

THE AMERICAN ACADEMY OF HIV MEDICINE ■ SUMMER 2022

HIV

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c/o The YGS Group
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Executive Director, AAHIVM

The Need for Expansion, Not Restriction

WITH THE SUPREME COURT'S DECISION to overturn *Roe v. Wade* shortly before the printing of this issue of *HIV Specialist*, providers of compassionate and comprehensive sexual health care are now right in the crosshairs of conservative efforts to restrict and often criminalize access to and provision of abortion services on the state level. At a time when the end of the HIV epidemic in the U.S. is clearly in sight, comprehensive and inclusive reproductive and sexual health care access should be increasing, not shuttering for fear of ecclesiastically-driven vigilante justice. It's quite clearly the wrong direction from an HIV, sexual/reproductive health and overall health access perspective, and frankly from a clinical standard of care perspective as well.

This decision adds to the extraordinary challenges that already exist in the form of disparities along racial lines and within other dispossessed communities. Compounding the barriers to care is the lack of clinicians of color serving populations who have better health outcomes when their provider looks like them. As Dr. Ross Hewitt underscores in his article in this issue, only about one in twenty physicians in the U.S. is Black/African-

American, while simultaneously Black men make up 40 percent of all new HIV diagnoses. What this means is that the provider community does not demographically mirror that of the population most affected by the HIV epidemic, while those patients struggle to overcome community stigma and other social determinants that compromise their health access. What they need most is available care provided in a culturally sensitive way by physicians and other providers who understand the specific challenges faced by the populations they serve. Dr. Hewitt writes, "HIV has become a suburban and rural population issue for Southern states like Mississippi, Alabama, and South Carolina, where care expertise has been traditionally centered in urban areas. The care is not meeting the demand."

The Academy is committed to addressing racial, geographical and other care access disparities across all policies and programs. This spring, the Academy Council for Racial Equity (ACRE) hosted a Minority Student Open, inviting medical students of color to tune into a keynote, a panel discussion and several breakout sessions with ACRE members on how to successfully enter the HIV field. You can read all about the speakers, the sessions and the impact of the Minority Student Open in this issue, but the basic point is to show the way forward for the next generation of HIV care clinicians starting their careers. They will not only need to be clinically competent in the disease state, but understand the unique and complex situations of those clients and communities. Frankly, this is one of the reasons the Academy exists: to help build and support a diverse HIV workforce,

and we are committed to the ongoing work of engaging and supporting medical students entering the field, especially providers of color.

What we do not need in the fight *against* HIV and *for* comprehensive and inclusive sexual and reproductive health is for newer providers to fear entering the clinical space of sexual health, reproductive health and STIs because of these excessively punitive abortion laws passing mostly in states where the need for diversity and expertise in sexual health care capacity is the highest. Generally speaking, the need for innovative ways of delivering comprehensive care that works around restrictive legislation and protects providers and patients is pressing, even as the national efforts to fight these laws are stridently underway.

The Academy will always stand for the autonomy of patients and their care providers making health decisions together without interference from uncompassionate state laws. We support our members, and work every day to increase member diversity and provide tools and support for clinicians to deliver comprehensive care. I look forward to hearing your feedback on our efforts as you read this important issue about expanding and diversifying the HIV workforce!

A stylized, handwritten signature in black ink, appearing to read "B. J. Packett".

IN THE NEWS

100 HIV Organizations Call On Congress to Fund Biden's National PrEP Program

PrEP4ALL, INC., along with 100 HIV organizations, are leading the push for Congress to fund a National Pre-Exposure Prophylaxis (PrEP) Program that would increase equity and accessibility to the revolutionary HIV prevention drug for un- and under-insured Americans. PrEP, first approved by the FDA in July of 2012, has had dismal uptake among communities vulnerable to HIV infection. Funding of a National PrEP Program would drastically increase uptake, putting the U.S. closer to its goal of ending the HIV epidemic by 2030.

The 100 organizations along with the Federal AIDS Policy Partnership (FAPP), AIDS Budget and Appropriations Coalition (ABAC) and the HIV Prevention Action Coalition (HPAC) are urging Hon. Rosa L. DeLauro, Chairwoman of the House Committee on Appropriations, Hon. Patrick Leahy, Chairman of Senate Committee on Appropriations, Hon. Kay Granger, Ranking Member of the House Committee on Appropriations, and Hon. Richard Shelby, Vice Chairman of Senate Committee on Appropriations, to fund a new national PrEP program within the Centers for Disease Control and Prevention (CDC) Division of HIV Prevention at \$400 million in FY 2023.

The funding would be a necessary first step toward achieving the "PrEP for All to End the HIV Epidemic" program proposed in President Biden's FY 2023 Budget Request. President Biden's FY 2023 Budget Request called for a 10-year mandatory funding program to expand PrEP across the U.S. to provide medication to un- and under-insured individuals and to support and expand PrEP programs across a variety of agencies.

The COVID-19 pandemic significantly increased barriers to PrEP access due to clinic closures, lost insurance due to unemployment, and shortage of lab supplies. Funding of a National PrEP Program is an essential investment to put the U.S. back on track



to reach the ambitious targets put forth in President Trump's Ending the HIV Epidemic initiative. Advocates believe that Congress and the Federal government must quickly act to ensure that anyone who could benefit from PrEP can access the medication and other PrEP services without any costs.

"Queer, Black, and Brown communities—who bear the brunt of tens of thousands of new HIV infections each year—cannot afford to let any more time go by before we fully scale up PrEP access. And due to many issues involving cost, lack of insurance coverage and knowledge of PrEP, we've seen PrEP mostly benefit white Americans (and primarily white gay men in large cities) in the past decade since the first drug was approved for PrEP. To ensure equity, we need House and Senate appropriators to immediately fund a national PrEP program and leverage the cost savings power brought about by generic competition," said Jeremiah Johnson, PrEP Policy Manager for PrEP4All.

Both the National HIV/AIDS Strategy and the Ending the HIV Epidemic Initiative rely on PrEP expansion as a key tool to ending the HIV epidemic by 2030. To achieve this, much more must be done. It is estimated that only 25 percent of people who could benefit from PrEP have received a prescription. PrEP use is highest among white people, at 66 percent of those who

could benefit from receiving PrEP, yet only nine percent of black people and 16 percent of Hispanic/Latino people who could benefit from PrEP in the United States have a prescription. Additionally, only 9.7 percent of women who could benefit from PrEP currently have a prescription. It is no coincidence that many of these same populations are disproportionately uninsured.

"A national PrEP program is an amazing opportunity to expand PrEP providers to include primary and other specialty (i.e., OB/GYN) care providers

into the conversation around expanded PrEP access among communities highly affected by HIV. If we are going to see equity in access and initiation of PrEP for Black people, women, and Latino communities this approach is necessary," said Nationally Distinguished HIV Prevention Advocate Leisha McKinley-Beach.

Thanks to the generic PrEP driving the cost of daily oral PrEP down to as low as \$20/month, Congress now has the opportunity to enact a PrEP program that will save the federal government money while achieving equitable access for all communities who need PrEP the most. With lifetime healthcare costs estimated at \$500,000 for each new HIV diagnosis and around 35,000 new diagnoses each year in the US, an investment in PrEP access would both prevent the spread of HIV and significantly reduce health care costs.

"While our nation has an effective program to fund care and treatment for people living with HIV, if we are to meet the goals of ending HIV by 2030 we need an equally effective national program to fund PrEP access. With strong Congressional, Presidential and community support this is the year that we must make this a reality," said ABAC Co-chairs Carl Schmid of HIV+Hepatitis Policy Institute, Nick Armstrong of The AIDS Institute and Emily McCloskey Schreiber of NASTAD.

IN THE NEWS

New AVAC Plan Lays Out Priorities for Swift and Equitable Rollout of Injectable Cabotegravir for PrEP

AS THE HIV PREVENTION FIELD is poised to introduce two promising new options: the dapivirine vaginal ring (DVR) and injectable cabotegravir (CAB), AVAC (formally the AIDS Vaccine Advocacy Coalition) lays out a Plan for Accelerating Access and Introduction of Injectable CAB for PrEP. The plan identifies immediate priorities to support the swift rollout of CAB for PrEP and calls on stakeholders to ensure that it's delivered to programs at scale at the lowest price possible.

In December 2021, the U.S. Food and Drug Administration (FDA) approved CAB as PrEP, making it the first injectable PrEP option to be added to a growing range of proven prevention methods. Eight additional applications have been filed for regulatory approval in priority countries with decisions expected later this year. In addition, WHO guidelines for injectable PrEP are expected later this year.

"COVID-19 has shown us that the field can compress timelines and new technologies can be developed, tested and distributed quickly and with urgency, at least for wealthier nations," said Mitchell Warren, AVAC Executive Director. "The challenge now is to learn these lessons from COVID-19. Can the world respond just as urgently for HIV prevention? Can we speed up the process, with delivery happening in parallel to further research that may be needed? Can access be scaled and programs designed so that injectable PrEP truly impacts the HIV epidemic and is delivered with equity, reaching those who need it most? The answer to all these questions must be yes. But will take all of us, doing our part."

AVAC's plan comes on the heels of months-long discussions between advocates and other stakeholders who participated in a series of meetings with ViiV Healthcare, the maker of injectable CAB for PrEP, and in the World Health Organization (WHO) Guidelines Review Group. These discussions prioritized the imperative to make good on the promise of injectable cabotegravir to advance HIV prevention and

global health—a number of important statements from advocates emerged from these discussions. In response, ViiV announced last month that it is «actively negotiating voluntary licensing terms» of CAB for PrEP to the Medicines Patent Pool (MPP) and is «committed to supplying» CAB for PrEP at a non-profit price for public programs in low-income and all sub-Saharan African countries until a generic is available.

"This is an example of advocacy at its best, but while this commitment is hugely important, advocates have much more work ahead to ensure that all stakeholders do their part to support swift and equitable access to injectable CAB for PrEP," Warren added.

AVAC's plan provides a comprehensive view of all the moving parts involved in delivering CAB for PrEP and identifies priorities for ensuring time is not wasted and opportunity is not squandered in making CAB for PrEP available to all who need and want it. The plan focuses on learning the lessons from the first ten years of delivering oral PrEP and how to move faster, more strategically, and with greater coordination to maximize the impact of injectable CAB for PrEP.

"Injectable CAB for PrEP gives us an important opportunity to advance HIV prevention for populations most at risk. We are committed to ensuring we get rollout right so that a broad range of options are available to people who want and need them, especially young women," wrote a group of Southern African Women Advocates in a March 2022 statement. "We... will work with all stakeholders, including ViiV, to make a real impact in HIV prevention."

Members of this group along with colleagues in East Africa, with support from AVAC, Advocacy for Prevention of HIV and AIDS (APHA) and International Community of Women living with HIV Eastern Africa (ICWEA,) have formed the African Women Community Prevention Accountability Board to serve as an ongoing, independent mechanism for

stakeholder engagement to provide input into CAB for PrEP planning and implementation among cisgender women in Africa.

Oral PrEP was first shown to be safe and effective in 2010 and first approved in 2012, but the field moved too slowly—and now 10 years since first approved, fewer than 2 million people have used this option, while an estimated 120 million could benefit from it.

AVAC's plan calls on ViiV, policy makers, normative agencies, donors, program implementers, researchers, civil society, advocates and communities to act on a range of key activities, which include:

- A transparent commitment from ViiV, and a negotiated guarantee from donors, on a cost-effective and affordable price and volume for CAB for PrEP to support early launch, introduction and rollout.
- Inclusion of injectable CAB for PrEP in WHO guidelines, which are expected ahead of AIDS 2022.
- National Programs in priority countries complete CAB for PrEP registration or secure relevant waivers.
- Voluntary licensing from ViiV to select generic manufacturer(s), including technology transfer as required.
- Donor investments in generic manufacturing capacity.
- National Programs in priority countries complete CAB for PrEP registration or secure relevant waivers.
- Market assessments and demand forecasts are updated with data from initial projects, to inform programming, manufacturing and cost.
- Operational research and implementation science studies identify successful, scalable delivery channels; a testing algorithm that balances resistance risk with the needs of users and providers; ongoing engagement with communities and civil society; and an independent coordination mechanism.

The plan also lays out advocacy priorities and calls on advocates to hold decision-makers on CAB for PrEP—and on prevention generally—accountable. Is there clarity about next steps? Are there targets and milestones in place? Is there adequate funding to support rollout? How might decisions be made about who would get the product first, if it's licensed and introduced through phased rollout?

"We welcome the recent announcement by ViiV to start negotiations with the MPP to potentially open the door for generic injectable CAB- LA. While it's notable progress, this is NOT a license agreement," said Kenly Sikwese, Executive Director at the AfroCAB Treatment Access Partnership and a member of AVAC's board of directors. "New HIV prevention options, in particular injectable cabotegravir for PrEP, hold the promise to transform HIV prevention in our communities. For years, communities have advocated for diverse HIV prevention options that respond to the needs, lifestyles, and unique experiences of our community members at greatest risk for HIV infection. Affordable, widespread access to injectable CAB can represent a step change for HIV prevention, if we can collectively move faster and more strategically."

In the days to come, advocates will continue to engage with ViiV, WHO, donors and other decision-making bodies focused on the future of CAB for PrEP. AVAC will be tracking the progress, investing support, and putting a spotlight on the key priorities as information becomes available.

AVAC has worked on PrEP advocacy and introduction since the design of the earliest studies on the efficacy of oral PrEP beginning in 2004. In 2007, AVAC partnered with UNAIDS to develop the Good Participatory Practice Guidelines, offering a roadmap and principles to effectively engage with all stakeholders in the design and conduct of biomedical HIV prevention trials. Nearly 15 years later, with growing advocacy calling for greater political and financial support to introduce and rollout the dapivirine vaginal ring, or PrEP ring, along with injectable CAB for PrEP, many of the initial principles of GPP—transparency, accountability, community stakeholder autonomy, and mutual understanding—continue to be more important than ever.

HIV Care Providers Highlight Legislative Interventions Necessary to End the HIV Epidemic

WASHINGTON, DC: Members of the American Academy of HIV Medicine recently met with Congressional representatives to highlight four critical policy interventions needed to achieve the goal of ending the HIV epidemic by 2030.

Over fifty Academy members and credentialed providers participated in thirty scheduled meetings, representing eighteen states across the U.S. Participants included doctors, nurse practitioners, physician assistants, and pharmacists, representing the core of the HIV clinical care team.

"It is important for our Congressional representatives to hear directly from frontline providers who recognize the day-to-day barriers people with and at risk for HIV face," said Bruce J. Packett, executive director of the Academy. "Thanks to advances in HIV treatment and prevention, we have the clinical tools necessary to eradicate HIV. However, it's the social determinants, health inequities and systemic barriers to access that is keeping us from crossing the finish line. Congress needs to understand that they have the power to end this epidemic."

During the virtual meetings, providers highlighted four policy interventions necessary to end the HIV epidemic in the U.S. by 2030:

- Enable greater access to HIV prevention, including pre-exposure prophylaxis (PrEP)
- Expand the HIV healthcare workforce in number and diversity
- Support adequate federal funding for ending the HIV epidemic in the areas of prevention, treatment, care, and research
- Decriminalize HIV through federal interventions while pressuring states

to eliminate archaic state outmoded, stigmatizing criminalization laws

The Ending the HIV Epidemic (EHE) initiative was conceived in 2019 and is aimed at reducing new HIV infections in the US by 90% by 2030. The EHE is structured to make intensive interventions in 57 different jurisdictions - 50 localities that account for more than half of new HIV diagnoses and 7 states with a substantial rural burden.

"The goal of eliminating HIV by 2030 is realistic, but only with Congressional support," said Leslie McGorman, director of public policy for the Academy. "We've seen great progress over the past two years starting with the White House's Office of National AIDS Policy (ONAP) reopened under President Biden, as well as an updated National HIV/AIDS Strategy (NHAS). This advocacy day was able to showcase the specific next steps Congress must take to enact policies critical to the EHE's success of our provider members and ultimately to the Ending the Epidemic initiative."

In addition to hearing about provider members' specific challenges on the frontlines, Senators and Representatives were encouraged to support specific, existing legislation that addresses many issues facing people with and at risk for HIV, as well as growing the HIV health care workforce:

- The PrEP Assistance Program Act (H.R. 5605)
- The PrEP Access and Affordability Act (H.R. 6117/S. 3295)
- The PREVENT Pandemics Act (S. 3799)
- The BIO Preparedness Workforce Act (H.R. 5602/S. 3244)
- The HELP Act (H.R. 2295)
- The REPEAL HIV Discrimination Act (H.R. 6111)

IN THE NEWS

ViiV Healthcare Commits to Grant Voluntary License for Patents Relating to Cabotegravir Long-Acting for PrEP to Medicines Patent Pool

ViiV Healthcare and MPP are actively negotiating voluntary licensing terms to help widen access to innovative HIV prevention measure

VIIV HEALTHCARE has today announced that it is committing to license its patents relating to cabotegravir long-acting (LA) for HIV pre-exposure prophylaxis (PrEP) and is entering into negotiation on voluntary licensing terms with the UN-backed Medicines Patent Pool (MPP). ViiV Healthcare and MPP are working to agree terms and execute a voluntary licence as quickly as possible to help enable at scale access to cabotegravir LA for PrEP in low- and middle-income countries.

This builds on a long-standing partnership between ViiV Healthcare and MPP which has been highly successful in facilitating the manufacture and sale of low-cost versions of ViiV Healthcare medicines in countries most affected by HIV and least able to pay for treatment and care. Voluntary licensing has enabled access to generic products containing another of ViiV Healthcare's innovative medicines, dolutegravir, for at least 20 million people living with HIV in low- and middle-income countries, as of December 2021.

Deborah Waterhouse, CEO of ViiV Healthcare said: "We are excited by the potential role that this long-acting injectable medicine for HIV prevention can play in helping to avert the transmission of HIV and ending the HIV epidemic by 2030. Widening access for an injectable such as this is complex and will take all stakeholders playing their part. We are pleased that today we are making a significant contribution towards this aim by ensuring ViiV Healthcare patents will not stand in the way of enabling access for people in low- and middle-income countries who could benefit from cabotegravir LA for PrEP. We look forward to working at pace with MPP to execute the licence in the coming months, building on the experience of our valued and long-standing partnership."

Charles Gore, Executive Director, MPP said: "Because of its long-acting nature, cabotegravir is potentially a very important drug in our battle against HIV. In particular, it could be a game-changer in prevention. It is critical that it becomes widely available to the people who could benefit from it. We are therefore delighted that ViiV has committed to working with us on a voluntary licence to contribute to making that possible."

Agreeing a voluntary licence for patents for cabotegravir LA for PrEP will represent an important step towards broadening access; however there will remain significant complexities and considerations that need to be managed to support the development, manufacture and roll out of a generic long-acting injectable. Compared to oral anti-retroviral medicines, a long-acting injectable is more complex to manufacture, there may be capital investment needs, and there is an evolving and less well-defined demand for the product. These are challenges not only for ViiV Healthcare but also for any future generic licensees.

To maximise the likelihood of success of a voluntary licence, ViiV Healthcare is committed to actively engaging with a range of stakeholders including MPP, funders, procurement agencies, community groups and generic manufacturers to help find workable and sustainable solutions to enable generic manufacturing as quickly as possible. Until a generic is available, ViiV Healthcare has committed to supply cabotegravir LA for PrEP at a non-profit price for public programmes in low-income, least developed and all sub-Saharan African countries.

Cabotegravir LA for PrEP is a long-acting injectable which has recently gained its first regulatory approval for use in the USA. It is not currently approved for use anywhere outside of the USA. ViiV Healthcare has submitted marketing applications in a number of countries including in sub-Saharan Africa. ViiV Healthcare is also working with community partners to understand country-specific contexts and is supporting implementation science projects that will provide critical information on the feasibility, acceptability and scalability to deliver successful introduction of cabotegravir LA for PrEP into national programmes, which would be needed to enable any future generic version of the product.



A new technology offers treatment for HIV infection through a single injection

BY TEL-AVIV UNIVERSITY

A NEW STUDY from Tel Aviv University offers a new and unique treatment for AIDS which may be developed into a vaccine or a one-time treatment for patients with HIV. The study examined the engineering of type B white blood cells in the patient's body so as to secrete anti-HIV antibodies in response to the virus. The study was led by Dr. Adi Barzel and the Ph.D. student Alessio Nehmad, both from the school of neurobiology, biochemistry and biophysics at the George S. Wise faculty of life sciences and the Dotan Center for Advanced Therapies in collaboration with the Sourasky Medical Center (Ichilov). The study was conducted in collaboration with additional researchers from Israel and the US. The study was published in Nature Biotechnology.

Over the last two decades, the lives of many AIDS patients have improved as a result of the administration of treatments that change the disease from lethal to chronic. However, we still have a long way to go before a treatment is found that would provide the patients with a permanent cure. One possible way to do it, with a one-time injection, was developed for the first time in Dr. Barzel's laboratory. The technique developed in his lab utilizes type B white blood cells that would be genetically engineered inside the patient's body to secrete neutralizing antibodies against the HIV virus that causes the disease.

B cells are a type of white blood cells responsible for generating antibodies against viruses, bacteria and more. B cells are formed in bone marrow. When they mature, B cells move into the blood and lymphatic system

and from there to the different body parts.

Dr. Barzel explains that "until now, only a few scientists, and we among them, had been able to engineer B cells outside of the body, and in this study we were the first to do this in the body and to make these cells generate desired antibodies. The genetic engineering is done with viral carriers derived from viruses that were engineered so as not to cause damage but only to bring the gene coded for the antibody into the B cells in the body.

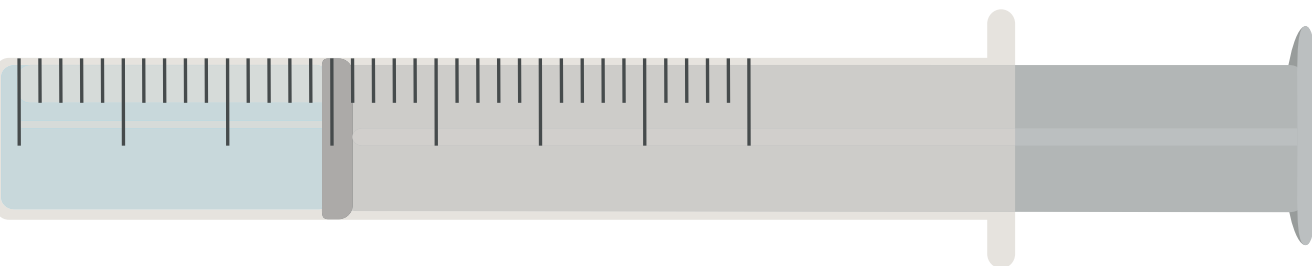
"Additionally, in this case we have been able to accurately introduce the antibodies into a desired site in the B cell genome. All model animals who had been administered the treatment responded and had high quantities of the desired antibody in their blood. We produced the antibody from the blood and made sure it was actually effective in neutralizing the HIV virus in the lab dish."

The genetic editing was done with a CRISPR. This is a technology based on a bacterial immune system against viruses. The bacteria use the CRISPR systems as a sort of molecular "search engine" to locate viral sequences and cut them in order to disable them. Two biochemists who had figured out the sophisticated defense mechanism, Emmanuelle Charpentier and Jennifer Doudna, were able to reroute for the cleavage of any DNA of choice. The technology has since been used to either disable unwanted genes or repair and insert desired genes. Doudna and Charpentier earned international recognition when they became chemistry Nobel Prize winners in 2020.

The Ph.D. student Alessio Nehmad elaborates on the use of CRISPR: "We incorporate the capability of a CRISPR to direct the introduction of genes into desired sites along with the capabilities of viral carriers to bring desired genes to desired cells. Thus, we are able to engineer the B cells inside the patient's body. We use two viral carriers of the AAV family, one carrier codes for the desired antibody and the second carrier codes the CRISPR system. When the CRISPR cuts in the desired site in the genome of the B cells it directs the introduction of the desired gene: the gene coding for the antibody against the HIV virus, which causes AIDS."

Currently, the researchers explain, there is no genetic treatment for AIDS, so the research opportunities are vast. Dr. Barzel concludes: "We developed an innovative treatment that may defeat the virus with a onetime injection, with the potential of bringing about tremendous improvement in the patients' condition. When the engineered B cells encounter the virus, the virus stimulates and encourages them to divide, so we are utilizing the very cause of the disease to combat it.

"Furthermore, if the virus changes, the B cells will also change accordingly in order to combat it, so we have created the first medication ever that can evolve in the body and defeat viruses in the 'arms race'. Based on this study we can expect that over the coming years we will be able to produce in this way a medication for AIDS, for additional infectious diseases and for certain types of cancer caused by a virus, such as cervical cancer, head and neck cancer and more."





MINORITY STUDENT OPEN Educates & Inspires

FROM IDEA TO REALITY

By Ross G. Hewitt, MD, FIDSA, FACP, AAHIVS

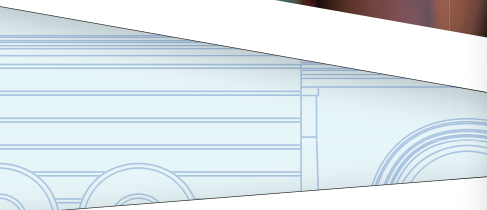
THE AMERICAN ACADEMY OF HIV MEDICINE and its Council on Racial Equity (ACRE) organized and hosted its first Minority Student Open virtually on March 31, 2022. ACRE was formed to advise the Academy about its programs and policies and how the organization can address the racial inequities in HIV care, which were magnified during the height of the COVID pandemic. Consistent with the Academy's goal of increasing and maintaining HIV care expertise in the community, ACRE members wanted to address another problem: the shortage of HIV providers that are people of color.

Spearheaded by Dr. Leonard Sowah, with significant input from Academy staff and ACRE members, the Academy reached out to minority healthcare students in the United States. Over 200 student participants registered to participate. The agenda included a plenary presentation by Dr. Keith Rawlings, an African American physician and Academy member with a long and distinguished HIV career, a panel discussion of ACRE members, and the opportunity to join one of three breakout sessions on the underrepresentation of people of color in HIV research, the business of HIV, and racial inequity in the hierarchy of healthcare.

Bruce Packett, Academy Executive Director, welcomed the participants and emphasized the Academy's dually tracked primary activities: expansion of expertise in HIV care and prevention through provider educational and credentialing programs in the community and advocacy on behalf of providers who treat and prevent HIV in policy and other government sectors, while connecting HIV providers, leveraging their expertise. In addition, he reminded the audience that the Academy provides complimentary membership to medical students to help support them in their interest in knowledge of HIV care and prevention.

Dr. Leonard Sowah, who served as the first chairperson of ACRE, also welcomed participants. He reviewed some of the goals of ACRE, which include supporting African American HIV providers, addressing racial inequities in HIV care, and addressing the shortage of HIV providers who are people of color. "Systemic racism... in healthcare costs lives," Dr. Sowah said.





Plenary Session: HIV Now in the Context of Racial Equity

The plenary session began with a keynote presentation by Dr. Keith Rawlings. Dr. Rawlings addressed four key points for participants: what is happening with the HIV epidemic in the United States right now; the racial inequities in HIV care and research; how the COVID epidemic has impacted HIV care; and the shortage of HIV providers who are people of color.

The White House Office for National AIDS Policy released its roadmap to end the HIV epidemic in November 2021.¹ While the HIV epidemic began as a bicoastal phenomenon, it has now concentrated itself. Fifty percent of new HIV transmissions occur in 48 counties, Washington, D.C., San Juan, Puerto Rico, and seven states with disproportionate rural HIV cases. The highest incidence is in the southeastern United States, from Florida to Maryland and west to Mississippi and Tennessee.² Of new HIV transmissions, the majority are in African Americans, Latinx, Asian and Pacific Islanders, and Native American populations, in other words, people of color. At clinics funded with federal dollars from the Ryan White Care Act, viral suppression is higher than in the same communities at non Ryan White-funded care clinics, providing evidence that HIV expertise does make an important difference. These same clinics provide and link to several important community-based services. As Dr. Rawlings pointed out, not every person with HIV needs a case manager or transportation assistance, but those resources must be there for those who need them.

Dr. Rawlings reminded the audience that treatment is a form of prevention of new HIV transmissions. High rates of viral load suppression in the community lead to lower rates of HIV transmission. Access to expertise in HIV preventive care is just as important for communities of color. People of color need to know their HIV status to access competent HIV prevention and treatment services and address their social determinants of health.

The United States is not on track to end the HIV epidemic by 2030. An important area of concern is the lack of uptake of pre-exposure prophylaxis (PrEP) to prevent HIV among people of color. Currently, only 20 to 25 percent of African American



HIV-negative men who have sex with men are currently using PrEP.³ The majority of PrEP users are White gay men. This important intervention is not reaching the people it needs to reach the most. We can and must do better.

As we have lived in a virtual world for the past two years, the COVID epidemic has greatly impacted HIV care. Public health resources targeting HIV care and prevention, such as sexually transmitted disease (STD) and HIV infection contract tracers, were redirected to address COVID. During COVID, we have seen rates of STDs increase. Infectious disease physicians were nearly all redirecting their energies to treating COVID. The pandemic caused a lack of access for many people with HIV to their providers and medications, leading to a lack of viral suppression with its accompanying potential for health status declines and increased community transmission of HIV. COVID has also impacted the healthcare workforce, especially nurses, a significant portion of which have left the profession.

The HIV provider community is aging and retiring, creating a gap in needed care for those remaining providers. African Americans only make up five percent of the physician population, yet African-American men make up almost 40 percent of the newly diagnosed HIV population.² HIV has become a suburban and rural population issue for Southern states like Mississippi, Alabama, and South Carolina, where care expertise has been traditionally centered in urban areas. The care is not meeting the demand. Our healthcare resources need to be redistributed to better address this need. One idea is to incentivize providers to expand into these underserved areas. Providers also need to reflect the communities they serve racially and ethnically. The patient-provider relationship is ultimately based on trust, which needs to be built, helped in part by patients being able to see themselves in their providers.

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While clinical research has attempted to address the underrepresentation of minority subjects in HIV clinical trials, the academic establishment still has a long way to go. Minority students should be encouraged and supported to pursue careers in HIV care and research, both basic science and clinical. We need to understand how our interventions affect and impact communities of color because such interventions may need to be targeted or tailored in new and different ways.

Dr. Rawlings challenged the participants to think about working in HIV care, in whatever healthcare profession they choose, and working in underserved communities, from the barrios of Los Angeles to the small towns of the Mississippi Delta and the tribal lands of Native Americans.

Other Minority Student Open Sessions

More in-depth coverage of other sessions within the Minority Student Open is covered elsewhere in this issue of *HIV Specialist*. Here are some highlights from these sessions, which are available on the ACRE page of the Academy website.

Panel Discussion: HIV as a Health Professions Career Path

A distinguished panel composed of African American women with specialty in HIV care included a physician (Dr. Michelle Collins-Ogle), a nurse practitioner (Alanna Johnson-Steeple), and two pharmacists (Dr. Briana Journ  e and Dr. Alftan Dyson) discussed their personal paths to becoming HIV caregivers. Collectively, they expressed how motivated they were to go into HIV care after they interacted with a person with HIV. The panelists offered participants many avenues to explore a wide variety of health professional positions that are part of the HIV care spectrum.

African-American Representation in HIV Research

“Nothing can be changed if it is not faced,” said Dr. Sowah as he conducted a breakout session on African American participation in research, both as participants and as investigators. Many obstacles exist to African American participation in medical research, and HIV research in particular. Minority males are underrepresented in the MACS HIV cohort, a large American observational cohort. Over the past twenty years, the percentage of African-American male investigators was static. Dr. Sowah provided participants with advice on how to approach becoming an investigator as a student or trainee.

The Business of HIV Care

Hermeyone Bell, NP, began a workshop session on the business of HIV care. In 2019, she established her own primary care practice in Atlanta, Georgia, in association with a collaborating physician. During the COVID pandemic, she was able to expand her activities to include telehealth visits and home visits. She discussed a number of issues regarding the administration of her practice, including assistance from access to capital for entrepreneurs (ACE) from the Small Business Administration.

Dr. Marc Ogilvy shared his passion for infectious diseases and HIV care from Minnesota to El Paso, Texas, helping his program to transition from paper to electronic medical records. He transitioned from academic medicine to hospital administration and back to clinical care growing his HIV clinic from 25 to 1300 patients, with seed funding from the state of Texas and Ryan White federal funding. He spoke about the wide range of medical roles he has held within HIV care, including participation on a variety of boards and committees. His take away message to participants was to develop affability, availability, and ability. Both panelists stated that it was their experience with

people with HIV that triggered their desire to work in HIV care.

Hierarchy in Healthcare

Dr. Cleophas d’Auvergne and Dr. Ada Stewart participated in a breakout session that addressed a variety of social determinants that impact African American access to healthcare in the United States, as well as people of color in countries around the world. The COVID pandemic helped to expose these issues as health outcomes were much poorer for African-American patients during its various waves. Systemic racism imbedded within healthcare systems contributes to these poorer outcomes. It’s important to understand that change, while difficult, can be worked toward through strong advocacy.

An Important First Step

The Minority Student Open, hoped to be the first of many, showcased the extraordinary expertise in HIV care that the members of ACRE possess. As African American men and women working within HIV care systems, their personal examples highlight their passion and dedication to care for people of color with HIV. Each one took advantage of opportunities presented to them to broaden their professional skills and experiences. As their paths unfolded, they did not know exactly where they would be today, but each was open to new experiences. The overwhelming positive message to student participants was simple: go for it! **HIV**



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REFERENCES

1. The White House. 2021. National HIV/AIDS Strategy for the United States 2022–2025. Washington, DC.
2. HIV.gov. 2020. Overview: Data & Trends: U.S. Statistics. <https://www.hiv.gov/hiv-basics/overview/data-and-trends/statistics>
3. Danny, D., Jeffries, W.L., Chapin-Bardeles, J. et al. 2019. Racial/Ethnic Disparities in HIV Preexposure Prophylaxis Among Men Who Have Sex with Men – 23 Urban Areas, 2017. *MMWR Morb Mortal Wkly Rep* 2019;68:801–806.

A Cultural

NAVIGATING PHARMACY SCHOOL, and ostensibly other academic programs, requires dedication and resilience to reach defined goals.¹ Coursework is challenging, and schedules are demanding. As a result, it can be difficult to take time for career explorations. Students often seek employment advice from faculty and staff at their institutions.² However, occupational guidance for students internal and external to their educational environments is not always readily accessible.³ Therefore, platforms that assemble professionals from different disciplines to share their wisdom with future professionals have proven to be informative, inspirational, and continually needed.⁴

Professional development sessions should be liberated spaces for students to have direct conversations about their educational experiences.⁴ Academic curricula tout a uniformed approach to educating students. However, students

typically experience curricula in different ways, in some cases through feelings of inequity and marginalization.³ Minority students in particular have voiced concerns about discriminatory educational practices and how their peers and

educators often view them in negative lights.³ Minority students experience these macro and micro aggressions perceivably due to their ethnicities, while keeping up with the rigors of their programs. This commonly results in

MINORITY STUDENT OPEN

By Raechell Alonzo, PharmD student
and Kenric B. Ware, PharmD



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Classroom

excessive psychological strain that their non-minority classmates are often able to avoid. Unfortunately, minority students' candid impressions of how they interact with their educational environments are often silenced.³ This is mainly due to hierarchies that exist among faculty and administrators, who are mostly non-minority, and concerns about retaliatory measures.³ The threat of feeling inadequate in relation to their peers or being accused of "pulling the race card" looms large for minority students. Venues that are non-judgmental and allow minority students a cathartic outlet to "let it out" are essential to coping with race relations in education. Any efforts to organize such spaces should be enduring, as minority students' mental anguishes

about these realities are not transient. In response to the complexities that come along with being a minority healthcare student, the American Academy of HIV Medicine (AAHIVM) hosted a Minority Student Open (MSO) under the auspices of a subset member group, the Academy Council on Racial Equity (ACRE). The MSO featured racial minority healthcare providers who covered career-guiding topics in a virtual session catered to an audience of underrepresented healthcare students. On behalf of racial minority pharmacy students, it was refreshing to participate in an event that had diversity in mind. The topics presented were relatable to different aspects of career development. The presenters discussed their

views in authentic ways that are typically absent from academic lectures. In turn, they brought culture to their classrooms through the trusted spaces they created for attendees.

The opportunity to participate in the MSO emanated from an HIV-focused, ambulatory care, advanced pharmacy practice experience, a five-week clinical clerkship in the last year of pharmacy school. Given the connection between minorities and HIV acquisition, the MSO being geared towards minority healthcare students felt like a timely interjection. Without having participated in anything similar previously, there were no expectations carried forward into the event. Having an interest in compounding



pharmacy, there was every effort made to absorb what the speakers had to say and apply it to this aspiring career trajectory. Admittedly, MSO attendance would seem to benefit students earlier in their professional school tenures as opposed to those on the latter ends. Nevertheless, exposure to career perspectives not considered previously is superior to none at all.

The MSO lasted a sufficient amount of time. The presenters were cognizant of leaving enough room for audience engagement. Given that the featured sessions ran concurrently, recording them was helpful for attendees to review later. Hearing from professionals about the paths they traveled to open their own practices was enlightening. Gaining a better understanding of their “why” reinforced the importance of diligent preparation and networking over the course of a career. While no session can convey everything there is to know about a topic, listening to the journeys and business acumen gained over time solidified that others could experience similar achievements. The MSO’s branding was bold and unapologetic. As minority students remain underrepresented in healthcare programs and careers, hopefully, this will be a recurring event that participants regard as resourceful and restorative.

As with longstanding initiatives and newer ones, such as the MSO, each iteration presents a chance to make adjustments along the way. Healthcare students represent the promise of a replenished healthcare workforce. Therefore, gaining the Academy’s trust to provide feedback on the MSO from a student’s perspective is an honor. Below are some observations that may serve the Academy well as it looks towards improved MSO experiences over time. These comments come forth with full recognition that perspectives of other students who attended the MSO may conflict with those offered here.

Making the MSO Bigger and Better

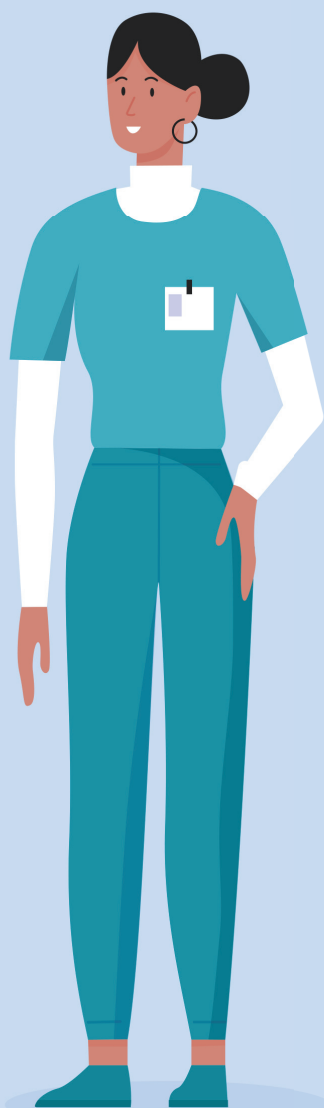
Mostly at the urging of the COVID-19 pandemic, a sizable number of workshops shifted to the virtual space. Differences of opinion abound toward acceptability and utility of virtual versus in-person sessions.⁵ There are advantages and disadvantages to both. Workshops facilitated solely online are at the mercy of sustained internet connections and requisite software.⁵ Some observers claim that virtual sessions lead to less engagement; possibly due to competition with participants’ multitasking.⁵ In-person workshops can be affected by budgetary constraints and optimal venue selection. However, the potential for human interactions without relying on electronic capabilities can resonate more with certain individuals.⁵ Nevertheless, experiencing the MSO virtually was beneficial. Online attendance removed the need for any travel plans and their associated costs. With a demanding pharmacy school schedule, virtual attendance prevented having to adjust responsibilities to participate. The virtual platform also allowed participants to interact with each other in real time using the chat box feature. These conversations, stemming from questions or comments in the chat box, likely would have been stifled during an in-person event due to participants typically being more interested in dialogue with presenters about the specific topic than peers.

Inherently, the presenters at the MSO had unique vantage points to share. However, the concurrent session format limited exposure to each of their perspectives. Therefore, something that could be of

value to future MSO iterations is embedding questions for each speaker to address relative to their journeys as students. In turn, after the MSO concludes, and participants receive the recording, attendees could compare presenters’ responses to the predetermined questions, along with other valuable insights offered. While there is an appreciation for where the presenters are in their careers today, students are often just as intrigued by the paths they traveled to get there.

Coupled with the MSO presenters’ professional credentials, their presence as underrepresented minorities aligned nicely with the event’s focus. Initiatives where minority students see themselves reflected in professionals employed in their aspiring career fields are empowering.⁶ Health professional schools and careers continue to have disproportionately low rates of minority individuals.⁶ In the absence of structured interventions that formally and informally make minority representation a priority, workforce diversity will remain suboptimal.⁶ Minority populations are overwhelmingly more impacted by chronic health conditions than their majority counterparts. As a result, it would seem advantageous to bolster the pipeline of minority professionals to increase access to healthcare for people who look like them.⁶ The inclusion of African American panelists to kick off the inaugural MSO ostensibly reflected most minorities in attendance. Nevertheless, perhaps future speaker participation could prioritize broader depictions of racial and gender minorities. Patients often find refuge in healthcare providers with whom they have commonalities. Similarly, students attending the MSO could likely feel better “seen” if some panelists were closer to their minority designations. As it may not be possible to capture every aspect of representation, increased minority depictions in society compel speaker selections to reflect the growth within the term *minority* as closely as possible. While the dynamics of presenters contributing to the MSO is important, of equal value is the student constituency that participated in the event. With a certain degree of prompting, students can work together to identify solutions to a variety of problems.⁷ Students’ creativity is often contagious, spreading among

While the dynamics of presenters contributing to the MSO is important, of equal value is the student constituency that participated in the event.



themselves and others, resulting in meaningful directions forward.⁷ Imploring student feedback also seems to impart a greater sense of responsibility and allegiance to the tasks at hand.⁷ Moreover, since students have not fully entered their projected career fields, their perspectives may be more optimistic than some seasoned professionals. The group of students who attended the MSO spanned the United States and possibly beyond, representing multiple educational disciplines. To better optimize students' capabilities, an idea for future MSOs is to create space for students to interact among themselves in a structured manner. A suggestion is to rely on panelists or other practitioners in attendance

to guide students through one or more healthcare dilemmas that routinely occur(s) in different practice settings. After presenting students with the situation(s), they could work with the facilitators to co-create strategies toward resolutions. Instituting a session during the MSO that appeals to students' critical thinking skills and their dependence upon each other's points of view should further invigorate their interest in pursuing healthcare professional roles. As impactful as the MSO content figures to continue being, presenting longitudinal service roles at the MSO that students can assume while in school could be influential as well. In light of challenges posed by the COVID-19 pandemic, some healthcare students sought novel ways to address their communities' plight.⁸ These students directed their passion for helping patients into virtual/remote responsibilities that made them active contributors to local improvements.⁸ Other healthcare students focused specifically on COVID-19-responsive "essential workers" to ensure that their needs were not neglected while they were busy helping others.⁹ This approach likely prevented additional healthcare professional burnout, positing a reciprocal care model that healthcare systems should esteem.

The MSO could also become an ideal venue to promote present and future areas for student assistance to the Academy. The MSO serves as a captive audience of students who have indicated a likelihood to assume more responsibilities through their attendance. Therefore, this may be an opportune way to connect students with the Academy's ongoing HIV-related activities. It also could in turn foster more organic and longitudinal mentor/mentee opportunities. In closing, it was wonderful that MSO attendance was free of charge. While there was no cost to attendees, gratitude extends to the organizers and panelists who invested a tremendous amount of their time to ensuring that the event was a success. Enacting suggestions presented here would likely necessitate lengthening the MSO's duration. As a result, a determination of how much longer the MSO could realistically last without diluting its effectiveness may temper some of the ideas proposed. A parting recommendation is to orchestrate periodic outreaches to student attendees to

remind them that the Academy is a viable resource available to attend to their different professional aspirations. **HIV**



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REFERENCES

1. Hughes GJ, Byrom NC. Managing student mental health: The challenges faced by academics on professional health care courses. *J Adv Nurs*. 2019;75(7):1539-1548.
2. Lynch J, Lungrin T. Integrating academic and career advising toward student success. *New Dir High Educ*. 2018;2018(184):69-79.
3. Huerta AH, Rios-Aguilar C, Ramirez D. "I had to figure it out": A case study of how community college student parents of color navigate college and careers. *Community Coll Rev*. 2022;50(2):193-218.
4. Sloan V, Haacker R, Barnes T, Brinkworth C. Long-term impacts of a career development workshop for undergraduates. *Bull Am Meteorol Soc*. 2017;98(9):1961-1967.
5. Kuhn KM. The constant mirror: Self-view and attitudes to virtual meetings. *Comput Hum Behav*. 2022;128(1):1-7.
6. Hagan AK, Pollet RM, Libertucci J. Suggestions for improving invited speaker diversity to reflect trainee diversity. *J Microbiol Biol Educ*. 2020;21(1):1-9.
7. Zhongling P, Hong J, Hu W. Interaction of the originality of peers' ideas and students' openness to experience in predicting creativity in online collaborative groups. *Br J Educ Technol*. 2019;50(4):1801-1814.
8. London M, Sanchez M. Becoming proximal in preclinical medical education: Community engaged learning addressing disparities in care. *J Health Care Poor Underserved*. 2020;31(4):104-113.
9. Engelson B, Robinson L, Coffey DS. Health professional education student volunteerism amid COVID-19: How a diverse, interprofessional team of health students created a volunteer model to support essential workers. *NAM Perspect*. 2020;2020(1):1-5.

The Hierarchy in HEALTHCARE

By Cleophas d’Auvergne, M.D. AAHIVS



HEALTH CARE IS A FUNDAMENTAL RIGHT according to the Office of the United Nations High Commission for Human Rights.¹ It is the one thing that promotes wellbeing and facilitates a productive life. Yet, for many racial and ethnic groups this right seems elusive owing to historical dynamics and socio-economic constraints that influence their natural environment and bodies. It is therefore important to trace the evolution of health inequalities and how many ethnic groups including African Americans find themselves in challenging situations exacerbated even more by the current COVID-19 pandemic.

According to Richard B. Duque in his understanding of the historical context of health disparities, the African American experience has been rather tortuous. He posits that a chronology of events has led to the potential for many individuals to have adverse health outcomes:

“First, housing discrimination which concentrated many African Americans in dense inner cities, often located in environmental toxic regions. These areas transformed over time into (2) unsafe neighborhoods, where domestic violence and street crime were normalized, and (3) food deserts that denied African Americans healthy dietary options. And then when impoverished African Americans developed physical and mental illness related to environmental carcinogens, unhealthy diets, and daily exposure to violence, they were often excluded from (4) quality health services available to the affluent.”²

The confluence of these social constraints acts as both an accelerant and trigger for negative health outcomes. Many African Americans and other ethnic groups within such challenging environments have little choice and simply learn to adapt and live with the vicissitudes of life.

Yet the social construct to influence this reality is framed by social determinants of health. These may be wide ranging and include the following:

- High poverty
- Unemployment
- Low levels of education
- Inadequate housing, over crowding
- Poor level of nutrition
- Domestic violence and rising crime rates
- Access to illegal drugs
- Unequal justice system

The more barriers that an individual encounters within their environment, the more difficult it becomes to prevail, and this limits their potential to enjoy a healthy and productive life.

In socio-economically depressed neighborhoods, limited access to pre-natal care and lack of follow up by women may lead to prematurity, low birth rates, and increases the risk of infant mortality. It is interesting that even with improved access to medical care under the Affordable Care Act, the disparities in health outcomes between African Americans and Whites are stark. African American women are three to four times more likely to die of pregnancy-related causes than White women. Moreover, the African American infant mortality rate is twice that for White infants.³

Other factors contribute to adverse health outcomes for minority populations. Access to illegal drugs in depressed neighborhoods makes children and adults vulnerable to drug addiction due to peer pressure and mental health challenges. Drug addiction marked by easy access to illegal drugs mixed with fentanyl is a key driver of the opioid crisis.^{4,5} Inadequate housing and overcrowding are risk factors for airborne infectious diseases such as tuberculosis and COVID-19. Crumbling infrastructure such as outdated pipes has contributed to lead poisoning in neighborhoods such as in Flint, Mich.⁶ The neurological sequela from lead poisoning has sentenced children to lifelong learning disabilities and behavioral problems. Socio-economic depressed neighborhoods also lack grocery stores with fresh fruits and vegetables that are termed food deserts. The lack of availability

Black mothers are **4x** more likely to die than white mothers.



of healthy foods in neighborhood stores pre-disposes citizens to poor choices of nutrition particularly the consumption of foods high in cholesterol and sugar resulting in chronic diseases such as obesity, diabetes, and hypertension. Hence, lack of adequate access to family health services, clean air, water, and food increases the vulnerability of residents in socio-economically challenged neighborhoods which in many cases have a larger proposition of minority populations.

COVID-19 Compounding the Problem

On top of all these constraining social determinants of health, COVID-19 has emerged as a sentinel event in our lifetime. As America met the milestone of one million COVID-19 deaths, one cannot ignore its societal impact. According to President Biden in a press statement, “One million empty chairs around the dinner table. Each an irreplaceable loss, each leaving behind a family, a community, and a nation forever changed because of this pandemic.”⁷ COVID-19 has indeed widened the cracks in the health-care system and increased disparities and inequalities. These inequalities have been demonstrated in the higher rates of deaths among Black and Latino Americans. According to the *Washington Post*, the COVID-19 pandemic has caused 1,023,916 excess deaths as of February 2022 and has disproportionately affected Black communities, 80-85 percent by the virus itself and 15 to 20 percent caused by disruptions from the pandemic.⁸

A study by the National Cancer Institute (NCI) further revealed that age-standardized all cause excess deaths in Black, as well as American Indian/Alaskan Native communities were three to four times higher than

White communities. Moreover in 2019, total mortality by population among Black men was 26 percent higher than in White men but in 2020 it was 45 percent higher. During this same period total mortality by population among Black women was 15 percent higher than White women. In 2020, that doubled to 32 percent.⁹ The COVID-19 pandemic has erased nearly two years from the average American life expectancy but for marginalized groups this has been worse. Black men’s life expectancies were reduced by three years during the first six months of the pandemic in 2020, and this is expected to linger for some time.¹⁰

Exploring Social Determinants

So, what may have contributed to these higher mortality rates in African American and Latino communities? Much of the answer lies in the social determinants of health including, housing inequality, high unemployment, poverty, and overcrowding. It is notable that many minorities live in multi-generational homes sharing houses because their pay is low and are also essential workers who cannot work from home. Some of the other factors include:

- Misinformation on vaccines
- Mistrust of the health care system
- Fear of contagion, deportation
- Provider shortage in communities of color
- High costs of doctor visits
- Lack of insurance coverage
- Health facility too far- lack of transportation
- Language barriers

Many individuals also had high rates of pre-existing chronic non communicable diseases including diabetes, hypertension, and obesity that pose a higher mortality risk for COVID-19. What was most concerning is the

loss of elderly parents who are often the leaders and cultural icons of the communities of color. Cultural legacy has been lost in many communities of color. Given the serious challenges that communities of color encounter it is incumbent that action be taken to help address this inequality. These include:

- Learning about systemic racism and health care inequality
- Developing educational forums or self-help groups to discuss challenges arising from health care inequality in your community and institution
- Become champions and advocate for DEIA based health services in educational training curriculums
- Raising public awareness through community and legislative action

It has become even more important that there is stronger representation of minority groups in the health care system to help alleviate and address the challenges arising from the hierarchy of health care. **HIV**



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REFERENCES

1. Office of the United Nations High Commissioner for Human Rights . Fact Sheet 31
2. Black Health Matters Too... Especially in the Era of Covid-19: How Poverty and Race Converge to Reduce Access to Quality Housing, Safe Neighborhoods, and Health and Wellness Services and Increase the Risk of Co-morbidities Associated with Global Pandemics.
3. Racism, Inequality, and Health Care for African Americans. The Century Foundation. December 2019.
4. What led to the opioid crisis—and how to fix it. Harvard Chan School of Public Health Feb 2022
5. Fentanyl Facts. CDC
6. Flint Water Crisis: Everything You Need to Know. NRDC 2018
7. Biden marks the approaching milestone of 1 million U.S. COVID-19 deaths. NPR 12 May, 2022
8. US ‘excess deaths’ during pandemic surpassed 1million with COVID-19 killing most but other diseases adding to the toll. Washington Posts February 2022
9. NCI study highlights pandemic’s disproportionate impact on Black, American Indian/Alaska Native, and Latino adults. National Institutes of Health. October 2021
10. Black male life expectancy hit hardest due to COVID. The Grio Feb 2022

Career Pathways in HIV

A PANEL DISCUSSION WITH THESE PROFESSIONALS:

During the Academy's Minority Student Open, participants were able to hear from four female African American HIV professionals on their career journeys. Each brought a unique perspective to entering the HIV field and their pathways to working with people with HIV. However, their passion for their patients and the desire to recruit more providers of color into HIV care is universal. Here is an excerpt from that panel discussion.



Michelle Collins-Ogle,
MD, FAAP, FPIDS, AAHIVS

Assistant Professor of Pediatrics
Division of Pediatric Infectious
Diseases

Einstein College of Medicine
Children's Hospital at Montefiore

Career Snapshot:

BS in biology from the University of Michigan. Residency in pediatrics and fellowship in pediatrics ID at Children's Hospital in Detroit. Went into academic medicine, but transitioned into general pediatrics to have more time with her children. She is back into both clinical care and academic medicine, now focuses primarily on HIV for children and adolescents, comprehensive gender affirming care, and prevention.



Aftan Dyson,
PharmD, BCACP, AAHIVP

**US Medical Director – Rukobia
ViiV Healthcare**

Career Snapshot:

BS in biology from the University of Tennessee at Chattanooga and her Doctor of Pharmacy from The University of Tennessee Health Science Center's College of Pharmacy. She did her PGY1 training in Kansas City, Missouri at Kansas City Care Clinic. Dr. Dyson was a MATEC Scholar and served on the Alabama AETC Faculty. She was a Specialty Pharmacy Manager at Walgreens, the pharmacy director at an Montgomery, Alabama Ryan White Clinic and is now a brand medical director at ViiV Healthcare.



Briana Journ e,
PharmD, MBA, CPh, AAHIVP

**Medical Science Liaison
The Janssen Pharmaceutical
Companies of Johnson &
Johnson**

Career Snapshot:

Dr. Journ e obtained her PharmD & MBA from Florida Agricultural & Mechanical University, where she also completed a 2 year Post-Doc Residency/Fellowship in partnership with the Florida Department of Health AIDS Drug Assistance Program. She served as clinical faculty for four years at FAMU before transitioning to industry where she is now an infectious disease medical science liaison for Janssen Pharmaceuticals.



Alanna Johnson-Steaple,
MSN, MS, ARNP-BC, AACRN,
CCC-SLP

Neighborhood Medical Center

Career Snapshot:

Ms. Johnson-Steaple began her career as a medical speech/language pathologist in pediatrics and geriatrics. She then went to nursing school to be a nurse practitioner in public and community health. She is now an NP with the Ryan White HIV/AIDS Program and primary care provider at the Neighborhood Medical Center in Tallahassee, Florida. She received her BA from the College of Charleston, her MSN degree from the University of North Carolina at Chapel Hill, and trained as a nurse practitioner at Florida A&M University.

How did you get involved in HIV care?

Dr. Collins-Ogle:



"I didn't choose this path. This path chose me! I thought I was going to do general pediatrics. But during my residency, I was taking care of babies that had HIV/AIDS. That changed my direction. I made a commitment at that time that I would stay in this fight and in this field so I could do everything I could to help these kids

who look like me survive this epidemic. I had no idea that 40 years later we would still be seeing new diagnoses."

Dr. Dyson:

"I started out thinking I wanted to be a pediatric clinical pharmacist. However, during my last year of pharmacy school, I did a rotation at an adult specialty care clinic in Memphis. The first week there, I had a patient come in who was having particularly bad side effects to his HIV medication. The side effects were causing him to have trouble performing his job. After listening to his concerns and conferring with my preceptor, I changed his medication. He came back a few months later before my rotation was over and he was a totally different person! We cried together because he said for the first time, someone had listened to him. He said he was actually treated like a person instead of a number. It was at that moment that the entire trajectory of my career changed. Everything after that was about HIV and prevention for me."

Dr. Journée:



"During my two year post-doc residency with Florida A&M University and the Florida Department of Health, I was able to work as the AIDS Drug Assistance Program pharmacist. That's when I knew I was going to stay in HIV. After working with the patients and the providers, I just felt like HIV was home. I loved

HIV because I loved the fact I was helping people who looked like me. Representation is really important."

Ms. Johnson-Steaple:

"I started out my career in the speech and hearing sciences. I worked as medical speech and language pathologist for about 25 years before going back to nursing school to become a nurse practitioner. I did this because I loved public and community health! When your community is healthy, there's nothing else like it. This setting automatically puts you into the advocacy world because you begin to see the vulnerable populations. I recognized that some people don't have a voice. I wanted to be their voice."

As a student considering HIV as a career, is it important to know exactly in what area you'd like to specialize?

Dr. Collins-Ogle:

"No. Early on, I didn't see myself doing many of the things I'm doing now. Not having your plan already made and not really knowing what exactly you want to do is not a bad thing. No matter what your background, there are so many options in HIV that you can take. It doesn't even have to be in a clinical role. Think outside the box that fits your personality and most importantly, find your passion."

Ms. Johnson-Steaple:



"It's important to educate yourself on the other disciplines within HIV care. For instance, cognitive impairment issues is a big area of concern.

People who are working with language support, physical and occupational therapists; these are all vital components of someone's comprehensive care. Members of these professions need to be educated on the medications and issues related to HIV if they are working within populations disproportionately affected. It's OK to look outside of the clinical and medical field. The HIV care team is a large group of people!



Can you do traditional care and academia?

Dr. Collins-Ogle:

“Absolutely. I didn’t realize I needed both types of stimulation. I need to take care of people. Taking care of people is what keeps me going every day. You never know what you’re going to get everything. But my path also lead me to academics and I love that. If you are interested in both of these areas, YES, go for it! There are not a lot of women or providers of color in academic. You need to be voice for your population. There is definitely a space for your and a need for you as a person of color. If you are working in an academic instruction, get involved in research. It doesn’t matter if you are a nurse, nurse practitioners, physician assistant or pharmacist. You can definitely find those opportunities to participate in research while still doing clinical practice. In fact, all the clinical work gives you access to potential participants for clinical trials. It is extremely important for black and brown people to be involved in clinical trials and if you are the one asking, someone they trust, they are more likely to participate.”

Dr. Dyson:

“I agree. I have worked on two clinical trials and found that it is essential to have people of color involved with the research at every level. You are looking out for your own community which is meaningful!”

Ms. Johnson-Steaple:

“Consider unique research angles too. For instance, how does dementia affect people with HIV? This type of outside-the-box thinking will lead to even more unique research opportunities.

What would you do differently in your career?

Dr. Collins-Ogle:

“I wouldn’t change anything. Every experience I’ve had has led me to where I am now. I do everything all over again.”

Dr. Dyson:



“I feel the same way. This is the path I was meant to go on. In each of the positions I’ve been in, I’ve learned something that has prepared me for the next role. And that’s not just clinically. I’ve learned how to work with different people and different personalities. I’ve carried these learnings with me. All things have prepared me for what I’m doing now.”

Ms. Johnson-Steaple:

“I think you never truly understand why things turn out the way they do. But when I look back on my career, there’s a certain level of peace at how things turned out.”

Dr. Journée:

“As a student, I wish I would have done more internships with different types of entities. In school, they teach traditional lessons for your career paths. But as a student, I think it’s important to participate in other areas outside of your clinical training, such as public policy. When you get involved in those non-traditional areas, you can better understand your true worth. As students, it’s important to get a broad base of knowledge about the industry you’re entering.”

What resources would you recommend for students or professionals just entering the HIV care field?

Ms. Johnson-Steaple:

“The American Academy of HIV medicine is a wonderful springboard for all types of resources. You also come into contact with so many different members of the HIV care team. This is great for mentorship and sharing best practices.”

Dr. Collins-Ogle:

“I agree. The Academy is wonderful. But also look into other HIV-related organizations such as HIVMA and the Association of Nurses in AIDS Care (ANAC). They are a great group and you don’t have to be in the nursing profession to be a member.

Dr. Journée:

“Professional organizations are extremely important. And also consider national medical organizations and associations. Think about healthcare as a whole, not working in a silo. It’s very inter-professional. Get involved with all sorts of professional organizations for career advancement, learning opportunities, leadership skill development and networking.”





THE NEED FOR Racially Diverse Pharmacists IN HIV CARE

By Hope E. Campbell, PharmD, BCPS,
and Angela C. Riley, PharmD

IN 2019, THE US DEPARTMENT OF HEALTH AND HUMAN SERVICES (HHS) launched the Ending HIV Epidemic (EHE) initiative, which had a bold aim to decrease new HIV transmissions by 75 percent by 2025 and by 90 percent by 2030.¹ Healthy People 2030 also established objectives regarding HIV that mirrored those of the EHE.² These national goals require an “all hands on deck” approach, and pharmacists as members of the healthcare team are well positioned to participate. EHE intervention strategies are focused on diagnosis, treatment, and prevention. At the frontline are specialized pharmacists working in HIV-specific care environments who have demonstrated their proficiency and expertise as HIV Pharmacists with the AAHIVP credential from the American Academy of HIV Medicine.

Over 30,000 people had a new diagnosis of HIV in 2020, with a disproportionate burden of disease occurring in men, those with male-to-male sexual contact, and Black or African American persons. More than half of the new cases occurred in people aged 13-34.³ The persistent statistics are partly due to the impact of social determinants of health on minoritized populations. A long history of residential segregation, lack of access to quality health care, and psychosocial stress contribute to the observed health disparities.⁴

Increasing the number of people with HIV who are diagnosed as soon as possible after transmission is a target that pharmacists can impact. Student pharmacists and practitioners can be certified to perform HIV testing. The Student National Pharmaceutical Association (SNPhA), which is the student arm of the National Pharmaceutical Association, has the Remember the Ribbon initiative.⁵ This initiative aims to reduce the number of new HIV transmissions through awareness, prevention, and education. The local SNPhA chapter at Belmont University College of Pharmacy in Nashville, Tenn., is an excellent example of this initiative. Students partner with a local agency called Nashville Cares to become certified HIV testers who then prioritize testing in underserved populations within the city.

The Pharmacist Role in PrEP Uptake

Pre-exposure prophylaxis (PrEP) is a proven strategy for preventing new HIV transmissions. Yet, the success of PrEP or post-exposure prophylaxis (PEP) is highly dependent upon patient acceptance and adherence. Pharmacists are trained to counsel, improve patient adherence, motivate, monitor, and manage the patient to ensure the achievement of clinical care goals.⁶ As such, it is imperative that pharmacists are equipped and authorized to independently provide PrEP, PEP, and HIV testing across the country. In California, for example, the passage of the Senate bill, SB 159, allows pharmacists to provide medications for PrEP and PEP without a prescription from a physician. Schools and Colleges of Pharmacy or educational organizations (e.g., AAHIVM or AETCs) can provide the training required to participate in this program. Several states, such as Oregon and Illinois, have also passed or are in the process of passing similar legislation because pharmacists are able to expand PrEP and PEP access to populations missed by the traditional healthcare model.⁷

Pharmacists are one of the most accessible members of the healthcare team with 90 percent of Americans living within five miles of a community pharmacy.⁸ Therefore, the community pharmacy is ideal for pharmacists to extend access to HIV care. However, the presence of a pharmacist and the availability of HIV-related services such as PrEP and PEP is not enough. Patients want to engage with a provider with whom they can communicate and trust.⁹ Systemic racism and years of documented abuse of minoritized populations at the hands of medical professionals have left a legacy of medical mistrust among Black Americans.¹⁰ This population is less likely to be users of PrEP despite the high burden of risk that they experience.¹¹ The resultant health disparities experienced by minoritized people threaten the attainment of EHE goals.

The Importance of Diversity

One of many approaches to decreasing health disparities among minoritized communities is to increase the racial concordance between provider and patient. Black patients are more likely to disclose health information and follow medical recommendations if their medical provider is of the same race.¹² Racial concordance improves time spent together, shared decision making and medication adherence. It is possible that because of a shared history, culture and minoritized status, Black patients are more likely to trust and have deeper communications with their Black doctors. The same phenomenon is expected in pharmacist-patient relationships though this has been less studied. Though there are numerous benefits to patient-provider racial or ethnic concordance it is a challenge to achieve given the low representation of minoritized doctors in the medical workforce. Incorporating healthcare personnel, such as pharmacists, who are members of a minoritized group in care teams is a possible though less than ideal solution.

Within the profession of pharmacy, all minoritized groups except for Asian persons are under-represented. This pattern is also reflected within schools and colleges of pharmacy. Using the COVID-19 pandemic as a model, to meaningfully impact the Black and Brown communities, institutions must increase the representativeness of

The need for pharmacists with advanced or specialized skills to serve the rapidly growing population of ethnically and racially diverse patients is at a critical level. However, the observation is that student pharmacists from minoritized backgrounds are less likely to obtain residency or fellowship training opportunities.

their workforce and support initiatives to diversify the workforce pipeline. The need for pharmacists with advanced or specialized skills to serve the rapidly growing population of ethnically and racially diverse patients is at a critical level. However, the observation is that student pharmacists from minoritized backgrounds are less likely to obtain residency or fellowship training opportunities. The American Society of Health System Pharmacists (ASHP), which oversees and accredits residencies, does not report actual race and ethnicity data for residencies despite calls to do so for the last 20 years. This lack of commitment to transparency blunts the first step towards change which would be to know the facts. The social activist James Baldwin said, “not everything that is faced can be changed, but nothing can be changed until it is faced.” Black and Hispanic graduates appear to hit a glass ceiling that blocks their mobility into advanced training opportunities available through residencies and fellowships.

Similarly, numerous solutions for increasing the number of underrepresented minority candidates in the pipeline to pharmacy faculty have been proposed.¹³ These include changes in the recruitment of residency candidates, provision of funding support, enhanced systems of accountability, and accreditation standards that reflect the profession’s commitment to diversity, equity, and inclusion. Acknowledgment of, and education about, the impact that systemic and structural racism has on patients, students, colleagues, and





organizations is essential for change to occur.

Enrollment data from schools and colleges of pharmacy in Fall 2019 reveal a student body of almost 61,000 students. White and Asian students account for 48 percent and 25 percent of that enrollment, respectively. Underrepresented minoritized (URM) students account for only 17 percent despite their representation at 33 percent in the general population. The representation of URMs in residency and fellowship programs associated with a school or college of pharmacy is 12.6 percent and 14.5 percent, respectively. More glaring is the lack of Black residents and fellows at only 7.5 percent and 12.3 percent, respectively, in College of Pharmacy/School of Pharmacy-associated programs.

According to the 2019 report from the National Pharmacist Workforce Study, 4.9 percent of the 5400 pharmacists who responded self-identified as Black.¹⁴ Of these pharmacists, 80 percent were working either full or part-time. Due to the small sample size, there is a concern for non-responder bias even as it aligns with anecdotal evidence that the pool of Black pharmacists is lower than that of their representation in the general population.

Moreover, pharmacists in the workforce designated as HIV pharmacists is another means for improving concordance as a strategy to reach target populations in the epidemic. Based upon current data, of the 1680 pharmacists currently credentialed by

AAHIVM, 11 percent identify as Black and 4.2 percent as Latinx.

Black patients seeking care from a racially concordant pharmacist, particularly an HIV pharmacist, are likely to find that search challenging. The implications for HIV care are that despite accessibility to a pharmacist, their lack of racial and ethnic diversity means that patients from minoritized populations will have a decreased likelihood of being served by someone that looks like them or with whom they feel more comfortable. To effectively end the HIV epidemic, we must prioritize the creation of educational pathways and post-graduate training opportunities for workforce diversification in STEM, with particular emphasis on pharmacy practice. Activities encouraging specialization among the currently licensed pharmacists will further increase patient access and expand pharmacists' role in public health, especially regarding the HIV epidemic. **HIV**



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REFERENCES:

1. HIV.gov. What is Ending the HIV Epidemic in the US? Overview. <https://www.hiv.gov/federal-response/ending-the-hiv-epidemic/overview>. Accessed May 27, 2022.
2. Healthy People 2030. <http://health.gov/healthypeople/objectives-and-data/browse-objectives>. Updated January 15, 2021. Accessed May 25, 2022.
3. Centers for Disease Control and Prevention. HIV Surveillance Report, 2020, Vol 33. <https://www.cdc.gov/hiv/library/reports/hiv-surveillance.html>. Accessed May 25, 2022.
4. Centers for Disease Control and Prevention. Social determinants of health among adults with diagnosed HIV infection, 2019. HIV Surveillance Supplemental Report 2022;27(No. 2). <http://www.cdc.gov/hiv/library/reports/hiv-surveillance.html>. Published March 2022. Accessed May 25, 2022.
5. SNPhA initiatives. Remember the ribbon. <https://snpha.org/page/Initiatives>. Accessed May 24, 2022.
6. Bruno C, Saberi P. Pharmacists as providers of HIV pre-exposure prophylaxis. *Int J Clin Pharm*. 2012;34(6):803-806. <https://doi.org/10.1007/s11096-012-9709-0>
7. Pharmacist Prescribed PrEP and PEP in Oregon. Oregon.gov. https://www.oregon.gov/oha/PH/DISEASES/CONDITIONS/HIVSTD/VIRAL/HEPATITIS/HIVPREVENTION/Documents/PrEP%20and%20PEP/Overview_of_Pharmacist_Prescribed_PrEP_and_PEP_in_Oregon.pdf. Accessed May 27, 2022.
8. National Association of Chain Drug Stores. Re: Health Care Workshop, Project No. P131207. http://www.nacds.org/ceo/2014/0508/supplemental_comments.pdf. Accessed May 25, 2022.
9. Kelling SE. Exploring Accessibility of Community Pharmacy Services. *Inov Pharm*. 2015;6(3): Article 210. <http://pubs.lib.umn.edu/innovations/vol6/iss3/6>. Accessed May 25, 2022.
10. Riley AC, Campbell H, Butler L, et al. Socialized and traumatized: Pharmacists, underserved patients, and the COVID-19 vaccine. *J Am Pharm Assoc* (2003). 2021;61(6):e2-e5. <https://doi.org/10.1016/j.japh.2021.05.020>
11. Mayer KH, Agwu A, Malebranche D. Barriers to the Wider Use of Pre-exposure Prophylaxis in the United States: A Narrative Review. *Adv Ther*. 2020;37(5):1778-1811. <https://doi.org/10.1007/s12325-020-01295-0>
12. Shen MJ, Peterson EB, Costas-Muñiz R, et al. The Effects of Race and Racial Concordance on Patient-Physician Communication: A Systematic Review of the Literature. *J Racial Ethn Health Disparities*. 2018;5(1):117-140. <https://doi.org/10.1007/s40615-017-0350-4>
13. Campbell HE, Hagan AM, Gaither C. Addressing the Need for Ethnic and Racial Diversity in the Pipeline for Pharmacy Faculty. *Am J Pharm Educ*. Oct 2021, 85 (9) 8586; DOI: <https://doi.org/10.5688/ajpe8586>
14. Doucette WR, Witry MJ, Arya V, Bakken BK, Gaither CA, Kreling DH, Mott DA, Schommer JC. Final report of the 2019 national pharmacist workforce survey. https://www.aacp.org/sites/default/files/2020-03/2019_NPWS_Final_Report.pdf. January 15, 2020.



Exposing the Real Truth

Why women of color are underrepresented in the healthcare hierarchy

By Michelle Collins-Ogle, M.D., FAAP, AAHIVS

AS THIS COUNTRY FACES THE CHALLENGE of addressing health disparities that have existed for four hundred years in the African American community, we can't ignore what research has shown: For Black people, having Black physicians leads to improved health outcomes.¹ In addition, studies indicate that racial and ethnic minority physicians are more likely to practice primary care and serve in underserved communities than their White counterparts.² Similarly, we cannot ignore the role gender plays in healthcare and the belief women physicians are not as smart as their male counterparts.² In fact, the belief that women healthcare professionals are inferior to their male counterparts is deeply rooted and pervasive in our society. In many professional contexts women's work roles and competences are more likely to be devalued.³

Sadly, gender preferences favoring men also exist among patients' evaluation of clinical performance: Many patients do not give female physicians the credit they deserve.³ As a woman of color, we face sexism and racism—"double discrimination." We are often overlooked for high level administrative positions or not considered for positions of which we are more than capable. A favorite diss is having an idea which is silenced only to be applauded when a White man repeats the exact same words. Ever had that happen to you? Here's a conclusion that won't surprise you: Black and Brown women are still seen as intellectually inferior to their White female and male counterparts.

African American women began practicing medicine as midwives and herbalists.⁴ Formal training and recognition of African American women began in 1858 when Sarah Mapps Douglass was the first Black woman to graduate from a medical course of study at an American University.⁵ After studying at New England Female Medical College, in 1867 Rebecca Crumpler became the first African American woman to earn a medical degree in the United States.⁶ At the time she was enrolled in medical school, there were 300 women physicians in the U.S., not one was Black. After graduation, she joined other Black physicians caring for freed slaves who would otherwise been without access to medical care. Dr. Crumpler joined the Freedman's Bureau Hospital where she experienced intense racism working as a Black "Doctress" in the South.⁶ From this came





EXPOSING THE REAL TRUTH

what is thought to be the first medical book written for women by a Black woman physician, *A Book of Medical Discourses: In Two Parts*, published in 1883. The first part covered illnesses of children from infancy to five years.⁶ Dr. Crumpler is one of so many accomplishments of African Americans left out of mainstream American history.

African American women have been invisible throughout the history of medicine, while making history. The late ophthalmologist, Dr. Patricia Bath, is the first African American female physician awarded a patent for a medical invention. She invented a new device and technique for cataract surgery known as laserphaco. In fact, Dr. Bath is one of two Black women inducted into the National Inventor's Hall of Fame and was also the first woman appointed chair of ophthalmology at a U.S. medical institution (UCLA) in 1983.⁷ Dr. Helen Dickens, is the first Black woman admitted to the American College of Surgeons. The only Black woman in her graduating class, Dr. Dickens earned her M.D. from the University of Illinois in 1934 and completed her internship at Provident Hospital in Chicago and in 1945, she was the first Black woman to be board certified in obstetrics and gynecology. Five years later, she became the first Black woman admitted as a fellow of the American College of Surgeons.

“Angry Black Woman,” “Stupid Bitch,” “You’re here. Thank Affirmative Action.”

As said by the Greenlining Institute, “Given the numerous inequities that disproportionately impact marginalized communities, especially women and people of color, the health sector must elevate the voices of physicians who represent the intersection of these identities—women physicians of color.” Yet, women physicians of color continue to face barriers and challenges that inhibit their ability to be community leaders. To improve the quality of patient care for the most vulnerable and underserved communities, medical schools, hospitals, and all health institutions must empower women of color to achieve their potential as health equity champions within the healthcare system. Visit www.greenlining.org for more information.

Black Americans represent 13 percent of the population but only four percent of approximately 877,000 active physicians in the workforce. Even worse, Black female doctors represent only two percent of physicians. In 2017, The American Association of Medical Colleges (AAMC) celebrated the fact that women now comprise over 50 percent of medical students. According to the AAMC, in 2018 and 2019, women matriculants outnumbered men. Now, for the first time, women make up the majority of students in U.S. medical schools. According to the AAMC's 2019 Fall Applicant, Matriculant and Enrollment Data Tables, women accounted for 52.4 percent of medical school matriculants this academic year. A long-awaited change and way overdue.

A Long Way to Go

Even with advances in the number of women entering medical school, women of color remain underrepresented at every level of the healthcare hierarchy. Black women are especially absent in leadership positions, academics, and in the C-suite, all-important decision-making positions. Black women have tremendous hurdles placed in front of us making it difficult to reach equity with our male counterparts.



According to the AAMC report *Diversity in Medicine: Facts and Figures 2019*, “medical school faculty continued to be predominantly White (63.9%) and male (58.6%).” The same holds true for practicing physicians, where the majority are also White (56.2%) and male (64.1%). According to AAMC 2019 faculty data, women held only 25.6 percent of full professorship and 15.9 percent of clinical sciences permanent department chairs.

Why? Well, it's complicated. The race and gender pay gap remains a barrier for females and African Americans, according to Medscape's 2018 compensation report. Overall, Black physicians earned \$50,000 per year less than White physicians (\$308,000 for White versus \$258,000 for Black). It's far worse for Black women physicians, earning nearly \$100,000 less than Black male physicians (\$322,000 for Black men versus \$225,000 for Black women). For African American women, bias is definitely a contributing factor. Far too often we are seen as “angry Black women” without the temperament to be academic leaders. Even our hair is a barrier to advancement; wearing braids or being too thick, and kinky, is seen as “not looking like a doctor” or “unprofessional.”

Speaking of perception and bias, recall the Delta Airlines incident a few years ago:

Women physicians of color continue to face barriers and challenges that inhibit their ability to be community leaders. To improve the quality of patient care for the most vulnerable and underserved communities, medical schools, hospitals, and all health institutions must empower women of color to achieve their potential as health equity champions within the healthcare system.

Tamika Cross, M.D., a Black physician who says she offered to provide medical assistance to an ill passenger aboard a Delta Air Lines flight. After asking if there were qualified passengers who could help, a White flight attendant told Dr. Cross to put her hand down because she was “looking for actual physicians or nurses or some type of medical personnel.” The flight crew “didn’t have time” to talk to Dr. Cross, who was a fourth-year OB/GYN resident at the University of Texas Health Science Center at Houston. Many Black female physicians shared their stories of being mistaken for nurses, physician assistants, dietitians, hospital food service employees, and housekeeping staff (often after introducing themselves as doctors). In addition, implicit bias doesn’t allow some people to see beyond their preconceived notions even when the facts should be obvious.

I had the honor of working with and being taught by Dr. Alexa Canady, the first African American woman neurosurgeon in the U.S. in 1981. Dr. Canady engaged in research which led to the invention of a programmable antiphon shunt to treat hydrocephalus. With such impressive accomplishments, Dr. Canady was teased by White physicians about her dialect. She was told didn’t sound “White enough” or parents of children she performed surgery on didn’t believe she could be the neurosurgeon, demanding to see the “real doctor.” Throughout our history, Black women have persevered by confronting and standing up to racism and misogyny. We endure being called, “bitches,” being told, “you’re not a real doctor,” and “you need to know your place.” The list goes on. Dr. Mae Jemison was the first Black woman in space. Dr. Velma Scantlebury was the nation’s first Black female transplant surgeon. Family physician Regina Benjamin, M.D., M.B.A., became the first Black woman and the first person younger than 40 to be elected to the AMA Board of Trustees in 1995, and later U.S.

Surgeon General. Pediatrician Dr. Joycelyn Elders became the first Black person and only the second woman to lead the U.S. Public Health Service and became the first Black physician to be appointed Surgeon General in 1993. Dr. Elders later stated that “you can’t be what you don’t see” when talking about young girls and boys going into medicine. These strong, Black women serve as role models to all women and allow us to see ourselves as leaders, fighters and champions.

Success for African American women can be costly. Many successful people may suffer from imposter syndrome which is defined as a collection of feelings of inadequacy that persist despite having success.⁸ This syndrome hits women of color especially hard. Many Black women suffer from chronic self-doubt even though we are clearly competent. No matter how hard we work, how successful we may be, we just don’t feel “good enough” or like we aren’t deserving of praise for a job well done. In fact, women of color, especially Black LGBTQIA+ women are more likely to experience imposter syndrome because we don’t see many people who look like us succeed in our respective areas of expertise. Experiencing chronic systemic racism and oppression is a major contributing factor in how we overcome (or not overcome) this syndrome. Being told, you aren’t good enough, you’re lesser than or can only succeed because you benefit from affirmative action, become internalized narratives which can unconsciously become facts.

Women of Color Unite!

We must continue to address the disparities and barriers placed in the face of Black women. We need to recognize implicit bias exists and should be incorporated as a vital component in medical schools, and higher institutions of learning. We must advocate for equal pay and encourage mentorship, social, and cultural support.

It’s not hyperbolic to say Black women endure micro-aggression and hostility regularly. Supreme Court Justice, Ketanji Brown Jackson endured vicious, and vile personal attacks during her confirmation hearing. She couldn’t be the “angry Black woman.” Displaying any emotion would certainly have cost her the seat on the SCOTUS. She faced every attack with poise and intellect: She had no choice! She couldn’t have had an emotional outburst with yelling and talked of how much she likes beer like Brett Kavanaugh. Justice Brown Jackson persevered. Women of color continue killing the game! Kamala Harris, our first Black, South Asian and Jamaican female Vice President continues to be an exemplar in courage and strength as she endures daily micro-aggression, and racist rants by privileged White men. Don’t worry, she knows how to succeed and gain strength in the face of racist misogynistic language. And finally, huge congratulations to Karine Jean-Pierre, the first Black woman and first openly gay person to serve as White House Press Secretary. The verbal, bigoted attacks will come, I have no doubt. But like many others before her, she’s got this! **HIV**



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REFERENCES

1. Boulware LE, Cooper LA, Ratner LE, LaVeist TA, Powe NR. Race and trust in the health care system. *Public Health Report* 2003 July-Aug; 118(4): 358-365.
2. Wiltshire J, Allison JJ, Brown R, Elder K. African American women perceptions of physician trustworthiness: A factorial survey analysis of physician race, gender and age. *AIMS Public Health*. 2018; 5(2): 122-134
3. Cohen PN, Huffman ML. Occupational segregation and the devaluation of women’s work across U.S. Labor Markets. *Soc Forces*. 2003;81:881-908.
4. Moldow, Gloria (1997). “Brown, Mary Louise”. In Hines, Darlene Clark (ed.). *Black Women in America: Science Health and Medicine*. New York
5. Bacon, Margaret Hope (2001). “New Light on Sarah Mapps Douglass and Her Reconciliation with Friends.” *Quaker History*. 90 (1): 28-49.
6. Changing the Face of Medicine. National Library of Medicine.
7. Murphy B, Haefner M. 21 Medical Pioneers to Celebrate This Black History Month. Feb 3, 2017.
8. Jessica Bennett. How to Overcome Imposter Syndrome. *The New York Times*

By Theresa Mack, M.D., MPH, FACP, AAHIVS

IN THE TITLE OF HER OP-ED IN *THE WASHINGTON POST*, Dr. Michelle A. Williams, epidemiologist said, “Racism is killing Black people.¹ It’s sickening them, too.” As a primary care physician working in New York City for the past 30 years, I can say with absolutely certainty, she’s right.

Racism is killing us.

As a physician, I have a closer view than most of the truth of this statement—of how exactly racism is killing my patients. The institution of racism is so insidious, so pervasive, that infects all that we do unless we make a conscious effort to combat it. Racism doesn’t require bad actors or hateful people to flourish. Well-meaning people can be agents of racism simply by allowing our system to function as it currently does.

Racism is a public health crisis. And until the institution of structural racism is addressed and our structurally racist policies are changed, healthcare disparities will continue to persist in the United States.

Why focus on institutional racism?

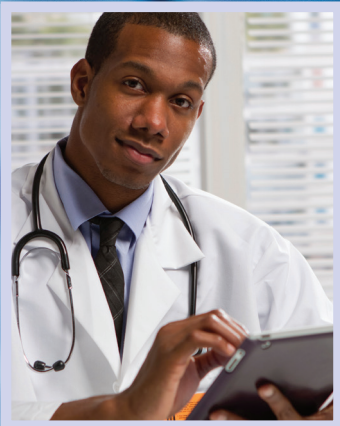
Dr. Camara Jones, an epidemiologist and family medicine physician specializing in the effects of racism on health disparities, has developed several prescient analogies that answer this question beautifully.

In her gardener analogy, Dr. Jones introduces us to a gardener with two plots of land: one with rich, fertile soil, and one with hard, rocky, nutritionally-deficient soil.² The gardener has two types of seeds: one that produces red flowers, and another that produces pink flowers. Due to her preference for red flowers, the gardener decides to plant the seeds for red flowers in the rich, fertile soil, and as an afterthought, plants the pink flowers in the poor, infertile soil.

As you might expect, the red flowers bloom beautifully, while the pink flowers struggle. At the end of harvest season, the gardener looks at her two plots of land and thinks to herself, “Whew! I knew there was a reason I preferred red flowers.”

The gardener analogy works beautifully as an allegory for structural racism. The pink flowers won’t start to grow until the structural reason for their stunted growth—their poor, nutritionally deficient soil—is addressed. But if you aren’t investigating for reasons for the disparity—aren’t actively searching the reasons for the poor growth of the pink flowers—you might miss them. You might just come to the conclusion that pink flowers don’t grow as well as red flowers do.

THE ROLE OF CLINICIANS OF COLOR IN ADVOCACY



Racism produces a rigged system, and structural racism is the mechanism that institutionalizes the inequity in this system. In his piece for HealthCity entitled “The Physician’s Role in Racial Equity,” Dr. Jonas Attilus describes racism as a major social determinant of health, because racism is “a system that distributes unequal access to resources, power, and privilege.”³

When we define racism this way, we can see that it is much more far-reaching and pervasive than just interpersonal instances of bias or micro-aggressions. Racism is also the system that underlies the bias, and which gives it power. Racism is a public health crisis, and it is the fundamental cause of adverse health outcomes and inequity in patients of color.

Manifestations of Racism in the Medical System

Every seven minutes, a Black person dies prematurely. Put another way, more than 200 Black people die every day who would not die if the health of Black and White patients were equal.⁴

In 2003, the Institute of Medicine published the results of a comprehensive and exhaustive study that assessed the extent of disparities experienced by minorities in the United States and explored possible reasons for those disparities. In short, this study found that even after correcting for insurance status, income, education, and severity of conditions, non-White people in the U.S. experience a lower quality of medical care than White people, across all specialties.⁵ To say this slightly differently, if you are a Black person in the U.S. with a disease, chances are you’re receiving worse care than you would if you were a similarly insured, similarly paid, similarly educated, and similarly sick White person.

I could go on for more pages than I have space for about the effects of racism in medicine, but for the sake of space, I’ll focus specifically on the intersections of racism and HIV care.

Black people make up 12 percent of the U.S. population, but in 2019, they accounted for an astounding 42 percent of the new HIV diagnoses.^{6,7} Once diagnosed with HIV, Black

people are less likely to be linked to care, retained in care, receive antiretroviral treatment and achieve adequate viral suppression.⁷ Finally, and most heartbreakingly, Black people are more likely to die from HIV than people from other ethnic groups.⁷

But how are these outcomes related to structural racism?

As you know, people with HIV who are homeless or lack stable housing “are more likely to delay HIV care and are less likely to access care consistently or to adhere to their HIV treatment.”⁸

In the U.S., Black people make up a disproportionate percentage of people experiencing homelessness.⁹ Black people are 12 percent of the general population but make up 40 percent of people experiencing homelessness. One in 20 White people will experience homelessness at some point throughout their lifetime. For Black people, that number is one in six.¹⁰

The Role of Clinicians of Color in Advocacy

Before writing this piece, I made the conscious choice to tailor my writing towards a specific target audience. I chose to write this piece as a letter addressed to clinicians of color. As people who work in and navigate the medical system daily, but who are also personally negatively impacted by racism, we have a personal, vested interest in making the healthcare system more anti-racist. Clinicians of color occupy a unique position in the healthcare system, and one that we can leverage to address racial disparities.

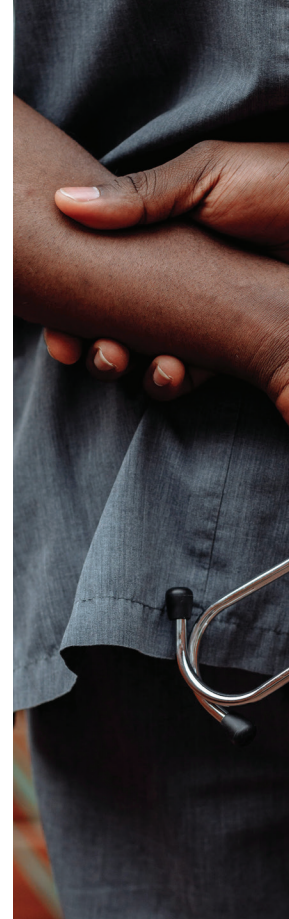
I see three major categories of ways that we can operate as agents of anti-racism.

1) Being an anti-racist clinician to patients

The first is in our capacity as clinicians, where we can use our medical knowledge and our familiarity with the inner workings of the medical system to advocate for change for our patients.

The role of clinicians of color in advocacy is to address the racism that our patients experience on a daily basis. We can leverage our medical expertise and our vested interest in dismantling racism to work to address structural inequities. In her article for Health Affairs, Dr. Ayotomiwa Ojo states, “Clinicians must leverage their expertise to promote the overall health of their patients. Physician advocacy is not elective, but essential to providing quality care and dismantling structural inequities that contribute to poorer health in vulnerable communities.”¹¹

The role of clinicians of color in advocacy is to not remain silent about racial injustice, but to take action against racism. Desmond Tutu famously said, “If you are neutral in situations of injustice, you have chosen the side of the oppressor.” This rings especially true for clinicians. By remaining neutral, by not being actively antiracist, we allow ourselves to become complicit in the institutionalized racism of the medical system. We should, as Dr. Attilus says in his piece for HealthCity, “make it clear that there will be zero passes for racist behaviors and policies, whether in our hospitals or their communities.”³





Racism is much more far-reaching and pervasive than just interpersonal instances of bias or micro-aggressions. Racism is also the system that underlies the bias, and which gives it power. Racism is a public health crisis, and it is the fundamental cause of adverse health outcomes and inequity in patients of color.

2) Being an antiracist mentor to medical trainees

The next is in our capacity as mentors to trainees. As people who have successfully navigated professional training in medicine and nursing, we are in prime positions to pave the way for future generations of medical professionals.

The role of clinicians of color in advocacy is to encourage and mentor students. Be a role model for them, and help them understand that as clinicians, we need to assist in solving the entire problems of the patient, not just their medical maladies.

The role of clinicians of color in advocacy is to help medical trainees of color navigate the racism of the system. A 2015 study published in the Journal of the American Medical Association (JAMA) found that Black medical graduates in U.S. M.D. schools were three times as likely to go unmatched as White medical students.¹² Even after correcting for Step 1 score, Black medical graduates were still one and a half times as likely to be unmatched. The persistence of the disparity after correction for Step 1 score is an indication that there is underlying structural racism to be addressed.

3) Being an anti-racist member of society

Finally, we have capacity to act as advocates not just in our capacity as physicians, but also in our capacity as citizens, and as members of our communities.

The role of clinicians of color in advocacy is to expand our sphere of influence outside the medical arena. Many of the structures upholding racism are bigger and more pervasive than even the healthcare system, and require fixes at a larger scale, such as the level of government. We can advocate for our patients by supporting governmental policies that benefit public well-being and address social issues such as the lack of medical insurance, underinsurance, and poverty.

How you can act as an Advocate In your practice as an anti-racist clinician to patients:

1. Identify practices in your own health system that are contributing to structural racism and work to address them.

Examples of practices might include a) clinical algorithms that are based erroneously on race, such as eGFR (estimated Glomerular Filtration Rate), or b) teaching *race* as a risk factor instead of *racism* as a risk factor, or c) embedded differences in the ways that patients with private insurance vs. public insurance are treated. It may be difficult to change this as just one person, so it is important to do this work with other people who share anti-racism as a value.

2. Become active in medical advocacy organizations.

There is power in numbers, and the good that you can do will be multiplied when you work with other like-minded clinicians. Here are a few organizations to consider becoming involved with: White Coats for Black Lives, Physicians for a National Health Program, National Medical Association, National Hispanic Medical Association, National Council of Asian and Pacific Islander Physicians. White Coats for Black Lives, while a medical-student organization, would definitely benefit from the support of established physicians and clinicians. Also, don't limit yourself only to working with other people in the medical field! Consider lending your labor to any organizations doing work that will positively impact the patients in your community.

3. Conduct research on solutions to health inequities.

Try to avoid the pitfall of performing research that solely investigates the presence of health inequities. Much of that research has already been done. What is needed is research into interventions that will *address* health inequities, not research into whether those disparities exist. Identify organizations that fund research into interventions that directly benefit patients, such as Patient-Centered Outcomes Research Institute (PCORI).

4. Practice anti-racism in your personal relationships with your patients.

In addition to being cognizant of implicit biases and not letting preconceived notions color how you treat patients of different races,

there are some positive actions you can take to personally practice anti-racism in the clinical space. For one, get in the practice of asking all of your patients standard questions to assess which social determinants of health may be affecting them, and which need to be addressed. Be familiar with the landscape in your area of practice so that you can connect patients with unmet needs to social workers or community-based organizations (CBOs) that can lend assistance.

In your practice as an anti-racist mentor to medical trainees:

1. Be a role model. Whether as a formal preceptor for a rotation or via unstructured shadowing, let your trainees see the way you interact with your patients and serve as a model for anti-racist behavior as a clinician. Most importantly, show them how to *listen* to your patients and develop an actual relationship with them. Encourage them to see the patient not just as a collection of illnesses, but as a full person with hobbies, goals, and dreams.

2. Be a mentor who can provide encouragement and guidance to medical trainees. Help them identify research mentors. Develop strong relationships with them so that you can write excellent letters of recommendation. Where possible, use your experience to help them avoid pitfalls. Advocate for them. Let them know that you are in their corner, and that they can lean on you for support.

In your practice as an anti-racist member of society:

1. Support anti-racist government policies. I don't plan to tell you who to vote for. All I'll say is that increasing the minimum wage helps to address poverty, which is a social determinant of health. Universal child-care and paid parental leave help ease the financial burden of raising children. Universal healthcare will ensure that everyone has access to medical care regardless of their financial situation. You can amplify your voice

by writing op-ed or opinion articles for your local newspapers to raise awareness about issues of social injustices.

2. Become involved with all levels of politics from community boards to Capitol Hill. Although voting is an extremely important act, it is far from the only thing that you can do. National politics receive an outsized share of attention, but local and community politics can also have large implications for your patients. Working with folks in your local community to address matters of injustice. In addition to voting in local elections and financially supporting your mayoral and city council candidates of choice, consider working with community organizations in the area. Here, it is important to recognize the privilege that you hold as a medical professional and avoid speaking for people. As Dr. Su'ah Abdul Khabeer so keenly pointed out, "You don't need to be a voice for the voiceless. Just pass the mic."¹³

Conclusion

As a physician and a teacher, I consistently stress to my students the importance of seeing the whole patient. To do this effectively, we as clinicians must take into account the social structures that contribute to the health of the patient, including, but not limited to, institutional racism. As clinicians, it is imperative that we use our knowledge, our voices, and our power to fight for the changes that will lead to better outcomes for our patients.

Acknowledgments

I would like to thank Dr. Camara Jones and Dr. David R. Williams for their decades-long work in, and passion for, addressing racism.

HIV



THERESA MACK M.D. MPH FACP

AAHIVS completed her medical education at Universidad del Noreste in Mexico. She completed her Internal Medicine residency in Mount Vernon, NY and her Nephrology fellowship in New York, NY, both at hospital affiliates of New York Medical College. She received her Master of Public Health from Columbia University. Dr. Mack is an advocate for the underserved and provides quality care to patients who may not

previously have had access to medical care. Dr. Mack primarily treats people with HIV/AIDS, hypertension, diabetes, and chronic kidney disease. In 2011, she was featured in the New York Daily News as "Dr. Angel" to people with HIV, and her patients describe her as sensitive, caring, well-informed, and professional. Dr. Mack is board-certified in Internal Medicine, Nephrology, and HIV medicine.

REFERENCES

- Williams, Michelle and Sanchez, Jeffrey. "Racism is killing black people. It's sickening them, too." *The Washington Post*. 04 Jun 2020. https://www.washingtonpost.com/opinions/racism-is-killing-black-people-its-sickening-them-too/2020/06/04/fe004cc8-a681-11ea-b619-3f9133bbb482_story.html
- Jones CP. Levels of racism: a theoretic framework and a gardener's tale. *Am J Public Health*. 2000;90(8):1212-1215. doi:10.2105/ajph.90.8.1212
- Attilus J. The Physician's Role in Racial Equity. *HealthCity*. June 05, 2020. <https://healthcity.bmc.org/policy-and-industry/physicians-role-racial-equity>. Published June 5, 2020. Accessed May 7, 2022.
- Williams, DR. Why Discrimination is a Health Issue. *Robert Wood Johnson Foundation Culture of Health Blog*. May 26, 2021. <https://www.rwjf.org/en/blog/2017/10/discrimination-is-a-health-issue.html> Published May 26, 2021. Accessed May 7, 2022.
- Institute of Medicine (US) Committee on Understanding and Eliminating Racial and Ethnic Disparities in Health Care. *Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care*. Smedley BD, Stith AY, Nelson AR, editors. Washington (DC): National Academies Press (US); 2003. PMID: 25032386.
- U.S. Census Bureau (2021). *2020 DEC Redistricting Data (PL 94-271)*. Retrieved from <https://data.census.gov/cedsci/table?q=United%20States>
- Center for Disease Control. "Health Disparities in HIV, Viral Hepatitis, STDs and TB". <https://www.cdc.gov/nchstp/healthdisparities/africanamericans.html#hiv>
- Land, E. Homelessness linked to HIV infection and low rates of viral suppression. San Francisco AIDS Foundation. <https://www.sfaf.org/collections/beta/homelessness-linked-to-hiv-infection-and-low-rates-of-viral-suppression/> Published Oct 2, 2018. Accessed May 7, 2021.
- Racial Inequities in Homelessness, By the Numbers. National Alliance to End Homelessness website. <https://endhomelessness.org/resource/racial-inequalities-homelessness-numbers/>. Published Jun 1, 2020. Accessed May 7, 2022.
- Fusaro VA, Levy HG, Shaefer HL. Racial and Ethnic Disparities in the Lifetime Prevalence of Homelessness in the United States. *Demography*. 2018; 55(6): 2119-2128. Published 2018. Accessed May 7, 2022.
- Ojo A, Sandoval RS, Soled D, et al. No Longer an Elective Pursuit: The Importance of Physician Advocacy in Everyday Medicine. *Health Affairs* website. <https://www.healthaffairs.org/doi/10.1377/forefront.20200817.667867/full/>. Published Aug 19, 2020. Accessed May 7, 2022.
- Sondheimer HM, Xierali IM, Young GH, Nivet MA. Placement of US Medical School Graduates into Graduate Medical Education, 2005 Through 2015. *JAMA*. 2015;314(22):2409-2410.
- Khabeer, Su'ah Abdul. "You don't need to be a voice for the voiceless. Just pass the mic." Twitter. <https://twitter.com/drdsquad/status/830838928403988480?lang=en> Published Feb 12, 2017. Accessed May 7, 2022.

Powering the Knowledge and Skills to end HIV at the Community Level



Building the capacity of the nation's HIV prevention workforce is at the core of this CDC-funded training and technical assistance program

By Greg Grisolano, MA, and Zoe Sullivan-Blum, MPH

LIKE MANY OF HIS PEERS in the HIV prevention field, Randy Rafter knows that the work he's doing isn't easy. But it is life-changing for individuals and their communities.

A program manager at The Community Wellness Project, a community-based organization in St. Louis, Mo., Rafter recalled a tearful phone conversation late one night from a community member who feared a possible exposure to HIV. When that phone call came, Rafter said he knew just what to

do, thanks to the capacity building assistance (CBA) training he'd received from the CBA Provider Network (CPN).

"After a couple of phone calls and through the CBA training and development that I received, I was able to get the young person to come in and meet me at the office at three o'clock in the morning," he said.

Once the diagnosis was confirmed, Rafter said he was able to continue utilizing that training to connect the individual with services and with peer support to help navigate

the next part of the journey.

"I was able to be there for our individual like I wanted someone to be there for me when I was 14," Rafter said.

The training and technical assistance professionals like Rafter receive from CPN is funded by the Centers for Disease Control and Prevention (CDC) and supports evidence-based interventions, which are aligned with the broader goal of Ending the HIV Epidemic (EHE) in the U.S. The EHE initiative seeks to reduce the number of new HIV transmissions in the United

States by 75 percent by 2025, and then by at least 90 percent by 2030.¹

The CPN understands that the needs of community-based organizations (CBOs) and health departments providing high-impact HIV prevention services have not diminished during COVID-19, but rather, have increased. The CPN offers critical training and technical assistance to these CBOs and health departments. We know it's more important than ever to get information into the hands of organizations needing support in their work to end the HIV epidemic.

Who are Capacity Building Assistance Programs and Services for?

Capacity building assistance programs and services are for CDC-funded health departments, community-based organizations, and healthcare providers to enable the HIV prevention workforce to optimally plan, integrate, implement, and sustain comprehensive programs and services that will help achieve the nation's HIV prevention goals.

Services are free and are provided by a network of expert training and technical assistance organizations. Think of the network as a "one-stop-shop" for products, services, and trainings that are all tailor-made to support the HIV prevention workforce.

To end HIV at the community level, the HIV prevention workforce must be better equipped and prepared to do the local-level work that will address unique needs to reduce HIV transmission.

That workforce development training has been essential for Preston Tang in his career.

"Receiving CBA services has helped me grow exponentially as a professional, but also learn new innovation in the field of public health, HIV prevention and care," said Tang, a Health Program Specialist and Substance Abuse/HIV Program Coordinator with Nevada's HIV Prevention Program. "From starting in the field as a volunteer, now I've grown to be a leader of change."

The Three Aspects of CBA Services

There are three major components of CBA services: national training, regional technical assistance, and a professional learning

community for leaders in community-based organizations. These three areas of training and technical assistance help organizations to increase their capacity to test and diagnose all people with HIV in their communities and enhance linkage, retention, and re-engagement of people in HIV care and treatment. Training can also help organizations utilize proven interventions, such as pre-exposure prophylaxis (PrEP), to help increase their capacity to prevent new HIV transmission, as well as help prepare organizations to identify and respond to potential HIV outbreaks at the community level.

"We've been receiving CBA support for PrEP Institutes," said Telly Harris, a prevention coordinator with the Kentucky Cabinet for Health and Family Services. "These training professionals have been exemplary and willing to assist at all levels. Listening to the concerns of our state and the needs of our population's served. Their help has pushed our efforts tremendously and Kentucky couldn't be more grateful for their support."

National Training, both in the Classroom and via E-learning

The National HIV e-Learning Centers offer free national training options in e-learning formats and at different skill levels. The trainings cover a wide array of topics, including high-impact prevention (HIP) interventions and public health strategies. Self-paced e-learning has taken off as a way of building the capacity of teams. Supervisors and staff are able to plan professional development as a team, staff are able to learn at their own pace, and the workforce is empowered to take control of their own professional development.

Some organizations prefer more guided instruction, and live, instructor-led trainings in the National HIV Classroom Learning Center (NHCLC) can meet this need. These trainings occur in a virtual classroom format with a live instructor. Skilled trainers provide the HIV prevention workforce with high-quality courses designed to increase skill for implementing evidence-based and evidence-informed, culturally relevant HIV prevention interventions and public health strategies.

The needs-based, community aware approach to training is exactly what caught Chelsy Holland's attention at a recent CPN training event.

Holland, a program coordinator with the Alabama Department of Public Health's Office of HIV Prevention and Care, says engaging with local partners such as churches and rape crisis centers, has helped create a more holistic approach to tackling HIV prevention in her state. Holland organized several CBA trainings with local partners. "CPN has offered us several trainings. The most beneficial was the HIV 101. They aren't just talking to directors or peer navigators. They're talking to me, too."

To end HIV at the community level, the HIV prevention workforce must be better equipped and prepared to do the local-level work that will address unique needs to reduce HIV transmission.



Regional Technical Assistance

To provide more personalized support and facilitate long-term working relationships at the local level, the CPN offers tailored regional technical assistance (TA) to meet HIV prevention workforce capacity building needs and gain support in implementing evidence-based interventions.

The primary focus of regional TA is to help address challenges to effectively plan, integrate, implement, and sustain HIV prevention programs and services within a jurisdiction. This helps to address local implementation challenges, with an increased focus on responding to local capacity building needs and preferences across four regions of the United States. To increase knowledge, skills, and competencies for CDC-supported HIV prevention interventions and strategies, regional TA services include mentoring, consultation, demonstration, skills building, information, resource development and sharing, and peer-to-peer learning opportunities.

Quality Improvement for HIV/CBO Leadership

The third component of CBA services is focused on leadership development of senior leaders and managers working in CBOs. The National Learning Community for HIV CBO Leadership is a free, distance learning program that connects CBO leaders with resources to manage the people, programs, and organizations working to end the HIV epidemic. The aim is to empower and strengthen the next generation of leaders in the field. It includes a catalog of self-paced short courses designed by and for CBO managers, a virtual, cohort-based Creative Problem-Solving Intensive, and access to an exclusive online community of peers, coaches, and mentors in the HIV prevention workforce.

Capacity building assistance should not be a “one-and-done” method to workforce training. Rather, the CPN is more like a streaming service for staff training and development that HIV prevention professionals can return to repeatedly as needed.

Need More Info? Contact the CBA Provider Network Today

The CPN wants to help meet the training and technical needs of the HIV prevention workforce. Visit <https://www.cdc.gov/hiv/capacity-building-assistance/index.html> to learn more. Organizations not directly funded by CDC for their HIV prevention work should ask their state health department to submit a request for services on their behalf. Health department contacts are listed at <https://www.cdc.gov/CTS/Pages/Main/HDEExternalInfo.HIV>



GREG GRISOLANO, M.A., brings two decades of publishing experience to his role as a content developer for the CBA Provider Network. He previously worked in journalism for a variety of newspapers, magazines, and websites.



ZOE SULLIVAN-BLUM, MPH, works alongside the CBA Provider Network as a senior project manager for the Peer Recovery Center of Excellence. She previously did research on raising HPV vaccination awareness and rates among people taking PrEP, as well as with smoking cessation efforts in perinatal women.



Funded by Centers for Disease Control and Prevention

A Black man with a beard, wearing a dark suit and white shirt, is smiling and gesturing with his right hand towards the camera. He is sitting at a desk with a laptop and a smartphone. The background is blurred.

MENTORSHIP

A tool for
improving racial
and ethnic
representation
in HIV
research

By Leonard Sowah, MBChB, MPH, FACP, AAHIVS

ABOUT A MONTH AGO, I had the opportunity to talk to Dr. George Yendewa, a Sierra Leonean immigrant in the United States. Dr. Yendewa spoke about his work in HIV research and the impact of the AIDS Clinical Trials Group (ACTG) Minority HIV Investigator Mentoring Program (MHIMP) has had on his career. He describes himself as a family man, with his first child on the way. He is working hard to make lives better for people with HIV both here in the U.S. and internationally in Sierra Leone and Uganda.

He speaks with fondness about this mentor Dr. Robert Salata who is currently the chair of the department of medicine at Case Western Reserve University School of Medicine and the University Hospitals Cleveland Medical Center in Ohio. He appreciates how this mentor, another HIV researcher with several years of experience working in Uganda, has helped mold his career in academia and research. He says that having the support of the ACTG award allowed him the flexibility to follow research ideas and further widened his pool of potential mentors. The ACTG award has also allowed him to work on research ideas that are usually poorly funded but very important to the day to day lives of people with HIV in places like Sierra Leone.

Dr. Yendewa did not start out looking to do research in HIV. In his early career in infectious diseases, he had been drawn back home to work as an Ebola researcher, mostly due to his ties with West Africa, Sierra Leone, and Liberia, which were badly hit by the epidemic. His interest in post-Ebola syndrome, a problem much like long-haul COVID-19, drew his attention to the slowly escalating HIV epidemic in Sierra Leone. This epidemic is most likely driven by several years of civil war and the associated breakdown in social structures and destruction of the civil support systems. Dr. Yendewa was quickly drawn into this problem; and he soon recognized the interaction between two viral epidemics, HIV and hepatitis B, which has been endemic in many countries in the region, probably for centuries.

As an ACTG MHIMP awardee, Dr. Yendewa could draw on a wide and active network of scientists and clinicians involved in both HIV and viral hepatitis research. He believes the guidance and peer review of these individuals has made him the researcher he is today. As a person who has benefited from mentorship, he is an advocate for continuous learning. Based on this philosophy,

he loves being a part of the growth of other up and coming researchers. He believes his interactions with younger colleagues always challenges his beliefs and refashions his ideas about what he knows. When I asked him specifically about mentorship, he shot back with "Who is going to continue the work that you are doing when you are no longer here? The quality of the work that the next generation is going to do is dependent on the quality of the training that we have given them!" He hopes that his mentees will not always agree with him but will question and help reshape what he has taught them and take it in different directions.

Working as a HIV clinician and pursuing a career in research has its stresses, so Dr. Yendewa, who is a soccer fan, says a good English Premier League game always helps him relax. He describes himself as a lifelong supporter of Arsenal FC, a North London team. On the question of what he would like to do with his time if he has the choice, he says he is torn between doing cutting edge research and work that may not be novel but saves a lot of lives. George says he is a bit disappointed with the National Institutes of Health's (NIH) excessive focus on funding cutting edge research which is not usually what underrepresented minorities like himself are interested in on account of their backgrounds. Dr. Yendewa lauds the work of philanthropists like Bill Gates whose organization he believes is more likely to fund such researchers.

My conversation with this young, dedicated and talented physician raised one very important issue on the lack of diversity in representation in research leadership. A good look at this problem that he drew my attention to brought to light how much structural racism has molded our lives and society. In the field of academia and research, many have been warned to steer away from research into healthcare disparities and minority health

issues for several reasons. While many reasons have been given for this advice, the most common and likely reason is funding.

In the year 2020, the NIH received 703 R01 grant applications from individuals who identified as African American or Black and funded only 166 of these; a funding rate of 23.8 percent.¹ This was an improvement from 2013 when the funding rate for African Americans researchers was 12.2 percent. This funding rate is low compared to 21.8 percent for Whites in 2013 and 31.3 percent in 2020. Overall, NIH funding rates have improved across all categories but for some reason underrepresented minorities continue to trail Whites in this important determinant of research success.

I will not dive into the reasons driving this disparity but will say that this raises a question on the need for mentorship both targeted at underrepresented minorities in research and possibly some changes in NIH funding mechanisms. Lack of good mentorship though has been identified as one of the reasons minority researchers have less success in funding and academic scholarship. On this note, I hope more individuals like Dr. Yendewa can access the mentorship they deserve and help improve diversity that we clearly need in all areas of our lives. **HIV**



DR. LEONARD SOWAH is an internist with several years of experience serving low-income communities with a high burden of HIV. In his work, he has had the opportunity to interact with patients and other providers with intimate knowledge of the workings of HIV screening, prevention, and care in our prison system.

REFERENCES

1. Collins, Francis S., et al. "Affirming NIH's commitment to addressing structural racism in the biomedical research enterprise." *Cell* 184.12 (2021): 3075-3079.
2. Shavers, Vickie L., et al. "Barriers to racial/ethnic minority application and competition for NIH research funding." *Journal of the National Medical Association* 97.8 (2005): 1063.

HIV Clinical Leadership Fellowship Program

Growing and Elevating the HIV Workforce

THE LOS ANGELES AREA PACIFIC AIDS EDUCATION AND TRAINING CENTER at USC, a division of the department, created one of the first HIV Fellowships open to primary care physicians in 2001. Now in partnership with the Los Angeles County Department of Health Services (DHS), the second-largest municipal safety net system in the United States, the training center offers a unique HIV fellowship training program for physicians committed to improving primary care for people living with HIV in underserved communities. This program brings together the unique strengths of DHS, USC Keck School of Medicine's LA Area Pacific AIDS Education and Training Center, UCLA's National Clinician Scholars Program and ViiV Healthcare.

The purpose of the fellowship is to train physicians in the knowledge and skills necessary to provide expert HIV care, to be

health systems leaders, and to be successful community partners in patient-centered and community-specific HIV interventions.

Candidates are competitively selected through a national search for this two-year fellowship program. Those selected participate in the HIV Clinical Leadership Program with a full fellowship salary and benefits. Up to four fellows may be selected for each cohort. Following satisfactory completion of the program, fellows with eligible academic loans may receive up to \$150,000 in loan repayment if they continue to provide HIV-related services in underserved communities.

Due to the HIV epidemic, we encourage physicians with an interest in practicing in the South and Mid-Atlantic to apply!

Desired qualifications for potential candidates include:

- A strong interest in primary care and HIV medicine
- A strong interest in pursuing and implementing outpatient quality improvement or system innovation
- A sincere desire to work with under-served communities.

The HIV Clinical Leadership Program is seeking applicants who are Board eligible, or Board certified in Family Medicine, Internal Medicine, or Medicine-Pediatrics. Applicants must have completed an accredited United States medical residency program. The fellowship does not support any international visas.

The application cycle for the 2023-2025 cohort opens July 1st.

Apply July 1st of each year here: <https://www.hivmedfellowship.com/>



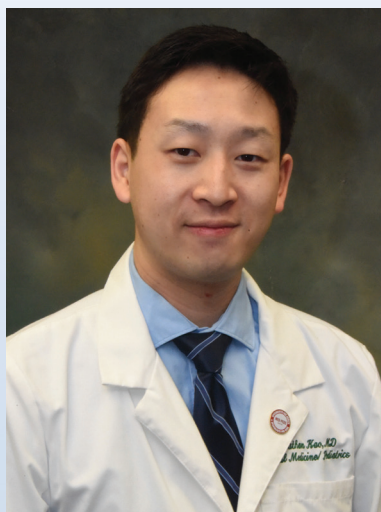
Meet Dr. X Kao. He recently completed the HIV Clinical Leadership Fellowship Program. We recently sat down with him to discuss his experience and his plans for the future:

Why did you choose to pursue a career in HIV Primary Care?

Like many Med-Peds physicians, I have a broad range of interests in medicine and wanted to be able to do everything. I loved doing primary care and being able to care for patients over the course of their life but always had a special interest in infectious diseases as well. In residency, I learned I could combine my interests when I worked in an HIV primary care clinic and it was a perfect fit.

What brought you to the HIV Clinical Leadership Fellowship Program in particular?

I am originally from Los Angeles so was happy to find a program close to home. I was also drawn to the program's focus on providing care for underserved communities including working with primary care clinics throughout the county system, providing care for patients who are incarcerated, and ensuring access to care for unhoused people.



What did you particularly enjoy about the HIV Clinical Leadership Fellowship Program?

When I met the faculty in the program, I knew it would be a great match. Their passion for their patients and dedication to both the academic research and clinical practice of medicine inspire me to be a better doctor.

What was your favorite clinical experience and why?

Providing consulting services in the emergency department for newly diagnosed and out-of-care patients with HIV was my favorite clinical experience. It was a great opportunity to develop clinical skills in diagnosis and management of opportunistic infections and other complications of HIV. In addition, learning how to counsel patients and identify and overcome barriers to care has been invaluable.

What was the best part of your training in the HIV Clinical Leadership Fellowship Program?

The best part of training in this fellowship was the breadth of experiences from inpatient infectious disease rotations to providing care on the streets with the Street Medicine team. Getting the chance to work in a variety of settings and provide care in both primary and acute settings has helped me feel comfortable managing a wide range of clinical situations.

How did the HIV Clinical Leadership Fellowship Program prepare you for a career as an HIV Specialist?

The fellowship allowed me to see patients across the spectrum of HIV infection from those who have had undetectable viral loads for years to advanced AIDS while under the guidance of infectious disease and HIV providers. Their mentorship in managing complex social and medical issues has prepared me well to be an HIV Specialist.

Now that you have completed the HIV Clinical Leadership Fellowship Program, where have you taken your career?

I will be joining the Internal Medicine and Pediatrics Primary Care team at UCLA Health where I will continue to provide general primary care and specialized care for people living with HIV in my community. **HIV**

The Intersection of Social Determinants of Health and HIV

By Klodiana Myftari, PharmD, BCACP and Milena Murray, PharmD, MSC, BCIDP, AAHIVP, FCCP

SOCIAL DETERMINANTS OF HEALTH (SDOH) can be defined as conditions in the environments in which people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks.¹ The impact of SDOH on infectious diseases, including HIV, has been known for over a decade.² People with HIV that have recurrent issues with mental health, substance use, homelessness, or food insecurity are more likely to fall out of care, less likely to adhere to treatment, and are less likely to achieve an undetectable HIV RNA.³ Controlling the HIV epidemic will involve more than a focus on HIV RNA and decreased HIV incidence. A call for honest dialogue and integrating SDOH into public health practice has not fully been met.⁴

Health is affected by genetics, social circumstances, environmental exposures, behavioral patterns, and health care.⁵ These factors contribute to premature death in a population. Resources that enhance the quality of life can significantly influence population health outcomes, including, but not limited to, safe and affordable housing, access to education, public safety, availability of healthy foods, local emergency/health services, and environments free of life-threatening toxins. The conditions in these various environments and settings have been referred to as “place.”¹ Understanding the relationship between how population groups experience “place” and the impact of “place” on health is vital to understanding SDOH.¹ Screening may be the most essential tool when addressing SDOH, with effective screening and identification of proper interventions that may be implemented. Furthermore, once identified, following up with patients and providing support via medication management and disease state education are simple introductory steps to help assist a population that has been often overlooked.¹

A study examining trends and patterns of differences in infectious disease mortality among counties in the United States found that HIV/AIDS mortality first increased in some of the wealthiest U.S. counties on the West Coast but has shifted to some of the poorest counties in the southeastern U.S.⁶ The authors state that a potential explanation for this phenomenon may stem from the fact that affluent

populations might have benefited from advanced medical HIV care and changing behaviors for HIV acquisition. Likewise, the study found substantial differences among counties in death rates from all infectious diseases. HIV/AIDS had the highest relative mortality inequality between counties (10.0 as the mortality rate ratio in the 90th and 10th percentile of the distribution). One of the SDOH factors driving the mortality outcome in certain counties was housing, where a high proportion of a county’s population was housed at Union Correctional Institutions.⁶

A study of loneliness, another SDOH factor, in people with HIV aged 50 years or greater (n=356) reported 58 percent had loneliness symptoms, and of those, 22 percent reported moderate, and 12 percent reported severe loneliness.⁷ These participants were more likely to report depression, substance use, and fewer supportive relationships. After adjustments, low income and depression were associated with poor health-related quality of life.⁷ The authors noted that a comprehensive care approach, including mental and psychosocial assessments, is needed with traditional clinical care.

Among the various strategies to address SDOH factors is the Health Impact Assessment (HIA), a combination of methods to formally examine the potential health effects of a proposed policy, program, or project.⁸ An HIA includes several steps such as screening, scoping, assessing, providing recommendations, reporting, monitoring, and evaluating projects, policies, and the HIA’s implementation on the impact and health status of a population.⁹ HIA has received considerable interest over the past

Resources that enhance the quality of life can significantly influence population health outcomes, including, but not limited to, safe and affordable housing, access to education, public safety, availability of healthy foods, local emergency/health services, and environments free of life-threatening toxins.

decade, although interest in HIA in the U.S. has been relatively slow to develop. Several groups have conducted formal HIAs across the U.S., examining the potential health impacts of various projects and policies. HIAs have added value when it comes to public decision-making. They can provide a means for bringing the public's health to the attention of policymakers by adding health information to considerations of specific proposals in other sectors.⁸ Additionally, HIAs provide an exact method of assessing possible positive and adverse health effects. If carefully performed, they provide a reasonable projection of health effects over time that can be important in public justification of decisions made by elected decision-makers. HIAs bring attention to the broad determinants of health, but they may also suggest ways to promote healthy public policy across sectors.⁸

It is difficult to determine where the best action plan is with such a complicated issue at hand. However, medical professionals must recognize and take action in their respective practices to make the largest impact on people with HIV. Practicing healthcare professionals see firsthand the impact of

SDOH on the health outcome of people with HIV. Additionally, healthcare professionals recognize the barriers and inequities that specific policies have created for this population. Therefore, healthcare professionals should actively engage in any step of an HIA to develop clear goals and targets for HIV care in the public health sector. These goals and targets should be tracked as part of ending the HIV epidemic. **HIV**



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REFERENCES

1. Office of Disease Prevention and Health Promotion. Healthy People 2020. Social Determinants of Health. <https://www.healthypeople.gov/node/3499/2020/topics-objectives/topic/social-determinants-health>.
2. Dean HD, Fenton KA. Addressing social determinants of health in the prevention and control of HIV/AIDS, viral hepatitis, sexually transmitted infections, and tuberculosis. *Public Health Rep.* 2010;125 Suppl 4:1-5. doi:<http://dx.doi.org/10.1177/00333549101250s401>
3. Rourke SB, Bacon J, McGee F, Gilbert M. Tackling the social and structural drivers of HIV in Canada. *Can Commun Dis Rep.* 2015;41:322-326. doi:<http://dx.doi.org/10.14745/ccdr.v41i12a03>
4. Sharpe TT, Harrison KM, Dean HD. Summary of CDC consultation to address social determinants of health for prevention of disparities in HIV/AIDS, viral hepatitis, sexually transmitted diseases, and tuberculosis. December 9-10, 2008. *Public Health Rep.* 2010;125 Suppl 4:11-15. doi:<http://dx.doi.org/10.1177/00333549101250s404>
5. Schroeder SA. Shattuck lecture. We can do better--improving the health of the American people. *N Engl J Med.* 2007;357:1221-1228. doi:<http://dx.doi.org/10.1056/NEJMSa073350>
6. El Beheraoui C, Mokdad AH, Dwyer-Lindgren L, et al. Trends and patterns of differences in infectious disease mortality among US counties, 1980-2014. *JAMA.* 2018;319:1248-1260. doi:<http://dx.doi.org/10.1001/jama.2018.2089>
7. Greene M, Hessol NA, Perissinotto C, et al. Loneliness in older adults living with HIV. *AIDS Behav.* 2018;22:1475-1484. doi:<http://dx.doi.org/10.1007/s10461-017-1985-1>
8. Cole BL, Fielding JE. Health impact assessment: A tool to help policy makers understand health beyond health care. *Annu Rev Public Health.* 2007;28:393-412. doi:<http://dx.doi.org/10.1146/annurev.publhealth.28.083006.131942>
9. Centers for Disease Control and Prevention. Health Impact Assessment. September 16, 2016. <https://www.cdc.gov/healthyplaces/hia.htm>.



CAROLYN CHU, MD, MSC, AAHIVS

AAHIVM Chief Medical Officer

FEATURED LITERATURE:

Patel N, Blumenthal J, Dubé MP, et al. Method of calculating renal function estimates could inappropriately exclude transgender patients receiving gender-affirming hormone therapy from pre-exposure prophylaxis eligibility. *LGBT Health*. 2022 Feb 23. doi: 10.1089/lgbt.2021.0219. Online ahead of print.

Study investigators quantified the variability in kidney function estimates between three commonly used equations when applied to a population of 258 transgender participants enrolled in a PrEP demonstration project (parent study: ImPrEP, NCT03086200). Primary outcome was estimated renal function based on the Cockcroft-Gault, Modification of Diet in Renal Disease (MDRD), and Chronic Kidney Disease Epidemiology Collaboration (CKD-EPI) equations. Two iterations of calculations were performed, the first using sex assigned at birth and the second gender identity. Authors observed a median difference of +16 (-11 to +21) mL/min in estimated CLCR when using sex assigned at birth for the gender coefficient vs. gender identity. Median differences in eGFR when using sex assigned at birth vs. gender identity were +25 (-19 to +33) mL/min and +13 (-10 to +22) mL/min, respectively, for GFRMDRD and GFRCKD-EPI. Among male sex assigned at birth individuals, significantly higher median renal function estimates were observed among users of gender-affirming therapy than nonusers (this observation was consistent regardless of method or equation used). Conversely, renal function estimates were lower for female sex assigned at birth users of gender-affirming therapy compared with nonusers. Overall, 6.6 percent of participants would have been potentially rendered ineligible for TDF/FTC-based PrEP based on at least one of the equations/methods yielding a creatinine clearance value < 60 mL/min (the proportion varied by equation and gender coefficient used).

AUTHOR'S COMMENTARY:

Findings of this study suggest large variability in estimated renal function depending on gender coefficient selection as well as exogenous use of gender-affirming therapy. Such variability may have clinically meaningful implications at the individual patient level (for both PrEP initiation as well as continuation) but also broader public health impact, given disproportionate rates of HIV in some transgender communities. Ongoing research is needed to increase understanding of appropriate biomarker and calculation/equation use to accurately assess renal function for transgender individuals including people on gender-affirming therapy, as well as best clinical practices in PrEP care for transgender populations.

FEATURED LITERATURE:

Eshleman SH, Fogel JM, Piwowar-Manning E, et al. Characterization of Human Immunodeficiency Virus (HIV) infections in women who received injectable cabotegravir or tenofovir disoproxil fumarate/emtricitabine for HIV prevention: HPTN 084. *J Infect Dis*. 2022 March 18; jia576. doi: 10.1093/infdis/jia576. PMID: 35301540. Online ahead of print.

This study describes baseline and incident HIV infections observed among 3,224 cisgender women enrolled in HPTN084. Results of HIV diagnostic testing, viral load testing including a single-copy RNA assay, resistance testing, and study drug concentration analysis are included. Three incident infections were identified among participants receiving cabotegravir (CAB) and 36 incident infections were identified among participants receiving TDF/FTC. Incident infections in the CAB arm included 2 participants with no recent drug exposure and no injections (testing suggested low/no adherence to blinded oral CAB), and 1 participant with delayed injections: for this case, 3 out of 9 injections occurred outside protocol-specified allowable windows. In all 3 incident CAB cases, CAB concentration at the first HIV-positive visit was below the level predicted to be protective based on non-human primate SHIV challenge studies. No cabotegravir resistance was identified. In 35 of the 36 TDF/FTC incident infection cases, suboptimal drug concentrations near the time of the first HIV-positive visit indicated low or no adherence. The M184V mutation was identified in 1 participant in the TDF/FTC arm: investigators were unable to determine whether this was acquired from study drug exposure. In 1 CAB and 8 TDF/FTC cases, retrospective testing revealed a delay between the first HIV-positive visit and the first site-positive visit (delay was longer for the participant receiving CAB compared to participants on TDF/FTC).

AUTHOR'S COMMENTARY:

Results from HPTN084 indicate both long-acting cabotegravir and oral TDF/FTC are highly effective for HIV prevention in cisgender women. However, detailed characterization of cases of HIV acquisition in the setting of pre-exposure prophylaxis use help advance our understanding of how medication exposure may affect HIV infection detection, inform optimal HIV testing approaches for persons initiating/maintained on PrEP, increase understanding of gender differences in adherence “forgiveness” of TDF/FTC, and also – importantly – inform implementation of long-acting cabotegravir as PrEP in real-world settings. Additional results from HPTN084 and 083 (both have transitioned to open-label extension studies) are expected to provide further insight; authors also note “ongoing analysis ... from the two trials will provide more information about the correlates of HIV protection with CAB-LA PrEP [and its impact] on viral replication, antibody expression, and drug resistance.”

FEATURED LITERATURE:

Wood BR, Bauer K, Lechtenberg R, et. al. Direct and indirect effects of a Project ECHO longitudinal clinical tele-mentoring program on viral suppression for persons with HIV: a population-based analysis. *J Acquir Immune Defic Syndr.* 2022 Apr 29. doi: 10.1097/QAI.0000000000003007. PMID: 35499527.

Health workforce capacity-building is a key component of the updated National HIV/AIDS Strategy—provider-level interventions such as Project ECHO can help disseminate and standardize best clinical practices through virtual communities of practice and learning. Project ECHO in particular aims to reach providers with limited specialist access, and outcomes have historically focused on qualitative measures, i.e., provider confidence, self-efficacy, and professional satisfaction. This study explored patient viral load (VL) outcomes for medical providers participating in the University of Washington/Mountain West AETC's Project ECHO program using 2011-2018 population-based data from Washington and Oregon (states which have comprehensive VL reporting systems). Patient demographic characteristics by Project ECHO participation status were generally similar. The percentage of patients with VL suppression (defined as VL $\leq$ 200 copies/mL) increased over time in both Project ECHO and non-Project ECHO cohorts, however, after adjusting for time, geographic location, and several patient and provider factors, participation was associated with an increased proportion of patients with VL suppression compared to no participation. Among patients of Project ECHO participants, overall VL suppression rate was significantly higher (by 13.7 percentage points) although authors note differences varied by provider PWH panel size. Additionally, greater improvement in the proportion of patients achieving VL suppression was observed among providers attending a larger number of ECHO sessions, though this also varied by panel volume.

AUTHOR'S COMMENTARY:

It is highly encouraging that results of this study point to favorable patient-level HIV treatment outcomes associated with a provider-facing capacity building intervention such as Project ECHO. Secondary analyses also suggest indirect benefits: namely, VL suppression among patients of lower-volume providers who didn't participate in Project ECHO themselves but worked in the same clinic system as at least one Project ECHO participant was higher than patients of providers with no engagement/connection to Project ECHO. Given the evolving nature of HIV care and advances in antiretroviral therapy, alongside the limited exposure most medical, nursing, and pharmacy students get to HIV medicine, dynamic and effective practice-based capacity building interventions such as virtual learning collaboratives are much needed. The impact of scaling up and expanding the reach of such efforts may be especially meaningful for PWH living in rural areas and/or individuals receiving care from lower PWH panel-volume providers.

FEATURED LITERATURE:

Hugueley B, McClung RP, Saduvala N, et. al. Baseline HIV drug-resistance testing: 12 U.S. jurisdictions, 2014-2019. *AIDS.* 2022 Jun 1; 36(7): 1039-1043. PMID: 35142706

This study examined patterns in reported baseline ARV drug resistance testing among 12 select U.S. jurisdictions (Alabama, California, Connecticut, D.C., Iowa, Michigan, New York, Rhode Island, South Carolina, Texas, Washington, and Wisconsin). Authors analyzed National HIV Surveillance System data reported to CDC regarding persons 13 years of age and over who were diagnosed with HIV during 2014-2019 (n = 93,666). 49.2 percent of individuals had a PR/RT (with or without integrase) sequence reported 90 days or less after diagnosis. A lower proportion of persons aged at least 60 years at diagnosis had baseline sequences reported compared with persons aged 13-19 years (45.1% vs. 50.2%). Testing rates also differed by race/ethnicity (testing was least common among American Indian/Alaska Native at 45.6%, and most common among Native Hawaiian/Other Pacific Islander at 54.8%); transmission category (53.2% for persons with HIV infection attributable to male-to-male sexual contact and inject drug use, compared to 46.8% for persons with infection attributable to injection drug use); initial CD4 count (62.1% for persons with CD4 cell counts less than 200 cells/ μ L or opportunistic infections vs. 52.4% for persons with CD4 cell counts at least 500 cells/ μ L); and geographic region (higher baseline testing was reported in the Midwest at 62.1% compared to 44.2% in the South). During the time period analyzed, PR/RT with integrase testing increased year to year (from 8.5% to 23.5%) and PR/RT-only testing decreased (from 39.2% to 26.2%).

AUTHOR'S COMMENTARY:

Baseline ARV drug resistance testing is recommended at entry into care for all people newly diagnosed with HIV, however findings from this analysis suggest only approximately half of all persons undergo initial PR/RT (with or without integrase) genotype testing in the U.S. Investigators also observed noteworthy demographic and geographic disparities. Collectively, these underscore opportunities to improve clinical practice and data reporting systems. Providers also appear to be including integrase resistance testing alongside PR/RT testing with increasing frequency – although this study is unable to determine reasons for this shift in practice, authors suggest the trend “may reflect the increased use of INSTIs as first-line ART, increased concern about transmitted INSTI resistance, or increased availability and ease of ordering integrase testing in combination with PR/RT testing”. **HIV**

Researcher Workbench

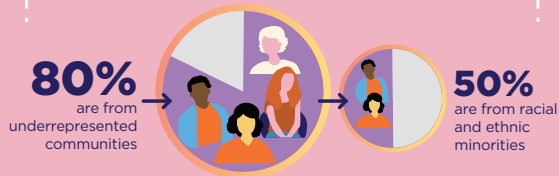
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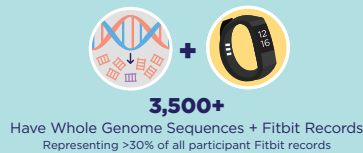
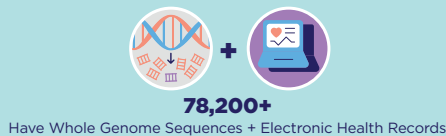
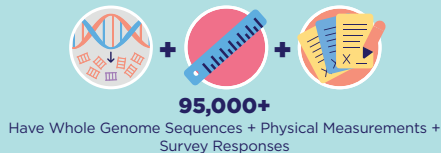
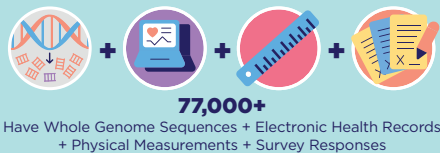


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