

**Social Determinants of Health, Telehealth, and HIV/AIDS: Implications for
Public Health Research and Practice in the State of Virginia**

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Abstract

Purpose: The purpose of this commentary is to assert the importance of addressing the social determinants of health to support HIV/AIDS control efforts, to describe the importance of telehealth in HIV/AIDS control, and to recommend courses of action to support HIV/AIDS control efforts within the state of Virginia.

Discussion: We provide an overview of the social determinants of health and their role in HIV/AIDS control, telehealth and its uptake within the HIV/AIDS community, and issues in Virginia facing HIV/AIDS control.

Conclusion and Recommendations: We conclude that addressing social determinants of health, especially stigma, is an important measure of HIV/AIDS control efforts. We recommend that telehealth be effectively leveraged to that end to support the containment of HIV and AIDS within the state of Virginia.

Purpose

The purpose of this commentary is to assert the importance of addressing the social determinants of health to support HIV/AIDS control efforts, to describe the importance of telehealth in HIV/AIDS control, and to recommend courses of action to support HIV/AIDS control efforts within the state of Virginia. We provide an overview of the issues at hand regarding the goals for fighting HIV/AIDS first before discussing social determinants of health, exploring telehealth, and determining what it means to the state of Virginia regarding public health research and practice efforts.

Discussion

Overview

Curbing the incidence and prevalence of human immunodeficiency virus (HIV) infection and subsequent development of acquired immunodeficiency syndrome (AIDS) is a notable public health issue. The Joint United Nations Programme on HIV/AIDS (UNAIDS) currently calls for 95% of all people living with HIV globally to know their HIV status, 95% of all people with diagnosed HIV infection to receive sustained antiretroviral therapy, and 95% of all people receiving antiretroviral therapy to have viral suppression by 2025 (Joint United Nations Program on HIV and AIDS, 2014). Some scholars have determined the colloquially dubbed “95-95-95” goals to be an ambitious but essential target in the fight to end AIDS (Frescura et al., 2022). These 95-95-95 goals align with Healthy People 2030 goals for the U.S. (Office of Disease Prevention and Health Promotion, accessed 2023). These goals could also be considered as a critical part of the Virginia Integrated HIV Services Plan for 2022-26 (Virginia Department of Health, accessed 2023). One review paper asserted that while the United States was on target to reach the earlier “90-

90-90” goals, there is a need to rapidly meet the new 95-95-95 targets (Hall, Brooks, & Mermin, 2019). Bearing these 95-95-95 goals in mind, though, we in the public health community have some important questions that need to be answered concerning social determinants of health, telehealth, and the state of Virginia.

Here, we seek to answer the following questions:

- 1) Should social determinants of health (SDoH) in people living with HIV be addressed by public health efforts, and if so, which of them is the most pressing?
- 2) What role will telehealth play in reaching the 95-95-95 targets?

How do the answers to the questions above (1 and 2) matter to public health research and practice efforts in Virginia?

Social Determinants of Health

Social determinants of health (SDoH) are the nonmedical factors influencing health outcomes (Centers for Disease Control and Prevention, accessed 2023). These factors have been shown in at least one study to be of note in people living with HIV (Menza, Hixson, Lipira, & Drach, 2021). There are five domains of social determinants of health: economic stability, education access, quality health care access, quality neighborhood and built environment, and social and community context (Office of Disease Prevention and Health Promotion, accessed 2023). There are challenges to determining this information within people living with HIV. One study reported that some participants with HIV felt distressed upon being asked about some of these determinants, especially those relating to trauma, discrimination, and stigma within the social and community context (Parisot et al., 2023). Another study reported that internalized stigma in people living with

HIV could mediate mental health outcomes, among others, and play a role in lowering medication adherence (Turan et al, 2017). As discussed above, medication adherence is critical to achieving the 95-95-95 goals outlined by UNAIDS. Ascertaining SDoH in patient care settings has therefore interested health care workers, especially nurses, who aim to improve patient outcomes and inform their patient care (Schneiderman & Olshansky, 2021). The history of HIV/AIDS itself has been discussed extensively; the challenges in care, including difficulties in patient-provider communication, have been illustrated at length (Engelmann, 2018). Part of the driving reasons behind difficulties in patient-provider communication involves the stigma mentioned above. Barriers to, linkage to, and retention in care are also a point of note due to said stigma and other issues as applicable to social determinants of health (Tarfa, Pecanac, & Shiyanbola, 2022).

Telehealth

Telehealth is defined as using electronic information and telecommunication technologies to support long-distance clinical health care, patient and professional health-related education, health administration, and public health (Health Resources and Services Administration, accessed 2023).

The uptake of telehealth services deserves special attention in the wake of COVID- 19; one issue brief reported that findings from the Household Pulse Survey indicated that telehealth uses consistently remained above 20% from 2021-2022 and for all population groups from the 1,180,248 adults who answered the telehealth question (Office of Health Policy, 2023). However, with the use of telehealth comes the acknowledgment of the digital divide.

The digital divide, defined as unequal access to or ability to engage in care

using technological means, has been shown to be predicted by various socio-demographic factors such as age, income level, socio-economic status, and perceived social isolation (Estacio, Whittle, & Protheroe, 2019). Care must be taken to ensure that the uptake of telehealth measures does not widen such a divide, lest it exacerbates the health inequities described by Sun and co-authors (2020). A review paper by Labisi and colleagues (2022) also described the need for ensuring privacy of patient records as well as ensuring broadband access to telehealth. Labisi and colleagues' recommendations are worth consideration by those on the forefront of public health research and practice with respect to HIV and AIDS control and prevention efforts both at large and in the state of Virginia, as are the points made by Sun and co-authors, and Estacio and colleagues.

Without efforts to overcome the digital divide by those in public health research and practice within the state of Virginia, improvement will not be seen in the long run with telehealth integration for people living with HIV, and ultimately, reaching the 95-95-95 goals will not be possible.

Implications for Public Health Research and Practice in Virginia

Both SDoH and telehealth need to be considered within the context of the state of Virginia, considered by the Centers for Disease Control and Prevention to be in a high-incidence area of the nation for HIV and AIDS (Centers for Disease Control and Prevention, 2021). We take into consideration the points discussed above in our recommendations below.

In our opinion, public health researchers and practitioners should include efforts to address stigma concerning those who are HIV positive and to improve

patient-provider communication throughout the state; a critical way of doing this involves addressing SDoH at large and focusing on addressing stigma. Doing so will improve medication adherence rates, linkage to and retention in care, and overall health outcomes. Future public health efforts should also involve community-engaged research to this end throughout the state, to reshape the social and community context of people living with HIV to deconstruct the aforementioned stigma. This could be accomplished by integrating telehealth services within an existing health system to focus on people living with HIV, as discussed by Dandachi and colleagues (2019) and ensuring effective dissemination and implementation of telehealth services to this population, using a framework such as RE-AIM as described by Brant and colleagues (2020).

It is the opinion of these authors, as well, that applications of the above points can go beyond patient care and enter the community space via systems such as cooperative extension. Since one of the goals of the cooperative extension system is to adapt to changing technology (United States Department of Agriculture, accessed 2023), it behooves cooperative extension to take note of the opportunities to integrate telehealth services within the existing system within their frameworks as well to reach those in remote areas of the state who

may be HIV positive. In this manner, people living with HIV in the state of Virginia can be empowered outside the examination room of a healthcare provider. Doing so will enable people living with HIV in rural areas to become empowered citizens in their communities.

Conclusion and Recommendations

To sum up, we assert the following to be pertinent: 1) addressing SDoH will be critical to ensure optimal patient outcomes for people living with HIV and in reaching the target 95-95-95 goals, especially stigma; 2) uptake in telehealth services is notable in the wake of COVID-19 and should be effectively leveraged to ensure optimal outcomes for HIV patients; to that end, overcoming the digital divide is critical, and 3) the state of Virginia should focus on community engaged research, integration of telehealth within the healthcare system, and effective dissemination and implementation of telehealth to people living with HIV. In this manner, the state of Virginia will be instrumental in HIV prevention and control and ultimately serve as an example for other states to do the same—with the overall aim of reaching the 95-95-95 targets to ensure optimal outcomes for those living with HIV within the state of Virginia, and ultimately, overall health and well-being for the U.S. and the world.

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