/OUD syndemic is a lofty, but attainable, goal if each sector commits to working in partnership, eliminating barriers, and leveraging the knowledge and skills at our collective disposal. Only with a concerted and relentless approach, can we improve lives and outcomes across our nation – both today and for generations to come.

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Deborah Parham Hopson, PhD, RN, FAAN is Senior Vice President for Public Health Systems Innovation at The MayaTech Corporation, and retired Rear Admiral of the U.S. Public Health Service Commissioned Corps. For more, contact dparhamhopson@mayatech.com or visit www.mayatech.com.

4401 Wilson Blvd. Suite 1100
Arlington, VA 22203
www.pscouncil.org