THE AMERICAN ACADEMY OF HIV MEDICINE ■ SEPTEMBER 2020

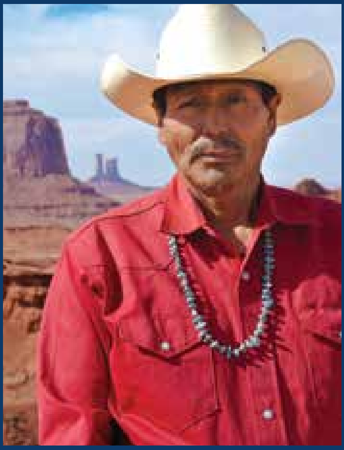
HIV SPECIALIST





Taking a Stand Against Health Disparities



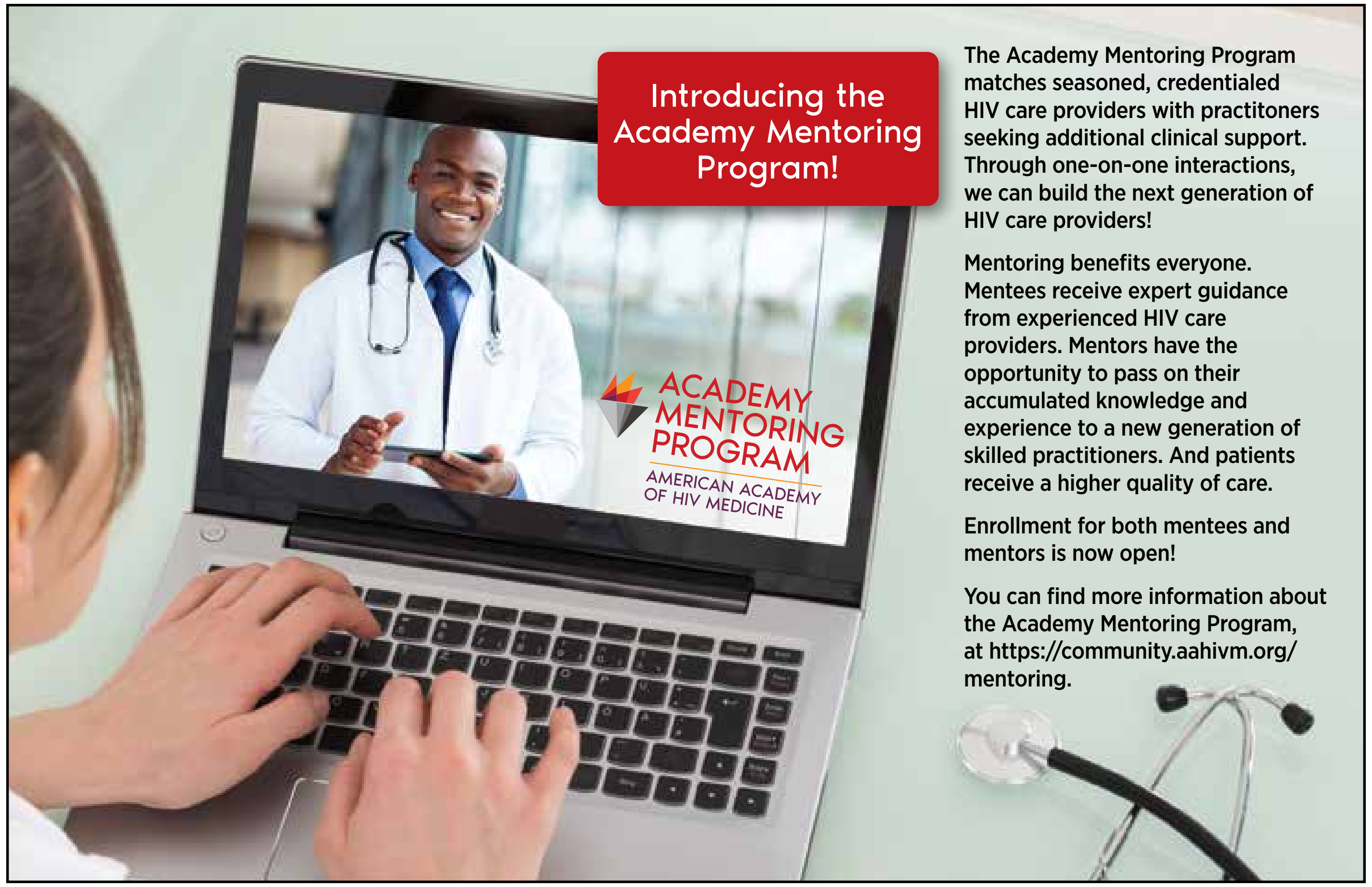



Health Disparities in Rural Black America

Native Hawaiian Health

Oral Health within Indigenous Communities

PrEP Behaviors During COVID-19



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HIV SPECIALIST

WWW.AAHIVM.ORG ■ SEPTEMBER 2020 ■ VOLUME 12, NO.3

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LETTER FROM THE DIRECTOR

By BRUCE J. PACKETT II
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Heeding the Call for Health Equity

AS A FOLLOW-UP to our June *HIV Specialist* issue on Covid-19 and its various connections, clinical and social, with the HIV epidemic, our editorial advisory group decided an issue specifically on enhancing racial equities in healthcare settings was the next thematic move. I wrote in my last column about how the novel coronavirus pandemic brought into sharp relief our already existing systemic racial disparities, during a time of protest and acute outrage over racism in America. Now in the wake of yet another high profile police shooting of a black citizen, the chorus of discontent is growing louder and broader.

I would like to personally and warmly thank our guest editors, Dr. Michelle Ogle and Dr. Ada Stewart, two well-recognized thought leaders in HIV medicine for their important contributions to this issue. They specifically highlight the immense and painful history of racism in the American healthcare setting and medical research. This is not just a history lesson, but rather a narrative of accreting systemic rot that brings us to where we are today in terms of medical mistrust and disproportionately poorer health outcomes for black and brown bodies.

Even after nationwide protest and barbed anger inevitably quells, the Academy will not lose focus on critical organizational strategies around Diversity, Equity and Inclusion (DEI). We have assembled an advisory body of some of our leading African American and Black member providers, provisionally called the Academy Council on Racial Equity. This group of experts will set the organizational agenda for tackling clinical disparities in Black communities head on.

We have also retained the services of the Almond Group, a DC-based consultancy on DEI to train our Academy staff on these important issues, to help us craft an organizational mission statement around DEI (long overdue) and to provide a thorough review of our policies and programs with an eye towards these key principles.

This is not the time to be quiet about race and racial issues in America. We thank you for your voices and advocacy on behalf of your patients.

INFORMATION FOR HIV CARE PROVIDERS IN THE NEWS

Long-Acting, Injectable Drug Could Strengthen Efforts to Prevent, Treat HIV

SCIENTISTS have developed an injectable drug that blocks HIV from entering cells. They say the new drug potentially offers long-lasting protection from the infection with fewer side effects. The drug, which was tested in non-human primates, could eventually replace or supplement components of combination drug "cocktail" therapies currently used to prevent or treat the virus.

University of Utah Health scientists led the study in collaboration with researchers from the National Institute of Allergy and Infectious Diseases (NIAID), Beth Israel Deaconess Medical Center in Boston, and Navigen, Inc.

"This is an exciting new HIV therapeutic option for both prevention and treatment, with a unique mechanism of action compared to other approved drugs," says Michael S. Kay, M.D. Ph.D., a senior author of the study and a U of U Health professor of biochemistry. "It has great potential to help patients who suffer from drug resistance as well as those who would benefit from a longer-acting, injectable anti-HIV drug cocktail."

The study appears in Proceedings of the National Academy of Sciences (PNAS).

In 2019, about 1.7 million people worldwide were newly infected with HIV, according to the World Health Organization. More than 38 million people are currently living with the infection. Combination antiretroviral therapy (cART), the so-called "drug cocktail," has dramatically improved survival and quality of life for such patients, but it is also costly, often has serious side effects, and requires patients to take pills daily. In addition, because HIV frequently mutates, drug resistance is a constant challenge, Kay says, so researchers are always seeking new drugs with novel mechanisms of action to produce more robust combination therapies.

In this new study, the researchers tested a unique drug called CPT31, based on a D-peptide that targets a critical pocket on HIV's fusion machinery that rarely mutates. D-peptides are mirror images of naturally occurring peptides. To imagine it, think of right and left hands. The building blocks and overall structure of natural peptides are analogous to our left hand versus our right hand for D-peptides.

Because of that, CPT31 and other D-peptides are not degraded in the body. Therefore, they last much longer than natural peptides, making them especially suitable for a long-acting injectable formulation.

"In addition to their durability in the body, D-peptides are largely ignored by the immune system, preventing immune reactions that are a side effect often seen with traditional peptide and protein drugs," says Brett Welch, a co-author of the study and senior director of technology and strategy at Navigen, Inc., the Salt Lake City company that co-developed CPT31 and is managing clinical trials. "As a D-peptide, our hope is that CPT31 will provide extended viral suppression with a lower dose and reduced side effects."

SHUTTERSTOCK/ RIGSBYPHOTO

To see if CPT31 could prevent HIV infection, Kay and colleagues first injected the drug into healthy macaque monkeys starting several days prior to exposure to a hybrid simian-human form of HIV called SHIV. The monkeys were completely protected from this very high SHIV exposure, much higher than what humans typically encounter, and never developed signs of infection. Subsequently, the scientists identified the minimum dose of CPT31 needed to confer complete protection, information that will help inform clinical trials.

"We think this drug could be used by itself to prevent HIV infection because initial HIV exposure typically involves a relatively small amount of virus," Kay says. "This study showed that the vast majority of circulating HIV strains from around the world are potently blocked by CPT31."

But what about later stages of the disease when there are billions of copies of the virus circulating in the body?

To find out, the researchers gave CPT31 to monkeys with untreated SHIV infections and high viral loads. Over the course of 30 days, the drug significantly lowered the presence of SHIV in their bloodstreams. However, virus levels rebound in two to three weeks due to drug resistance, as typically observed when treating established infections with a single drug.

"Such a simplified 'maintenance therapy' could present patients with a new option for viral control that is more cost-effective, convenient to take, and has fewer side effects," Kay says.

In parallel with clinical trials, Navigen is developing a long-acting injectable formulation of CPT31 with the goal of only requiring injection of the drug once every three months.

"Long-acting injectable formulations appear to be greatly preferred by both patients and physicians compared to current daily drug regimens that can be challenging to maintain," Welch says. "Additionally, the steady therapeutic drug levels provided by such a formulation would reduce the risk of drug resistance caused by missed daily pills, as well as reduce side effects."

Upcoming human trials, scheduled for later this year, will help determine whether CPT31 is safe and effective in humans. Kay says that the full course of human clinical trials and subsequent FDA approval could take several years.

IN THE NEWS

Unique HIV Reservoirs in Elite Controllers

Xu Yu, MD, Ragon Institute group leader, recently published a study entitled “Distinct viral reservoirs in individuals with spontaneous control of HIV-1,” in *Nature*. Yu’s lab, in collaboration with Ragon group geaders Mathias Lichterfeld, MD, PhD and Mary Carrington, PhD, and Ragon Director, Bruce Walker, MD, found rare sequences of HIV DNA by analyzing billions of cells from 64 elite controllers (people living with HIV who suppress the virus naturally without the need for medication), and 41 individuals on antiretroviral drugs (ART). Unlike ART-treated individuals, elite controllers’ viral reservoirs appear to be incapable of being reactivated. This likely helps the elite controllers maintain spontaneous, drug-free control of HIV and may represent a distinguishing feature for a functional cure of HIV infection.

HIV affects more than 35 million people worldwide and can be effectively controlled, but not cured, with a daily regimen of ART. Upon infection, retroviruses like HIV place copies of their viral genetic material into cells’ genomes, creating viral reservoirs, sanctuaries where HIV persists despite ART, throughout the body. When a complete copy of the virus, or intact viral genome, is incorporated into a cell’s genome, it can be used to create new copies of HIV. For people living with HIV, this means that if they stop taking ART, the intact viral genomes previously integrated into the cells’ genomes start making new copies of the virus, leading to rapid viral rebound and disease progression. The HIV viral reservoir has remained a major obstacle to an HIV cure.

Elite controllers’ immune systems use a T-cell mediated immune response to control the virus without medication, to the point that the virus is completely undetectable by standard assays. Understanding the interplay between their immune system and HIV may hold the key to helping the immune systems of people living with HIV to suppress the virus without daily treatment, achieving what is known as a functional cure.

Yu’s group studied the viral reservoir in elite controllers, using next-generation sequencing techniques to precisely map the locations of intact HIV genomes in the human genome. They found that in elite controllers, HIV was often found in locations of the genome that researchers call gene deserts. In these inactive parts of the human genome, human DNA is never turned on, and HIV cannot be effectively expressed but remains in a “blocked and locked” state. This means that HIV is locked in the cell’s genome, and the viral genome is blocked from being used to create more viruses and is therefore incapable of causing disease.

> **Unlike ART-treated individuals, elite controllers’ viral reservoirs appear to be incapable of being reactivated. This...may represent a distinguishing feature for a functional cure of HIV infection.**

“This positioning of viral genomes in elite controllers,” Yu, says, “is highly atypical, as in the vast majority of people living with HIV-1, HIV is located in the active human genes where viruses can be readily produced.”

When the authors collected cells from elite controllers and infected them with HIV in the lab, they found the virus integrated into active sites in the cell genomes, not in the inactive gene deserts. This suggests that the elite controllers’ unique viral reservoirs may be a result of their HIV-suppressing T cell response eliminating intact viral genomes from active sites.

If researchers are able to identify which viral reservoirs can make new copies of the virus after treatment stops, it may help them to target a treatment against the active, or rebound-competent, reservoirs. This study suggests that if researchers can activate the kind of T cell immunity that is present in elite controllers, they may be able to eliminate rebound-competent viral reservoirs in people living with HIV, achieving a functional cure. The remaining viral DNA, located in non-active parts of the human genome, could be allowed to exist without causing disease.

“NHLBI is interested in understanding how the immune systems of some people living with HIV naturally control their infection without medication,” said Keith Hoots, M.D., director of the Division of Blood Diseases and Resources at the National Heart, Lung, and Blood Institute, part of the National Institutes of Health, and a veteran HIV researcher himself. “What happens with these individuals, whom we call elite controllers, may shed light on an HIV-1 cure and also help us understand how a person with HIV might control virus and avoid HIV-associated comorbidities.”

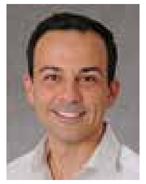
Yu’s group had one more finding: one of their elite controller participants had no intact HIV found in over 1.5 billion cells analyzed. This raises the possibility that a “sterilizing cure” of HIV, in which the participant’s immune system has removed all intact HIV genomes from the body, may be achieved naturally in extremely rare instances.

This project was supported by the National Heart, Lung, and Blood Institute, the National Institute of Allergy and Infectious Diseases, the National Institute of Drug Abuse, the National Institutes of Health, the Mark and Lisa Schwartz Family Foundation, the Ragon Institute of MGH, MIT and Harvard, the Bill & Melinda Gates Foundation, and the Foundation for AIDS Research (amfAR).

MS Drug May be Used to Inhibit HIV Infection and Reduce Latent Reservoir

Fingolimod, used to treat multiple sclerosis flare-ups, may inhibit HIV replication and consequently reduce the latent reservoir, according to research published in PLOS Pathogens by GW researchers

Fingolimod, an FDA-approved immunosuppressive drug used to treat multiple sclerosis flare-ups, may be used to block HIV infection and reduce the latent reservoir. Researchers at the George Washington University (GW) published their novel findings in PLOS Pathogens.



“While antiretroviral drugs have been effective in treating HIV thus far, drug resistance, negative side effects of antiretroviral therapy, and its varying efficacy underscore the need to develop alternative treatment and prevention options,” said Alberto Bosque, PhD, MBA, assistant professor of microbiology, immunology, and tropical medicine at the GW School of Medicine and Health Sciences. “For the first time, our research team found that by targeting the receptors to the signaling molecule Sphingosine-1-phosphate (S1P), we could effectively block HIV infection and cell-to-cell transmission of the virus and consequently reduce the seeding of the latent virus in the test tube.”

Treatment for HIV is lifelong, due to a latent reservoir of HIV-infected cells that may reactivate at any time. In addition to other drawbacks, current antiretroviral therapies do not specifically target latent infection. Finding ways to not only target infection, but also reduce the latent reservoir would have a great impact on the nearly 40 million people living with HIV worldwide.

Fingolimod, known also as Gilenya, works by acting as a functional antagonist of S1P receptors. By observing human immune cells, Bosque and his research team found that HIV infection was blocked by targeting S1P receptors with Fingolimod. The team discovered that the HIV life cycle was impacted at multiple levels. First, the drug reduced the surface density of the HIV receptor in T-cells, inhibiting viral binding and fusion. Secondly, Fingolimod activated the antiviral restriction factor SAMHD1, leading to a reduction in levels of total and integrated HIV.

“We believe this compound may be a promising novel therapy for HIV treatment and prevention,” said Bosque.

“Fingolimod inhibits multiple stages of the HIV-1 life cycle,” was published in PLOS Pathogens.

Kidney transplantation between people with HIV is safe, NIH study finds

Multicenter HOPE Act study expands pool of available kidneys

KIDNEY TRANSPLANTATION from deceased donors with HIV to people living with both HIV and end-stage kidney disease is feasible and safe, investigators supported by the National Institutes of Health have found. Their study demonstrates that the pool of available kidneys for people with HIV can be expanded by including donors with HIV, making more kidneys available for all who are awaiting a transplant.

The new findings build on research from 2019, when scientists from the University of Cape Town and NIH reported that people living with HIV who received kidney transplants from deceased donors with HIV had high overall survival and kidney graft survival after five years.

People living with HIV have a growing prevalence of end-stage kidney disease and are nearly three times more likely to die while on kidney dialysis than people without HIV. Kidney transplantation extends the lives of people with HIV and end-stage kidney disease, but these individuals face a shortage of donors and limited access to donor kidneys. The HIV Organ Policy Equity (HOPE) Act, passed by the U.S. Congress and signed into law in 2013, allows organ transplants from donors with HIV to recipients with HIV in approved research studies in the United States. Experts concurred that kidney transplantation between people with HIV would expand the pool of available organs and save lives. Consequently, investigators sought to explore the safety of this innovative transplantation practice.

The multicenter study was conducted by the HOPE in Action team led by Christine M. Durand, M.D., associate professor of medicine, and Dorry Segev, M.D., professor of surgery at Johns Hopkins University in Baltimore. NIH’s National Institute of Allergy and Infectious Diseases (NIAID) funded the study with additional support from the National Cancer Institute, also part of NIH.

Between March 2016 and July 2019, investigators at 14 clinical research sites enrolled 75 adults with end-stage kidney disease and HIV whose virus was reliably suppressed by anti-HIV therapy. Twenty-five participants received kidney transplants from deceased donors with HIV, and 50 participants received kidney transplants from deceased donors without HIV. The latter group included 22 donors who had false-positive HIV tests, another new organ source that has been an unexpected benefit of the HOPE Act.

All participants survived transplantation at a median follow-up of 1.4 years for recipients of HIV-positive kidneys and 1.8 years for recipients of HIV-negative kidneys. One year after transplantation, overall graft survival was excellent and comparable between recipients of HIV-positive kidneys (91%) and HIV-negative kidneys (92%). In addition, there were no differences in the rates of infections requiring hospitalization, serious adverse events (1.1 per person year) or HIV-related complications, which were rare.

Dr. Durand also is leading the HOPE in Action Multicenter Kidney Study, a large-scale, NIAID-sponsored clinical trial to further study the safety of kidney transplantation between people with HIV.

ACADEMY MEMBER

SPOTLIGHT

BY AARON AUSTIN, MEMBERSHIP DIRECTOR

Ronald Cathcart, MD, AAHIVS
Melbourne, Florida

“BY FAR, FOUR OF THE BEST YEARS OF MY LIFE.” This is how Dr. Cathcart recalls his time at Meharry Medical College, a HBCU in Nashville, TN, specializing in healthcare education. As part of his medical training he did externships in Mississippi and Alabama where he ‘delivered’ babies. “Of course,” Ronald says, “the mothers did all the work! I also had the privilege and pleasure of doing an externship in Ghana for one summer.” After medical school, he did his internship and residency in Internal Medicine at the University of Florida in Jacksonville before going into private practice in Fort Myers for about three years in the late 1980s.

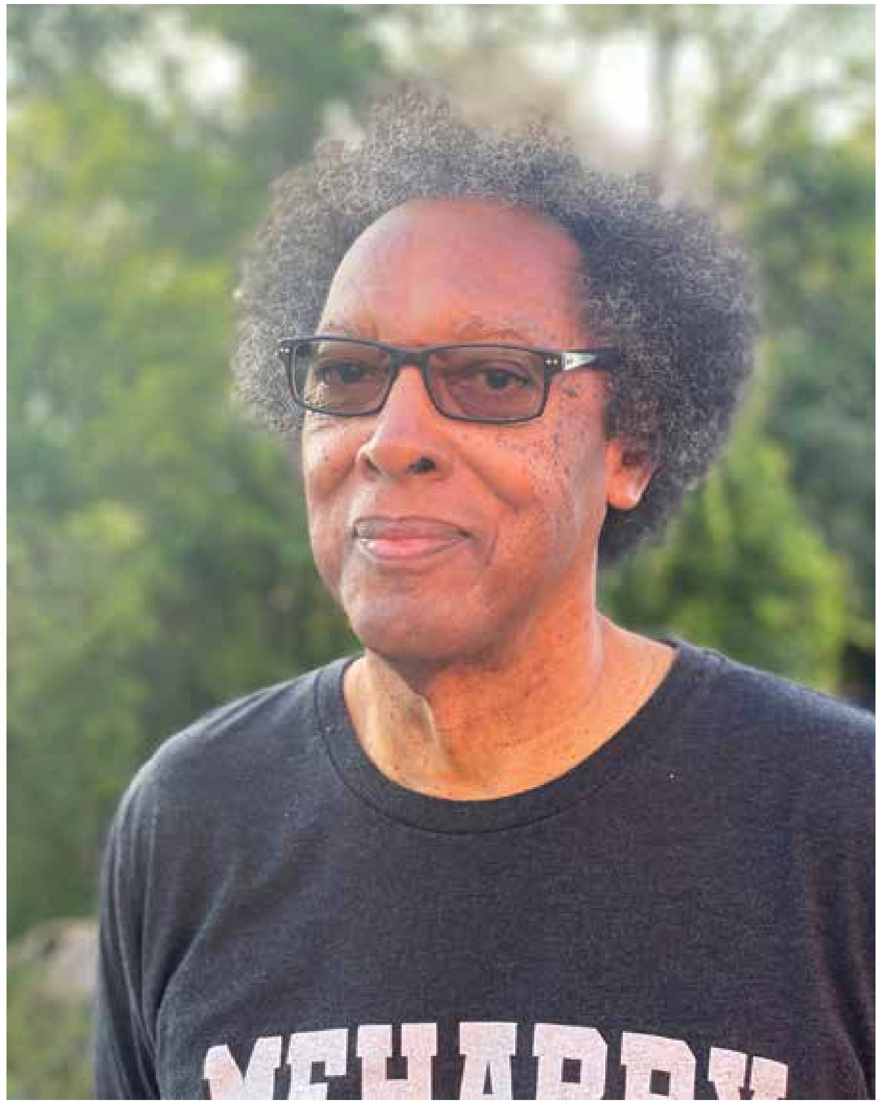
“… I want to continue to see and be a part of progress in the field of HIV medicine and I would like to see more patients (and staff) adopt a healthier lifestyle to avoid preventable diseases caused by poor diet and poor choices in general…”

“A friend of mine in Fort Lauderdale asked me to come into the health department to treat people living with HIV,” recalls Ronald. “I was not satisfied with private practice and, after about two years of telling her ‘no,’ I agreed to sign on and become a staff physician. I became the medical director of the clinic.” Dr. Cathcart spent 17 years with the Broward County Health Department treating patients living with and dying from HIV from 1989 to 2006. “It was a lot of heartbreak and tears for a while because, at first, most of our patients (most of whom were young) eventually died. In 1996, things did change: highly active antiretroviral therapy became available and patients started living.”

In 2006, Dr. Cathcart moved to Brevard County and joined Comprehensive Health Care, a non-profit, Ryan White supported, stand-alone practice in Melbourne, Florida; officially called Unconditional Love, Inc. doing business as Comprehensive Health Care. He is still in practice as a staff physician here today along with a robust team. “We have a nurse practitioner, four registered nurses (one of whom is the chief operating officer), eight case managers, medical records personnel, one nurse assistant and receptionists, drivers, and assistants to the CEO. The clinic was started by a nurse practitioner who worked at the Brevard County Health Department because there was no non-private medical entity that treated people with HIV in 1991. She and her brother and friend were the first staff of the clinic.”

Together with a nurse practitioner, Dr. Cathcart sees about 20 patients a day and works five days a week. He has about 700 active patients; most (about 87%) of whom have undetectable viral loads. Asked to consider his patient population, Ronald shares, “We have a broad mixture of patients with HIV. Some work, others are retired, many are disabled. We only see adults (18 years and older). Our oldest patient is 91 years old. More than half of our patients are over age 50. The most common risk factor for acquiring HIV is men who have sex with men (about 60 to 65%), followed by heterosexual transmission, intravenous drug use, and vertical transmission from mother to child. A minority include blood transfusion and unknown risk factors. European-Americans make up about 50 percent of our patients followed by African-Americans being about 40 percent and Hispanic-Americans and Caribbean-Americans make up about 10 percent of our patients.”

Dr. Cathcart and his team epitomize the kind of multidisciplinary collaborative approach to care that many practices strive to achieve. He says, “We have a team of people here who could probably make more money elsewhere. However, with all of us working together with and for our patients, they (the patients) seem to have bought into our approach: treat patients like family and show them that we care for and about them. Until the money ran out, we had Christmas parties for our patients and their families. Our goal is to do whatever we can to keep our patients as healthy as possible. We are aware that the patients must do their part every day. We see them about once every four to five months, so during their appointment we do our best to treat them as best as we can.”



Dr. Cathcart tells his patients the secret to having and keeping an undetectable viral load: take your antiretrovirals (usually one pill once a day) as directed. His patients generally take their medications and keep their clinic appointments. “My job is made easier by the drug companies,” says Ronald. “They have antiretrovirals that are friendly, easy to take, and with little in the way of side effects. This way, our patients are generally adherent and that means everything. In the bad old days things were much different and patients didn’t live long enough to suffer from most of the comorbidities. Today, our patients die, not from HIV, but from what I call diseases that could be treated and sometimes reversed by a healthy lifestyle. There is a great reluctance, as I see it, by our patients to adopt changes in their lives that would require action on their part. These changes include diet, exercise, and stopping smoking, drinking alcohol, and using street drugs.”

Looking to the future, Dr. Cathcart believes we will have long-acting medications that may only need to be given once a year or longer, meaning patients may need to be seen less often. He hopes a cure for HIV will materialize one day but has doubts. He thinks preexposure prophylaxis (PrEP) will become more widespread, and hopefully among high risk groups such as young, African-American men who have sex with men. “I am coming to the end of my career,” Ronald shares. “I hope to work as long as possible. I want to continue to see and be a part of progress in the field of HIV medicine and I would like to see more patients (and staff) adopt a healthier lifestyle to avoid preventable diseases caused by poor diet and poor choices in general.”

Dr. Cathcart recently had the opportunity to return to his medical school, Meharry Medical College, after almost 47 years and give a talk to medical staff and students. “I had the opportunity to return to a place where I had the best time of my life. I was welcomed with open arms. Of course, I cried tears of joy. I took pictures with some of the medical students. It was great to return to a place I will always cherish!”

Outside of work, Ronald’s life is about family, including his children and grandchildren. “I want to see them all grow to be successful in life. Of course, that success is whatever they think it is. I want to be the best dad and grandpa possible. That means always to be myself and to continue to live as healthy a lifestyle as possible.”

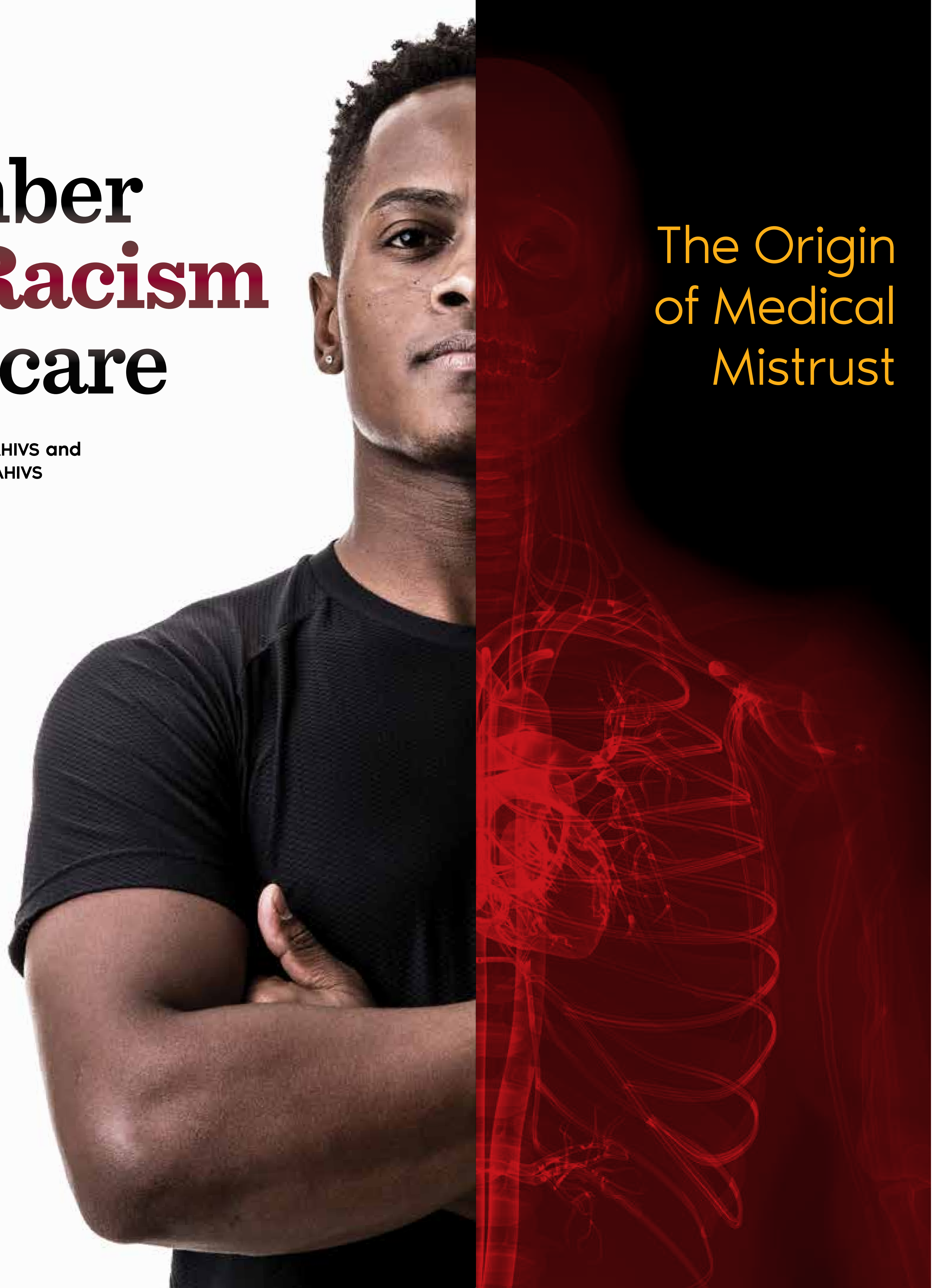
Asked why he joined AAHIVM as an Academy Member, Ronald says “I joined AAHIVM because it was an organization that had the tools to continue to educate me on matters of HIV. I look forward to reading the information in the emails and the challenge of continuing to credential as an HIV Specialist. This organization is truly dedicated to its members in keeping us up-to-date with the latest information in the field of HIV.” **HIV**

AAHIVM Membership Director **AARON AUSTIN** organizes, engages and leads the Academy’s global membership of frontline HIV care providers around initiatives of advocacy, education and professional development. He is currently completing coursework for his MPH at The George Washington University Milken Institute School of Public Health.

The Somber History of Racism in Healthcare

The Origin of Medical Mistrust

By Michelle Ogle, MD, FAAP, AAHIVS and
Ada Stewart, MD, FAAP, AAHIVS



RACISM IS DEFINED AS A BELIEF that different races possess distinct abilities, characteristics or qualities which are used to distinguish them as inferior or superior to one another.[1] From the earliest recordings in history, racism has been based on the myth that Black people are different, and have inferior physical and mental abilities. In fact, the gross disparities within the healthcare system is based on racism.

From the beginning of slavery, white physicians played a key role in the abuse and mistreatment of black bodies. Slaves were medically neglected and abused because they were not legally human beings, which left them powerless. Slave owners decided when and if healthcare was given. They often allowed medical care to be rendered to save the life of their property after their homemade remedies failed. Too often medical treatment was late or diseases were improperly diagnosed. When slaves were ill, they were accused of faking, feigning or being lazy. Physicians were used to reinforce the owner's diagnoses or decide whether the slaves were actually ill. But many southern physicians' profitability and support of slavery put them in a position to render medical decisions based on their shared economic success with the slave owners, not what was best to save another human being.[2]

Dr. Samuel Adolphus Cartwright was the most prominent physician, surgeon, and medical scientist in antebellum Mississippi.[3] He published more than eighty articles in the national medical press on a variety of topics, winning numerous awards for his original research and contributions to medical literature. His influence extended beyond medicine, and he became widely known as a slavery advocate and published articles on slave physiology and health. In 1846, Dr. Cartwright was elected as first president of the Mississippi State Medical Society, turning his focus on writings based on pro-southern, pro-slavery and black inferiority theories.[3] He stressed that blacks and whites were physiologically and structurally different, thus requiring different medical treatments. Cartwright also suggested Black slaves were mentally incapable of functioning without a white master.

Many nineteenth-century southern physicians also owned slaves while shaping the role of ethnicity in medicine and health.[2] In the antebellum south, these physicians propagated flawed theories that Black patients had different diseases, disease susceptibilities and medical outcomes than whites. Doctors often used these ideas to provide scientific justifications for slavery and black inferiority. Cartwright contended that the relation of the slave and master was "not based upon human but Divine law" and concluded that the Bible doomed Blacks to be "servant of servants."[3] Cartwright's extreme racial and pro-slavery views became the template for southern physicians to continue supporting slavery as many of them acquired their wealth from providing medical care for slaves. In 1853, Dr. Cartwright said, "The most profitable kind of practice is that among negroes."[4]

When slaves were too old or sick for monetary gain, their owners would sell them to physicians for use in experiments. It was also common practice to "raise slaves" for the sole reason to be used in experiments. Involuntary experimentation on freed slaves occurred by kidnapping, and selling them to the highest bidder. The concept of informed consent was not seen as essential in all experiments and not required by law when Blacks were used as study participants. When consent was obtained, Black people were often lied to about the purpose of the experiment and how they would benefit from participation or would add other clinical experiments without informing participants.

Teaching Racism

As the concept of teaching hospitals evolved in the nineteenth century, medical students were expected to experience specialized teaching, including gaining knowledge by experimenting on black bodies. This became more difficult after the abolition of slavery because black people were not permitted to receive inpatient care at hospitals with wealthy whites.

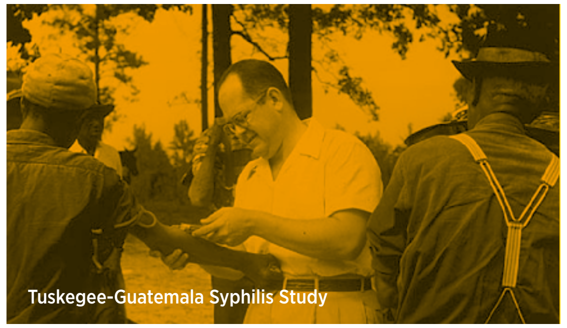
To address this dilemma, many hospitals established “Charity Wards” to house experimental subjects which mainly included Blacks and poor whites.[5] In exchange for payment of medical services rendered, patients on the Charity Ward would agree to be subjects of experimentation and teaching material. In many cases, patients were unknowingly agreeing to life saving medical treatment being withheld so students could observe disease progression. Having access to black bodies, enslaved and free was used as a marketing tool to attract students to attend medical schools and teaching programs throughout the south

This unlimited access to black bodies became very lucrative, providing limitless access for surgeries, observing physical progression of infections and response to various experimental treatments. Physicians would perform unnecessary surgeries to gain notoriety and skills at the expense of black lives.[5] The overall mission was to use black bodies and poor whites to collect data on success or treatment failures of diseases common in wealthy, well to-do-whites.

Overtime, physicians learned and accepted that medical or surgical treatment were based on race and socioeconomic status. Physicians and nurses graduated from teaching institutions with little regard for black lives and understanding they were nothing more than research material.

Paving the Way

In 1847, Rush Medical School in Chicago, graduated the first African American physician in the U.S.[6] Dr. David Jones Peck, paved the way for other African American men to pursue medical careers to provide care for Black people who were being denied fair and equal medical treatment such as Dr. Daniel Hale Williams, who graduated from the Chicago Medical College in 1883 (today known as Northwestern Medical School).[7] Dr. Williams practiced medicine in Chicago at a time when there were only three other Black physicians in Chicago and became the first surgeon to perform open-heart surgery on a human. Dr. Williams was not only a successful open heart surgeon, he was a fierce advocate in addressing disparities within healthcare, co-founding the National Medical Association, a professional organization for black medical clinicians founded as an alternative to the all-white American Medical Association that did not extend membership to Black doctors.[7]



Tuskegee-Guatemala Syphilis Study

Black physicians, like Dr. Williams, provided the impulse for the establishment of black hospitals as a means of providing medical education and much needed care for freed slaves. In 1862, in Washington, D.C., the Medical Division of the Freedmen's Bureau (Bureau of Refugees, Freedmen and Abandoned Lands) established Freedman's hospital to provide medical care to slaves, especially those freed following the aftermath of the Civil War.[8] Approximately 30 years later, Dr. Williams founded Provident Hospital and Training School in Chicago which became the first black owned and operated hospital in the United States providing training for Black nurses and interns.[7] For the first time, medical treatment for Black patients, was provided by Black medical and nursing students both of whom had been denied access to white hospitals.

Until the 1960s, many hospitals would not admit Black patients or hire Black medical staff. According to Nathaniel Wesley Jr.'s book, “Black Hospitals in America: History, Contributions and Demise,” about 500 hospitals were exclusively owned or operated by Black doctors who primarily served Black patients in their communities during the height of the country's segregated past. Today, Howard University Hospital, previously the Freedman's hospital, remains the only black-owned and operated hospital in the country.[8]

Tuskegee-Guatemala Syphilis Study (1932-1972): The Real Story

In 1932, the U.S. Public Health Service commissioned its study of syphilis in the “Untreated Negro Male” (Tuskegee–Guatemala Study).[9] Once again, poor Black men were promised free healthcare to allow white doctors to use their black bodies for experimentation. Syphilis was pervasive in Macon County, Ala., with Black men being infected at alarming rates. The U.S. government promised approximately 600 impoverished Black men living free treatment for their syphilis. In reality, the syphilis study's design was to collect data on the progression of untreated syphilis in “negro males.”[9]

After these men died, autopsies were performed to document disease progression and organ system involvement. The underlying theory was that syphilis behaved differently in white men than in Blacks. Syphilis was thought to affect the brain and neurologic system in whites, while the disease was thought to primarily affect the cardiovascular system in Blacks because their brains were smaller, less well developed than white men's, and therefore the infection would spare the neurologic system including the brain. Black men were stigmatized as whores, sexual deviants and responsible for the spread of the infection, thereby unworthy of treatment.

In 1958, the U.S. Public Health Service, awarded certificates and the participants $25 for their sacrifice. Another fact not widely known is the U.S. government also promised to pay Guatemala to allow the same study design to be implemented in incarcerated, poor and mentally disabled Hispanic men.[9] The Tuskegee - Guatemala Syphilis study is the longest and most widely known experiment documenting the gross abuse suffered by Black and Guatemalan men and their families at the hands of the U.S. healthcare system. The effects from this horrific experiment on Black men are still lingering and a major factor for the distrust felt by Black Americans today.

HIV adds to the Problem

The HIV medical community is not innocent in adding to the distrust felt by many populations of color. In 1981, CDC reported the first known cases of AIDS (26 cases, one African American). By 1984, 50 percent of pediatric AIDS cases are among African Americans and between 1988–1991, for the first time, the number of new infections among African Americans exceeded the number of infections in whites. Today, African Americans have the highest rates of HIV infection in the nation.

Although just 13 percent of the U.S. population, Blacks account for nearly 50 percent of those living and dying with HIV/AIDS. As the demographics of HIV infection changed from gay white men to African American women and men, America's attitudes towards people living with HIV/AIDS changed as well—from empathy for the victims to apathy for Blacks, with many onlookers assuming the positive minority population contracted HIV because they were sexually promiscuous or drug users.

Nowhere can this be seen more vividly than with the experimentation conducted on infants and children with HIV in foster care. Since the early 1990's HIV-positive orphans were the subjects of many national clinical trials conducted by Columbia University Medical Center, as well as other New York area hospitals and teaching institutions. Pharmaceutical companies, including but not limited to GlaxoSmithKline (GSK), the makers of Zidovudine (AZT), had run clinical trials testing the first antiretroviral, as well as other medications on about 100 HIV positive orphans living in New York's Incarnation Children's Center (ICC).[10] In the late 1980's through 2005, Columbia University managed AIDS ARV trials through the Pediatric AIDS Clinical Trials Group (PACTG).[10] These trials were supported at the highest levels within the state's government including the National Institute of Child Health and Human Development with the approval of New York's administration for Children's Services. These infants and children's bodies were experimental subjects for many HIV treatment drug trials. It is reported that 36 drug trials were conducted at the ICC between 1997 and 2003.[10]

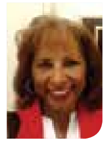
The major concern is there were no parental consents or consent from legal guardians or foster parents. Decisions for participation was made by ICC or Columbia University. Federal law gives parents the right and responsibility to decide if their children should be enrolled into a clinical trial and when they should be withdrawn. The children placed in ICC didn't have parents who were deemed responsible, given that many were incarcerated or dead. The children certainly could not provide assent. These children were property of the city of New York and governmental agencies. They gave consent for these children to be used as experimental subjects.

“We've Always Done it This Way”

It's hard to change 400 years of structural racism and discrimination. We tried to present a brief, painful history of how racial discrimination has shaped the current disparities within the healthcare system. At no time since the beginning of slavery has the health of black and brown people been equivalent to that of whites. Racism was built into our healthcare system and old habits are hard to break. This legacy of discrimination, and treating black bodies as experimental subjects has resulted in mistrust and an understanding that Black people receive substandard healthcare. Trust can facilitate or deter ones willingness to seek healthcare. What matters is having healthcare providers who can communicate in a language that patients culturally relate to and trust who treats them with dignity and respect. **HIV**

Acknowledgments

We would like to thank Harriet A. Washington, author of “Medical Apartheid.” It is the most detailed account of abusive medical practices against black people. Reading her book better informed our understanding of the long mistrust Black people have in white doctors and the healthcare system overall. And thank you to the Academy for giving us this space.



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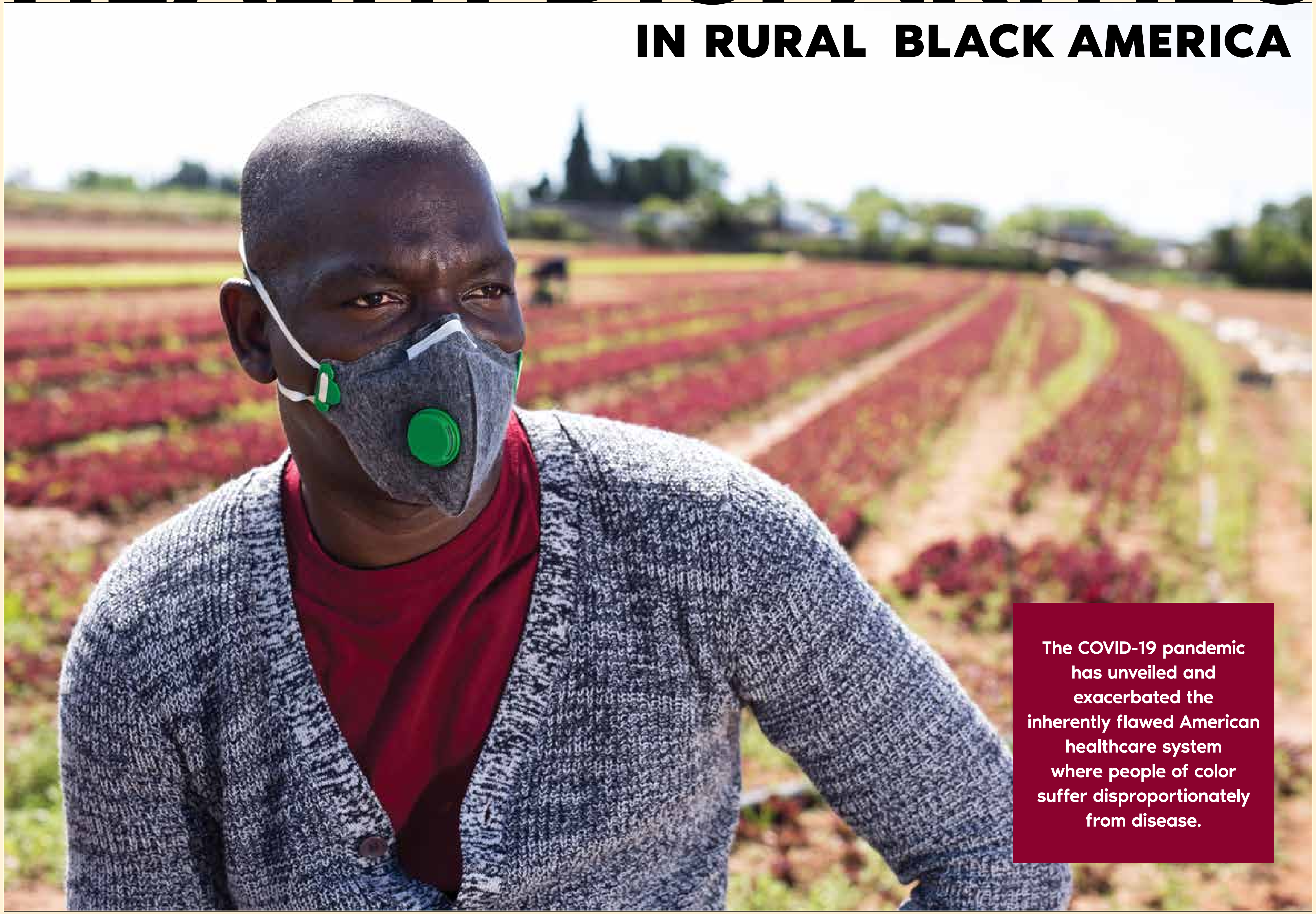
HEALTH DISPARITIES
IN RURAL BLACK AMERICA



SHUTTERSTOCK/ IAKOV FILIMONOV

> **The COVID-19 pandemic has unveiled and exacerbated the inherently flawed American healthcare system where people of color suffer disproportionately from disease.**

Why COVID-19 and HIV are Killing Us

By Ada Stewart, MD, FAAP, AAHIVS

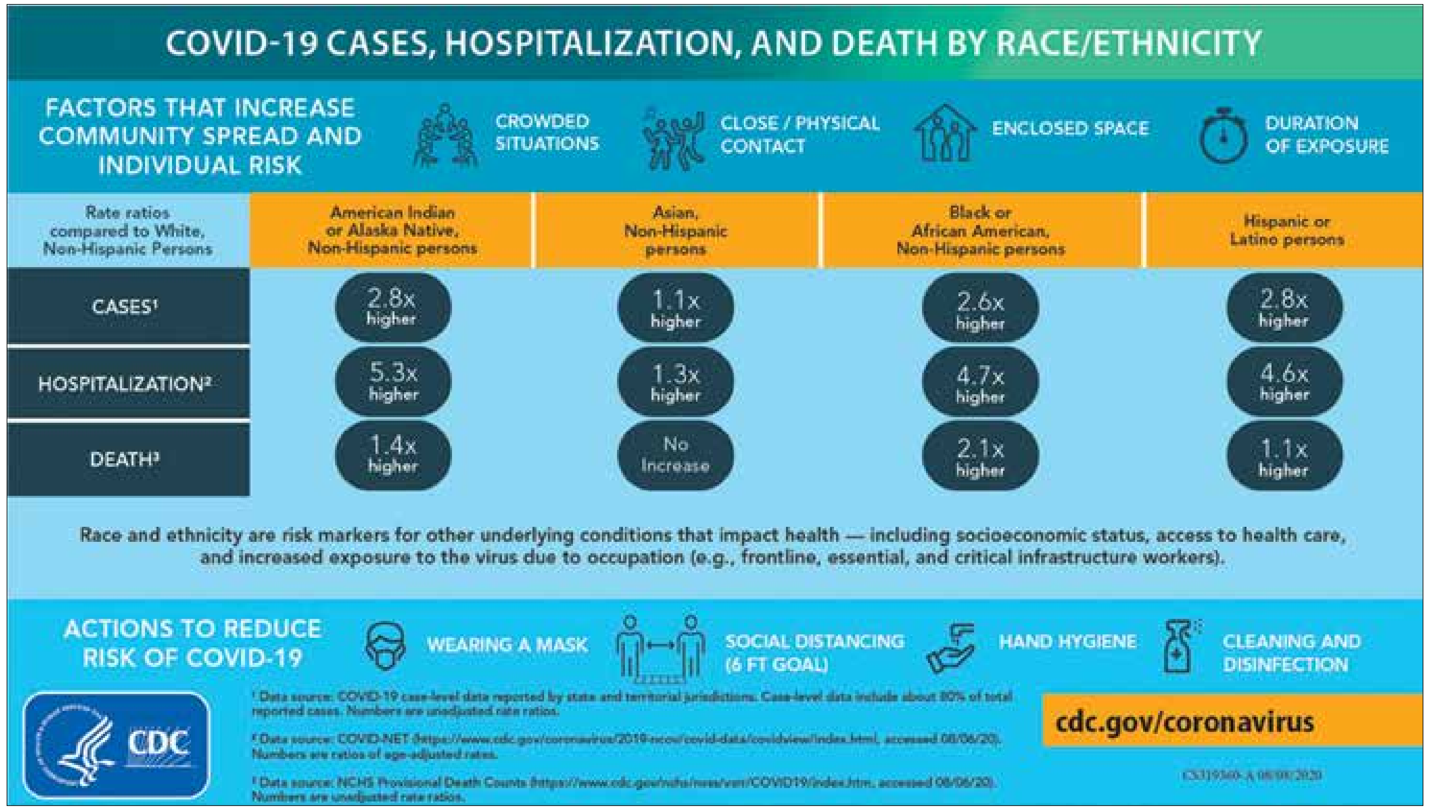
RURAL BLACK AMERICA faces significant health disparities due to many multifactorial challenges. These include stigma, a poorer elderly population, food deserts, and a lack of resources. These communities often have reduced access to healthcare, clean water, and transportation. Thus, these myriads of challenges have resulted in a disproportionate impact on African Americans related to HIV and SARS-CoV-2.

The COVID-19 pandemic has unveiled and exacerbated the inherently flawed American healthcare system where people of color suffer disproportionately from disease.[1] Many physicians who are committed to serving HIV patients in underserved communities are now experiencing the same challenges and barriers in treating COVID-19 in rural America. (Table 1)

In regards to HIV, southern states are not evenly burdened compared to the rest of America. The majority of the southern region is rural and a majority of new HIV cases are concentrated in the south.[2] (Table 2)

In President Donald Trump's State of the Union Address in February 2019, he announced plans to eradicate HIV/AIDS by 2030. Until recently, HIV/AIDS was thought of as a predominantly urban issue, but the 2015 HIV outbreak in Scott County, Ind., brought a new light and a new lens to the disease's prevalence in rural America. As Congress works with the Administration to develop strategies to prevent future cases of HIV/AIDS, they must acknowledge the challenges and needs of rural Americans living with the HIV and struggling to access necessary care.[3]

Table 1



COVID-19 CASES, HOSPITALIZATION, AND DEATH BY RACE/ETHNICITY

FACTORS THAT INCREASE COMMUNITY SPREAD AND INDIVIDUAL RISK: CROWDED SITUATIONS; CLOSE / PHYSICAL CONTACT; ENCLOSED SPACE; DURATION OF EXPOSURE

Rate ratios compared to White, Non-Hispanic Persons	American Indian or Alaska Native, Non-Hispanic persons	Asian, Non-Hispanic persons	Black or African American, Non-Hispanic persons	Hispanic or Latino persons
CASES[1]	2.8x higher	1.1x higher	2.6x higher	2.8x higher
HOSPITALIZATION[2]	5.3x higher	1.3x higher	4.7x higher	4.6x higher
DEATH[3]	1.4x higher	No Increase	2.1x higher	1.1x higher

Race and ethnicity are risk markers for other underlying conditions that impact health — including socioeconomic status, access to health care, and increased exposure to the virus due to occupation (e.g., frontline, essential, and critical infrastructure workers).

ACTIONS TO REDUCE RISK OF COVID-19: WEARING A MASK; SOCIAL DISTANCING (6 FT GOAL); HAND HYGIENE; CLEANING AND DISINFECTION

[1] Data source: COVID-19 case-level data reported by state and territorial jurisdictions. Case-level data include about 80% of total reported cases. Numbers are unadjusted rate ratios.

[2] Data source: COVID-NET (https://www.cdc.gov/coronavirus/2019-ncov/covid-data/covidview/index.html, accessed 08/06/20). Numbers are ratios of age-adjusted rates.

[3] Data source: NCHS Provisional Death Counts (https://www.cdc.gov/nchs/nvss/vsrr/COVID19/index.htm, accessed 08/06/20). Numbers are unadjusted rate ratios.

cdc.gov/coronavirus

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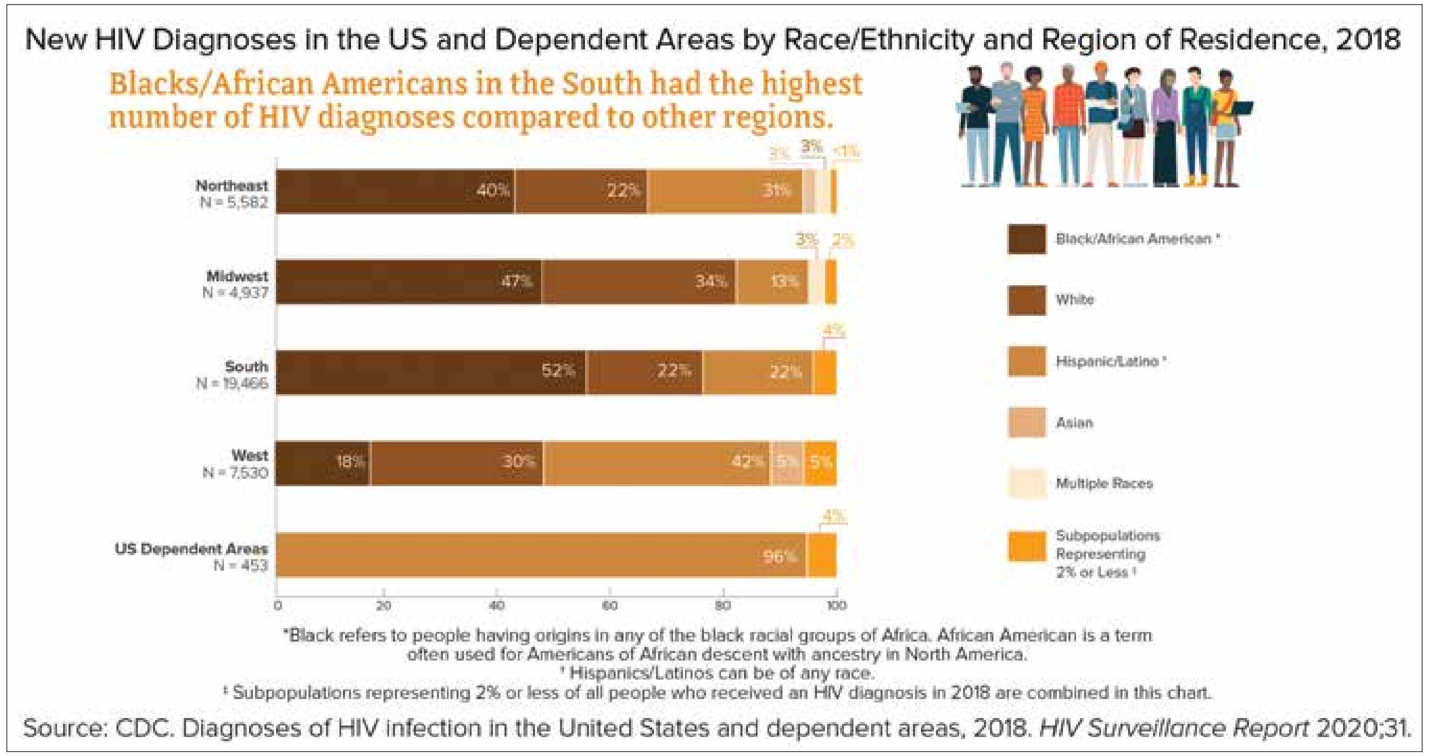
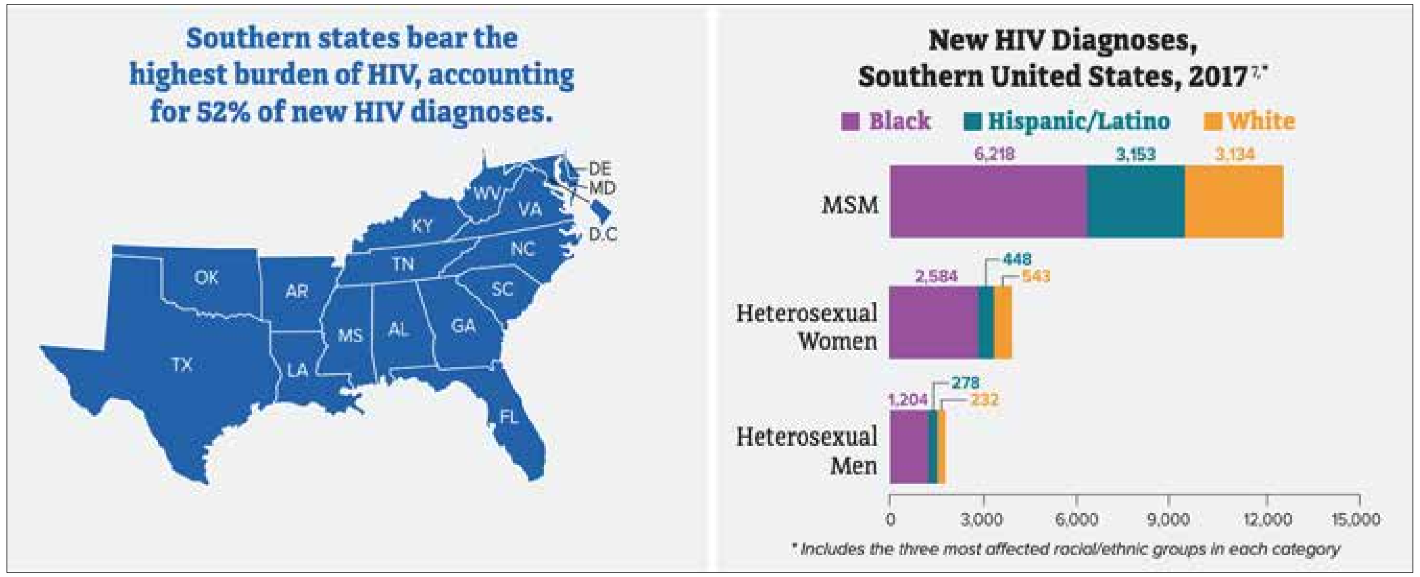
Table 2



*Black refers to people having origins in any of the black racial groups of Africa. African American is a term often used for Americans of African descent with ancestry in North America.
† Hispanics/Latinos can be of any race.
‡ Subpopulations representing 2% or less of all people who received an HIV diagnosis in 2018 are combined in this chart.

Source: CDC. Diagnoses of HIV infection in the United States and dependent areas, 2018. *HIV Surveillance Report* 2020;31.

Table 3



The program "Ending the HIV Epidemic: A Plan for America," was a call to action and has been implemented to reduce the number of new HIV infections in the United States by 75 percent by 2025, and at least 90 percent by 2030. Phase I of the plan focuses on 57 priority jurisdictions, including 48 counties, Washington, D.C., and San Juan, Puerto Rico, and seven states with a disproportionate occurrence of HIV in rural areas. This includes six of the seven states which are in located in the South, notably Alabama, Arkansas, Kentucky, Mississippi, Oklahoma, and South Carolina.[3]

The impact of HIV in the South varies by race. African Americans are disproportionately impacted in every risk group, accounting for 53 percent of new HIV diagnoses in the region in 2017. Black gay, bisexual, and other men who have sex with men (MSM) account for six out of every 10 new HIV diagnoses among African Americans in the South. Among MSM, the number of new diagnoses in Black MSM is nearly twice that of white and Hispanic/Latino MSM. While the number of new HIV diagnoses is similar among the latter two groups, new diagnoses among Hispanic/Latino MSM in the south have increased 27 percent since 2012. While new diagnoses among white MSM in the South have decreased nine percent in the same period. Among women, Black women are also disproportionately impacted, accounting for 67 percent of new HIV diagnoses among all women in the South.[2] (Table 3.)

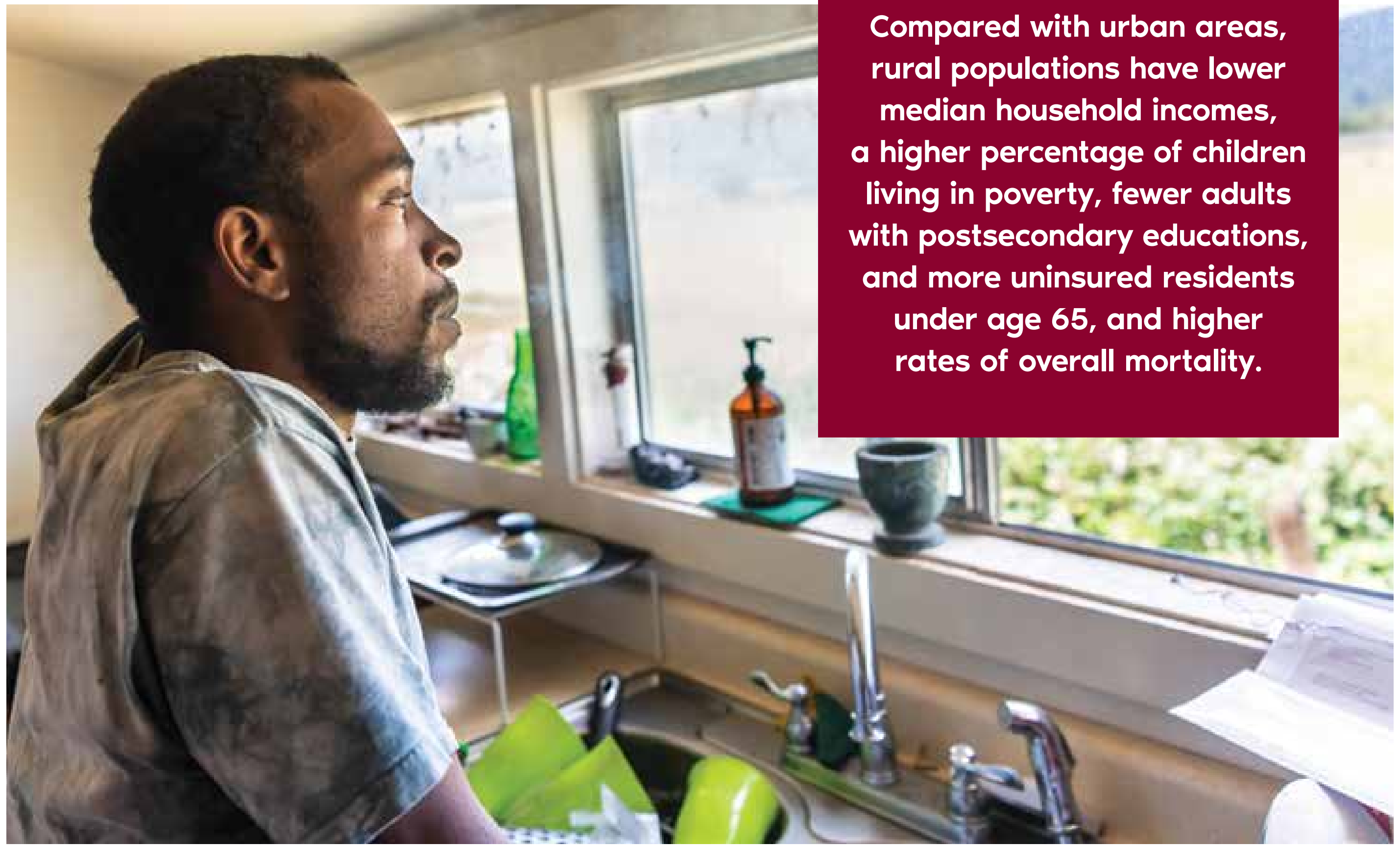
Despite significant progress in treating HIV with antiretroviral therapy, the mortality rate continues to remain high in the South. In some southern states the HIV death rate is three times higher than in other states. Although death rates have declined since 2012, the South accounted for nearly half (47 percent) of the 15,807-people diagnosed with HIV in the U.S. who died in 2016. These high mortality rates are secondary to the challenges and barriers to care in the rural areas.[4]

Pre-exposure prophylaxis (PrEP) for HIV is underutilized across the nation with less than a quarter of the 1.1 million Americans who could benefit from its use. The South has had limited uptake and Southerners accounted for only 27 percent of PrEP users in 2016, even though the region has more than half of new annual HIV cases.[5] However, implementation of PrEP has slowly improved over the past few years because of programs such as the "Ready Set Prep" initiative which makes PrEP medications available at no cost to individuals who lack prescription drug coverage.[6]

What factors are behind these disparities?

Stigma

Stigma is one of the most significant barriers to individuals living in rural communities. In rural areas, especially in the South, the stigma surrounding HIV/AIDS and its associated risk factors limit people's willingness to get tested, disclose their HIV status, seek treatment and or receive preventive services. Associated risk factors that can further create additional barriers include: sexual orientation, substance abuse disorder, poverty, and commercial sex work. These individuals are usually a part of a smaller community where



ISTOCK/ JUANMONINO

> **Compared with urban areas, rural populations have lower median household incomes, a higher percentage of children living in poverty, fewer adults with postsecondary educations, and more uninsured residents under age 65, and higher rates of overall mortality.**

everyone knows everyone and therefore may not seek out the necessary services for prevention or treatment.

Implicit bias among physicians can further limit one's opportunity to obtain HIV testing, care, or prevention services. Several myths and misinformation often run rampant in rural areas regarding HIV. Issues such as homophobia and transphobia, racism, and general discomfort with public discussion of sexuality may be more widespread in the South (rural areas). These challenges can limit access to accurate sexual health information, which people need to protect themselves from infection.

One way to address this is to expand sex education in school and have community health services that are focused on the overall health of individuals in these areas. Some communities have found success with the support of the Black churches in these areas. In addition, having support services and needle exchange programs with these areas can be of great benefit. If issues around stigma are not addressed, the number of individuals living and dying with HIV/AIDS will not decrease.

Poverty

Rural areas tend to have higher poverty rates and lower rates of health insurance coverage. Among the total non-elderly population, 15 percent of individuals in the South are uninsured compared to 10 percent of individuals in the rest of the country. Uninsured rates are lower for children compared to non-elderly adults, but children and non-elderly adults in the South are still more likely to be uninsured than those in the rest of the country.

Compared with urban areas, rural populations have lower median household incomes, a higher percentage of children living in poverty, fewer adults with postsecondary educations, and more uninsured residents under age 65, and higher rates of overall mortality.[7]

Many rural residents live on farms, ranches, reservations, frontiers, or in unstable housing and may live far from places to access the care that they need. They often must travel long distances to reach a healthcare provider. That means taking hours off from work for an initial appointment or follow-up, which causes many to delay or avoid care. Due to lack of insurance, some cannot afford medications and the associated cost of care. Many of the southern states have not expanded Medicaid and now due to the COVID-19 pandemic, many have lost their source of employment and income and may not be eligible for coverage.

In expansion states, Medicaid coverage for people living with HIV increased six percent between 2012 and 2014 nationwide. In those same states, the uninsured rate of people with HIV dropped six percent, according to the Kaiser Family Foundation.[8]

Furthermore, we must educate individuals living with HIV and the community about Ryan White Programs. These programs provide a comprehensive system of HIV primary medical care, essential support services, and medications for low-income people living with HIV who are uninsured and underserved.[9]

Lack of Access to Healthcare

Rural areas are negatively impacted by the lack of healthcare clinicians in addition to the increased closure of hospitals in rural areas. As of January 1, 2020, the rural hospital closure crisis has claimed 120 facilities across the nation over the past 10 years according to a recent study released by the Chartis Center for Rural Health.[10] With 60 million Americans living in rural communities (roughly 19.3 percent of the population) and access to healthcare in these regions already being a daily struggle, the study sheds light on an issue that requires rapid attention by policy makers, as well as local and state governments.

Current research shows that one in four rural hospitals are at risk of closure. But what are the factors contributing to these hospital closures? One study found that the overwhelming factor contributing to the increased risk of rural hospital closures was that "hospitals located in states that have not adopted Medicaid expansion have lower median operating margin and have a higher percentage of rural hospitals operating with a negative operating margin. Of the eight states with the highest levels of closures since 2010, none are Medicaid expansion states."[7]

Lack of Access to Providers to Treat the Community

Rural communities may experience limited access to healthcare services and providers. Clinicians may have limited experience with HIV and may not provide testing or treatment or feel comfortable prescribing PrEP. This may be the result of stigma, implicit bias, or discrimination towards those living with HIV.

Solutions include increasing loan forgiveness and encouraging medical schools to use a more holistic approach to medical school admission processes, exposure of medical students to rural communities' rotations and secured funding for Rural Teaching Health Centers. In addition to recruiting prospective medical students to work in rural areas, there needs to be increased focus on cultural sensitivity and humility, and the inclusion of implicit bias training to bring awareness to the social determinants of health in rural areas.

Digital Divide

Almost half of the U.S. population lacks broadband Internet access. Furthermore, areas without broadband often lack adequate cellphone service, and many low-income Americans quickly reach their mobile data allotment - even if they have mobile data plans. Individuals who are older or younger may have difficulty operating telehealth services. There needs to be greater education in both the community and the clinicians surrounding telemedicine. Telehealth provides a means of addressing the lack of access to care—eliminating issues relating to transportation and the need to miss work.

National advocacy for increased broadband is needed along with expanded support for telehealth services in rural areas. Telehealth has provided a critical access to care during COVID-19. We must not lose the opportunity to use this valuable tool while addressing barriers to its use in rural areas.

As we hopefully move forward to a post COVID-19 pandemic time period, we must address health disparities as they relate to both COVID-19 and HIV in rural black communities. We need to advocate to keep rural hospitals open and encourage more clinicians to practice in rural communities. Work needs to be done within rural communities to incorporate the use of community health workers. Issues such as stigma, discrimination and implicit bias must be addressed to ensure adequate access to screening, testing for HIV and linkage to care. Increased willingness of clinicians to provide PrEP, and treatment of individuals who test positive for HIV is also necessary. Ultimately, by addressing the social determinants of health that serve as barriers among Blacks in Rural America, we will embrace health equity and reduce the mortality rates among Black Americans suffering from HIV, in addition to COVID-19. **HIV**

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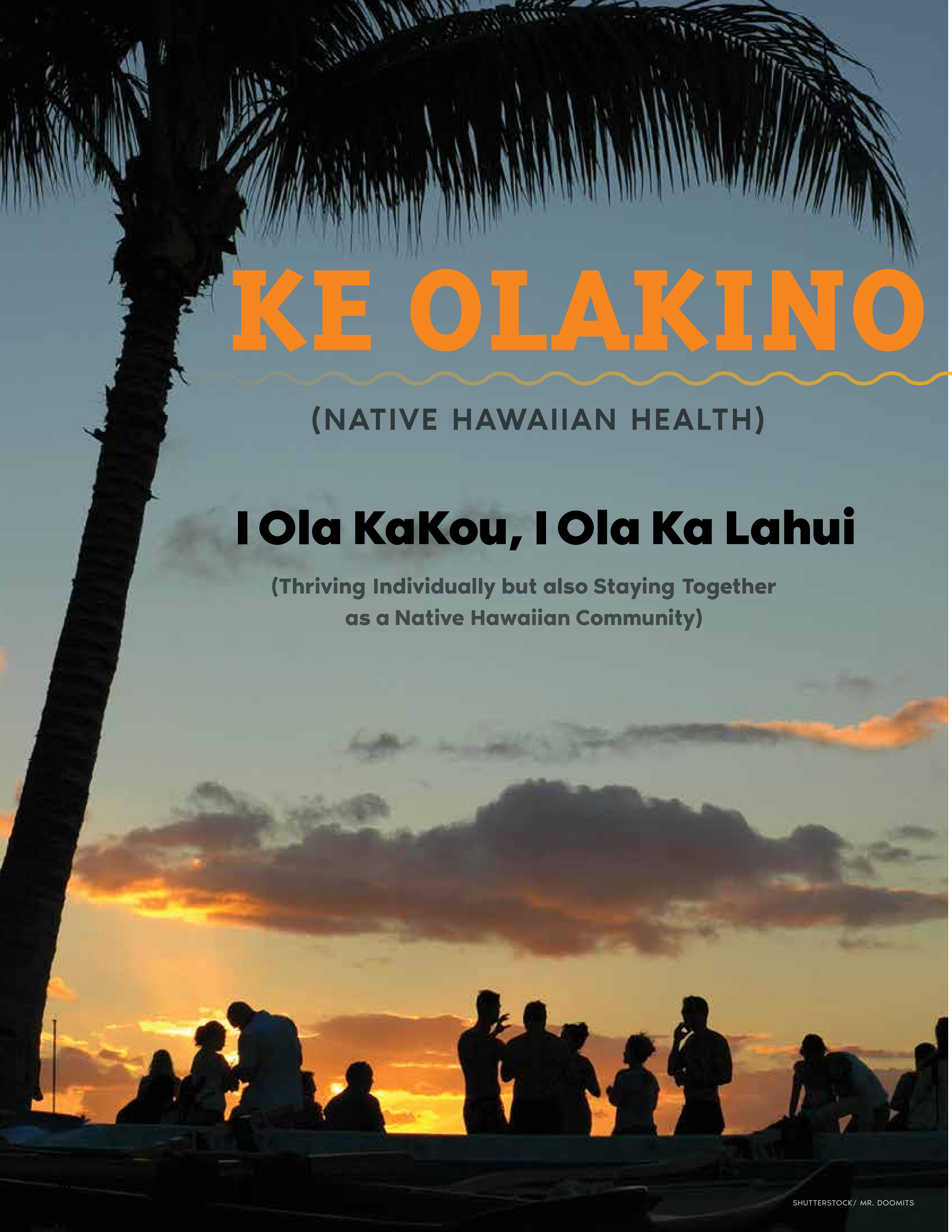

SHUTTERSTOCK/ MR. DOOMITS

> **“Growing up in Hawai’i, I always felt like I didn’t have a homeland that was ours. I would think the Japanese could go back to Japan, the Koreans have Korea, but where do us Hawaiians go? What and where do we call our home country?”**
>
> –as spoken by Dr. Elliot Kalauawa

KE OLAKINO HAWAI’I

(NATIVE HAWAIIAN HEALTH)

By Jeanelle Ahuna, PA-C, AAHIVS, Patricio Battani, MPH, Carlton K. Handley, and Elliot J. Kalauawa, MD, AAHIVS

I Ola KaKou, I Ola Ka Lahui

(Thriving Individually but also Staying Together as a Native Hawaiian Community)

Mo’olelo Hawai’i/ Hawaiian History

The native people of Hawai’i, or Kanaka Maoli, were descendants of Polynesians who migrated to here in two waves: the first around AD 400 from the Marquesas Islands, and later around the ninth or 10th century from Tahiti. Captain James Cook was the first European to arrive, on the island of Kauai in 1778. During these times, Hawai’i was a sovereign kingdom, one currently defined as: the ability of a people who share a common culture, religion, language, value system and land base, to exercise control over their lands and lives, independent of other nations.1

By 1820, the first Christian missionaries arrived and so began the colonization in the islands. Many settlers came, introducing new foods, new ideas/culture, and inevitably, new diseases; all things that have led to the depopulation of these people. While there was once about 300,000 Native Hawaiians at Captain Cook’s arrival, this number had dwindled down to 70,000 by 1853.[2]

In 1893, the Hawaiian monarchy was overthrown and annexation by the United States sealed in 1898, an act that was opposed by many. Foreign influence in politics, economics, culture and education became insurmountable. During this time, lands were taken from natives who lacked satisfactory documentation to prove the land belonged to them. After the monarchy was overthrown, teaching and learning with Hawaiian language was banned in 1896. Many were punished for speaking Hawaiian at school. The language would go silent in school and in many households for generations. For a culture whose early history lacked a written language, this was devastation of a culture rich in oral teachings history, practical knowledge, and culture.

It was not until the late 1960s and early 1970s, perhaps parallel to the African American and American Indian movements on the mainland America, the renaissance of Hawaiian culture, its practice in language, and identity, gained momentum for a resurgence in cultural pride and an increase in grass roots community activities involving music, hula and recognition of their history.

As time has passed, ancient day Hawai’i’ is much like modern day Hawai’i with Native Hawaiian population pushed to the margins of society. With each country contributing to Hawaii’s population and culture, the Native Hawaiians have endured vast cultural changes which contributed to their disparities in health.

Ke Olakino Hawai’i/ Native Hawaiian Health

Just as the identity and culture of the Native Hawaiian population became marginalized, their current socioeconomic status and health conditions reflect this.[3]

- Native Hawaiians in Hawai’i have high rates of risk factors for cardiovascular disease and cancer due to low incomes that hinder access to healthcare. Native Hawaiians suffer mortality rates that are higher than the other ethnic and national groups in Hawai’i for heart disease (68 percent higher), cancer (34 percent higher), stroke (20 percent higher) and diabetes (130 percent higher).

- Of all 50 states, Hawai’i residents are graced with the greatest longevity of life, but Native Hawaiians have the shortest life expectancy of all major ethnic groups studied due to heart disease, stroke, cancer and diabetes, with a life expectancy of 74.3 years, 6.2 years lower than the life expectancy for the State, at 80.9 years.

- In 2013, Native Hawaiians made up 28.9 percent of the homeless population in the Hawaiian Islands. Among the unemployed in Hawai’i from 2006 to 2010, 6.2 percent of the Native Hawaiians were unemployed as compared to 3.6 percent for the State of Hawai’i overall.

- Lastly, in 2016, Native Hawaiians/Pacific Islanders were 1.6 times more likely to be diagnosed with HIV infection, as compared to the white population.

At Waikiki Health (WH), one of our many foci is on health equity for all, and access to care wherever this may be for the client. Our team comprised of a medical and behavioral health provider, medical case management, Native Hawaiian healer, and pharmacist, work together with our patients at whatever part of the linkage to care continuum they may be at, in attempts to find that balance of HIV suppression and respect for one's personal healthcare goals and beliefs. Here are the stories of our patients, "J.P." and "C.C."

Kanaka Ho'ohalike/ Our Patient's Story

J.P., a 48-year-old person of mixed Native Hawaiian and Asian descent, is living with HIV, and uncontrolled diabetes, without employment or permanent residence.

In 2017, while residing on his/her aunt's couch and after several healthcare provider changes, the patient came to WH to seek medical treatment. Mistrusting of Western medicine, he/she had been off all antiviral medications with a high HIV viral load, and was looking for alternative ways for treatment. After twelve encounters with medical case management and two behavioral health (BH) interventions, he/she agreed to consult with our Native Hawaiian healer (NHH). Subsequent visits to NHH and BH, eventually led to the patient's first medical visit two months later. From these visits, the patient remained connected to care, choosing to initiate ART, and controlling the patient's HIV viral load after a year's work of engagement with members of the healthcare team. At the end of 2019, patient remained linked to care but continues to work on securing permanent housing and controlling other co-morbid conditions, including hypertension.

"C.C." is 59-year-old Native Hawaiian transgender patient living with HIV/Hepatitis C co-infection, methamphetamine-induced cardiomyopathy and schizoaffective disorder. Despite the challenges he has faced with his health and drug use, he has had success working as a case manager, and attending further graduate school studies. His career goals paused, when housing became the most recent challenge for him, living on the streets, at friend's places, and bouncing from shelters in the last six years. These life-stressors led to several suicide attempts. In 2019, he obtained stable housing, and his focus on health became a priority. During this time, he was able to finally verbalize that the nausea associated with prior ARVs bothered him but he did not want to seem too "humbug" about changing regimens.

ISTOCK/ DIGITA LHALLWAY

The change in regimen and achieving virologic suppression of his HIV, allowed for Hepatitis C treatment with intense harm reduction counseling on drug use along the way. This was a huge effort that required the dedicated participation from several case managers, a housing navigator, a behavioral health provider and lastly, meeting with his medical provider weekly or at least every two weeks, for the past 12 months. The team not only provided transportation for every visit, attention to other aspects of medical health, medication pill box management, but mainly the sense of community and support for this patient, allowing him to thrive with his medical health achievements. At one of his most recent visits, the provider overheard him talking to a friend on speaker phone saying, "Took 20 years Tita, but I got treated for my Hep C!"

Before westernization of their culture, the Native Hawaiian's view of health was multi-factorial, one embracing the lokahi (balance) triangle, of a person's physical, mental, and spiritual well-being with a deeply rooted connection to the world, their 'aina (land), environment, and community. For healing, a person may need to look toward setting right their emotional health before the physical body can heal or will find resources in native plants/foods for healing properties. 'Ohana, or family, is a very strong component in their view on promoting good health. As many live in multi-generational homes, the extended family unit permits a strong sense of kuleana (responsibility) and laulima (cooperation) in this strong and primary social structure. Often, the sense of caring for the land and the community is equally, if not stronger, than caring for one's self.

The deep complexity of Native Hawaiian culture, and its strong integration with this population's health, is a practice that is still lacking and leaving much more attention and application.

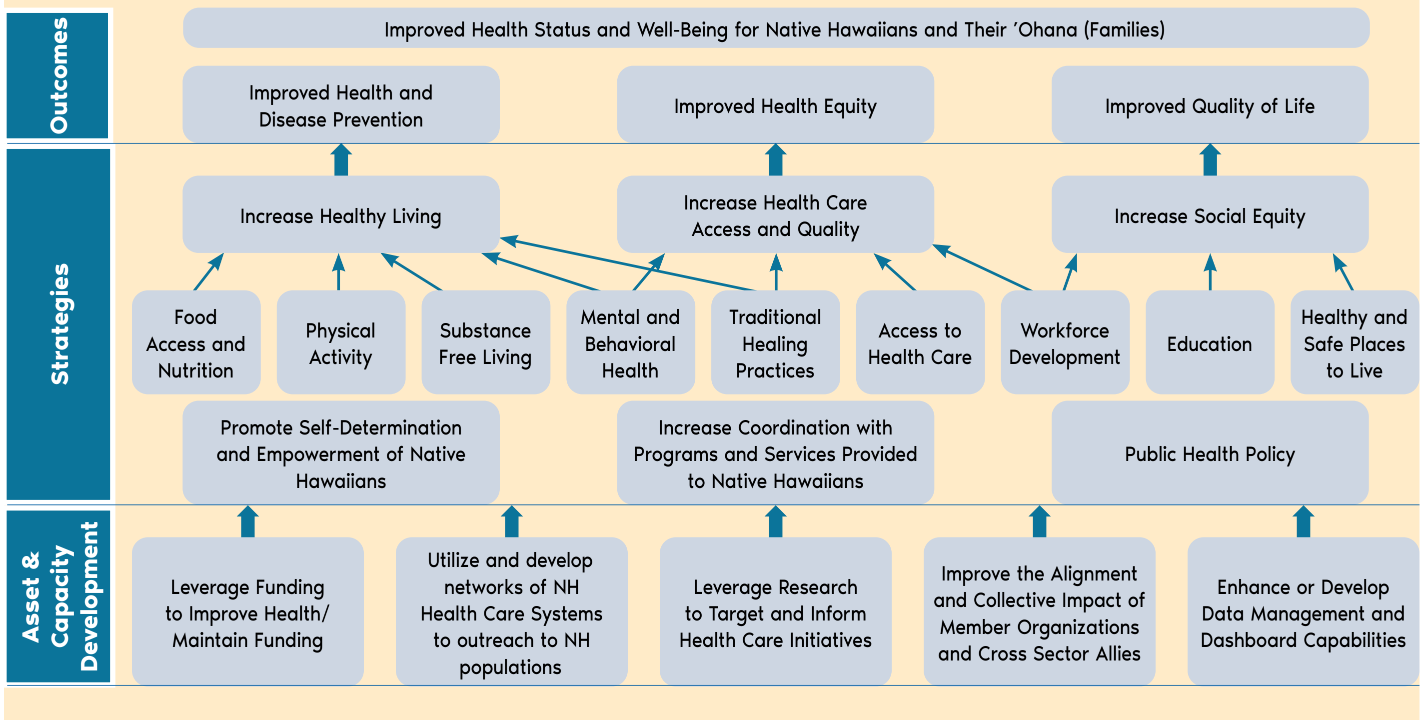
Mana'o Holomua/Final Thoughts

Throughout the history of colonization of Hawai'i, Native Hawaiians have endured many health disparities with origins referencing to the historical cultural trauma as the source of their ill outcomes. They lost their land, the ability to grow their own food, and to contribute to a previously sustainable community, with the arrival of new migrants. This trauma of colonialism including massive depopulation, landlessness, economic and political marginalization, institutionalization in the prisons, have contributed to the outcomes of poor health.

The Hawai'i Legislature in Act 195 (2011) affirmed that the Native Hawai'ian people are the "only indigenous, aboriginal, maoli people" of Hawai'i. Therefore, Native Hawaiians are a distinct people that lived in and exercised sovereignty over territory for centuries prior to European contact and the formation of the federal government and having maintained their own identity with a unique language, history, culture and ancestral land base.[4] They are a decreasing population, making up less than 20 percent of the population of Hawai'i.

The importance of healthcare for Native Hawai'ians, respective of their own beliefs and practices, is critical for this population to thrive—in not only HIV care but healthcare overall. Acknowledging and integrating their culture in medical practice, recognizes their approaches to health and well-being. At Waikiki Health, our mission put forth is congruent with the Native Hawaiian health strategy map (fig.1). We align our medical team to assist the patient-centric medical model and strive for ways to think out of the box when identifying focused strategies for improving access to insecurities in health, food and financial need. We correlate mental healthcare with medical care, while offering traditional Native Hawaiian healing practices. We keep in mind the importance of the lokahi triangle in connection to our patient's relationship to their 'aina and 'ohana; and while doing so, we can provide and help to promote better health for all populations. **HIV**

FIG.1 Native Hawaiian Health Strategy Map



Outcomes

Improved Health Status and Well-Being for Native Hawaiians and Their 'Ohana (Families)

Improved Health and Disease Prevention

Improved Health Equity

Improved Quality of Life

Strategies

Increase Healthy Living

Increase Health Care Access and Quality

Increase Social Equity

Food Access and Nutrition

Physical Activity

Substance Free Living

Mental and Behavioral Health

Traditional Healing Practices

Access to Health Care

Workforce Development

Education

Healthy and Safe Places to Live

Promote Self-Determination and Empowerment of Native Hawaiians

Increase Coordination with Programs and Services Provided to Native Hawaiians

Public Health Policy

Asset & Capacity Development

Leverage Funding to Improve Health/ Maintain Funding

Utilize and develop networks of NH Health Care Systems to outreach to NH populations

Leverage Research to Target and Inform Health Care Initiatives

Improve the Alignment and Collective Impact of Member Organizations and Cross Sector Allies

Enhance or Develop Data Management and Dashboard Capabilities

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CARLTON K. HANDLEY JR. is a Native Hawaiian and the Ryan White Program Manager for Waikiki Health. He has been an advocate for the LGBTQ and HIV positive communities for 10 years.

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Oral Health Disparities

WITHIN THE NATIVE COMMUNITY

BRUCE WARRINGTON/ UNSPLASH

By Kevin Ogle, DMD

DENTAL CARIES is the most common childhood chronic disease with 50 percent of adolescents affected between the ages ofsix through 12.[1] It is a lesser known fact that minorities, specifically those within the American Indian and Alaskan Native communities are disproportionately affected by oral disease when compared to other ethnic groups. Diminished access to professional oral healthcare is the root cause of this preventable epidemic.

The American Indian /Alaskan Native (AIAN) population has the highest rate of tooth decay of any population cohort in the United States. Native children aged two through four years are five times more likely than other ethnic groups to present with significant tooth decay. Seventy-nine percent of AIAN children, aged two through five years, have tooth decay with 60 percent of these children diagnosed with severe early childhood caries (baby bottle stimulated tooth decay). Eighty-seven percent of these children in mid adolescence (aged six through 14 years) will have a history of tooth decay which amounts to twice the rate of dental caries experienced by the general populace. Ninety-one percent of AIAN young people, aged 15–19 years, have history of dental caries. It is conservatively estimated that 68 percent of AIAN children suffer from untreated chronic dental caries.[1]

The implications and consequences are even further reaching. One in three school children report missing school because of dental pain while 25 percent report avoiding laughing or smiling because of the way their teeth look. The prevalence of caries infection persists in this population in spite of the implementation of patient directed dental education and decay prevention programs by the Indian Health Service (IHS) and tribes. Measures taken such as fluoridation of water systems, the application of topical fluoride and dental sealants, along with educational programs for children and parents have done little to change outcomes.1

The core of modern dentistry is centered on prevention. This is accomplished through routine hygiene appointments in conjunction with recall examinations, and yearly imaging studies. Dental caries is an infectious and transmissible disease. Proper oral healthcare plays an important role in the prevention and lessening of severity of many systemic diseases.[2] This is abundantly clear in the Native population. There has been a link between cardiovascular disease (specifically atherosclerosis) and periodontal disease. Individuals with gum disease also known as periodontal disease are at a two to three times greater risk of having a myocardial infarction, transient ischemic attack or other serious cardiovascular event.[2]

Access to quality healthcare has long been a point of contention within the Native American community in spite of a legal obligation by the United States Government to provide comprehensive care to tribe members living on federally reserved land.[1] IHS has fulfilled treaty obligations to provide healthcare for more than 560 recognized Native American tribes within the United States, however congress has continued to underfund the agency forcing providers to limit services offered.

IHS funding would have to double in order to match the benefits offered to Americans incarcerated and serving sentences in the U.S. prison system.[3] Why are our Native American brothers and sisters viewed differently in the eyes of the government? A thought provoking question to be sure. As a result of this disparity in funded services, tribe members face a healthcare reality in stark contrast to many other US citizens. Juvenile diabetes, hypertension, cardiovascular, and neurovascular disease are rampant within the native community. While genetic

> The American Indian/Alaskan Native (AIAN) population has the highest rate of tooth decay of any population cohort in the United States. Native children aged two through four years are five times more likely than other ethnic groups to present with significant tooth decay.

predisposition can account for some cases, the severity of a disease and overarching effects of a disease are greatly reduced with preventative education, dietary, and lifestyle modifications. Early disease diagnosis and comorbidity detection is instrumental to the management of progressive disease.

Federally Qualified Health Centers (FQHC) are an attractive way for graduating clinicians in medical and dental fields to overcome the nearly insurmountable cost of education. The IHS loan repayment program awards repayment for qualified health professional education loans to clinicians. These programs are very rewarding and offer an enriching experience and not only afford many indigenous peoples the healthcare they so desperately need. Currently there is a shortage of clinicians across American Indian and Alaskan native communities.[3] Expansion of these programs is an absolute necessity to provide these individuals with the healthcare they so desperately need.

In 2003 the U.S. Commission on Civil Rights published a report highlighting the civil rights disparities in healthcare for Native Americans. Population expansion and steady defunding have compounded this crisis. In the field of dentistry specifically, rampant childhood caries, edentulism, and oral cancer are extremely prevalent.[4] This is attributed not only to a lack of access to dental care but also a dearth of nutritionally dense healthy food options. During my rotations in Tuba City, Ariz. healthy food options were scarce. I was shocked to find that there were two small grocery stores, both of which proffered highly processed foods and an assortment of sugary soft drinks. Fresh fruit and vegetable options were limited and largely replaced with franchised fast food options.[5]

I was fortunate enough to offer a community outreach program directed at providing oral health education to school children as part of my rotations as a fourth year dental student. We stressed the importance of a proper hygiene regimen (brushing and flossing twice daily) as well as substitution of water, fresh fruits and vegetables as snack items. One particular snack item that was very popular with children was the "Piccadilly" a frozen slush made from snow-cone syrup, with gummy bears, pickles, and topped with Kool-Aid powder. This concoction is a dentist's worst nightmare. The acid in the drink leads to demineralization of tooth enamel, and the concentrated syrup and sugars from the candy are a perfect food source to promote proliferation of *Streptococcus mutans*, (the primary cariogenic bacteria of the oral flora).[6]

Bridging from dentistry, it is easy to draw parallels to infectious disease education and prevention. Education is key when attempting to remedy circumstance. According to the CDC's HIV surveillance report: for every 100 AIAN diagnosed with HIV, 60 have received some care, 49 are retained in care, and 46 are virally suppressed. In comparison for every 100 people overall diagnosed with HIV, 64 have received some care, 49 are retained in care, and 53 are virally suppressed. From 2010 to 2017, annually, the number of HIV diagnoses increased 39 percent among AIAN overall, however the trends varied by age and gender.[7]

In conclusion, it is important to shed light on how important federally funded programs like IHS are for at risk minorities like American Indian/Alaskan Natives.[8] For some individuals a lack of access to specialty medicine and dentistry may be the difference between having a diabetic limb amputation instead of vascular surgery or suffering the complications of osteonecrosis of the jaw status post head and neck radiation. With steady reduction in funding it is much more difficult for training clinicians to get exposure to FQHC through clinical rotations in Medical, Dental, and Pharmacy school. This not only compounds the plight the AIAN population faces, it discourages replenishment of providers who have fulfilled contractual obligations to provide care in distressed areas nationwide.

"If the white man wants to live in peace with the Indian, he can live in peace. Treat all men alike. Give them all the same law. Give them all an even chance to live and grow. All men were made by the same Great Spirit Chief. They are all brothers. The Earth is the mother of all people, and all people should have equal rights upon it. Let me be a free man, free to travel, free to stop, free to work, free to trade....where I choose my own teachers, free to follow the religion of my fathers, free to think and talk and act for myself, and I will obey every law, or submit to the penalty." – Chief Joseph, Nez Perce **HIV**

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SHUTTERSTOCK/ CAT ACT ART

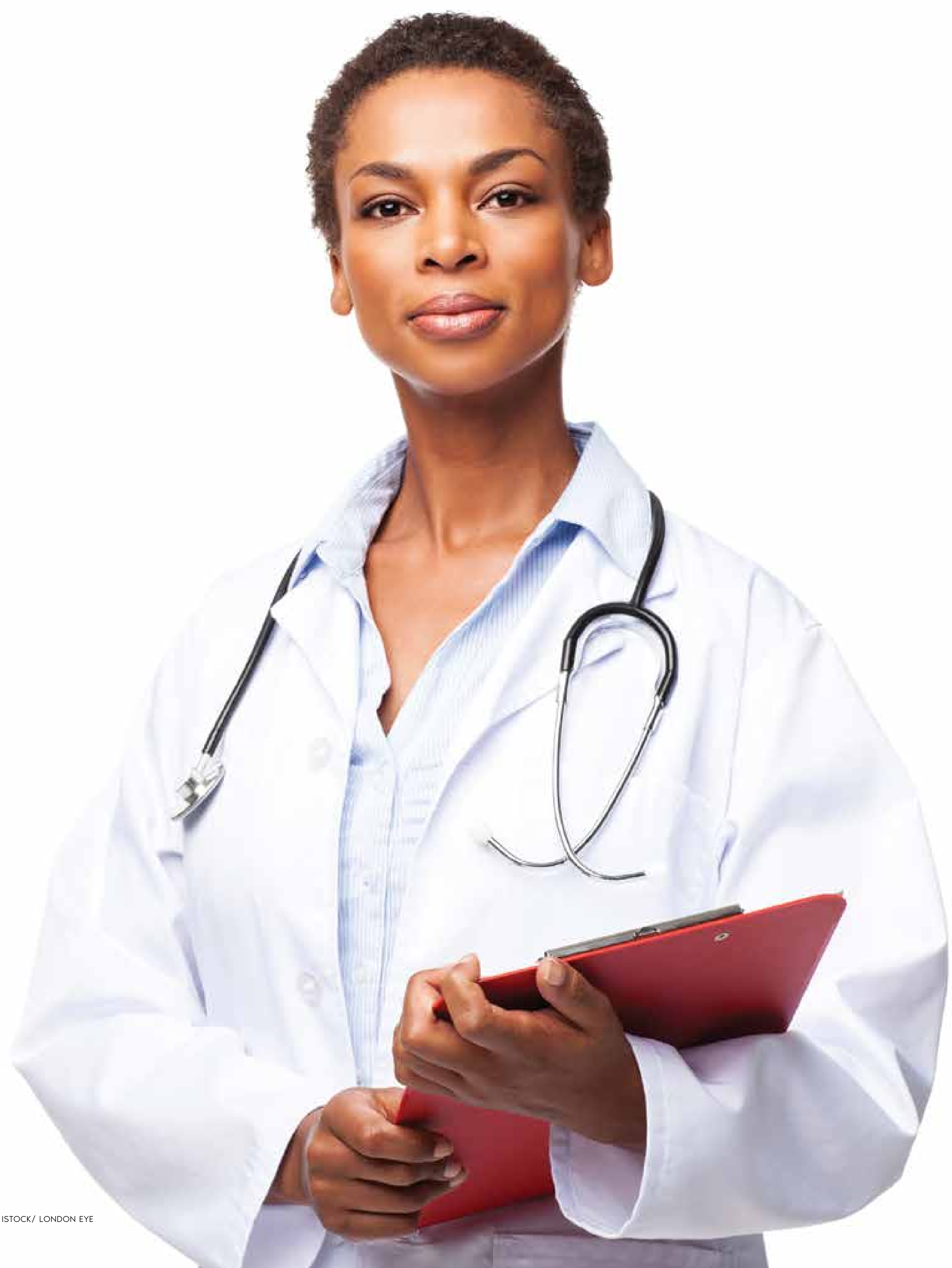
Exposing the REAL TRUTH Behind Why Women of Color are Underrepresented in the Healthcare Hierarchy

BY **Michelle Ogle**, MD, FAAP, AAHIVS

AS THIS COUNTRY FACES THE CHALLENGE of addressing health disparities that has 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 myth that 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, I face sexism and racism—"double discrimination." We are often overlooked for high level administrative positions or not considered for positions we are more than capable of filling. A common scenario for many women is having an idea silenced only to be applauded when a white man repeats the exact same words. Has this ever happened 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. ➤



ISTOCK/ LONDON EYE

Names You Have Never Heard

African American women began practicing in 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 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. 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, for which she was the first black woman to receive a medical patent. She was also the first woman appointed chair of ophthalmology at a U.S. medical institution (UCLA) in 1983.[7] Dr. Helen Dickens, was the first black woman admitted to the American College of Surgeons. The only black woman in her graduating class, Dr. Dickens earned her MD 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 certification in obstetrics and gynecology. Five years later, she became the first black woman admitted as a fellow of the American College of Surgeons.

Influx of Women of Color to Medical Schools

As noted 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 health care system.

According to the American Association of Medical Colleges (AAMC), Black Americans represent 13 percent of the population but only four percent of approximately 877,000 active physician workforce and even worse, black female doctors represent only two percent of all physicians. In 2017, the AAMC celebrated the fact that women now comprise over 50 percent of medical students. In 2018 and 2019, women matriculates' outnumbered men. Now, for the first time, women make up the majority of students in U.S. medical schools. In 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.

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*,(www.aamc.org) "medical school faculty continued to be predominantly white (63.9%) and male (58.6%)," and 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.

ISTOCK/ LONDON EYE

"Angry Black Woman," "Stupid Bitch," and "You're here, Thank Affirmative Action"

The race and gender pay gap remains a barrier for fsemales 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 whites versus $258,000 for blacks). 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).[8]

> *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." One need only look at the newly passed California law banning discrimination against black students and employees over their natural hairstyles to understand the depth of the problem.*

Recall the Delta Airlines incident a few years ago. Tamika Cross, MD, a black physician, 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 Cross to put her hand down because she was "looking for actual physicians or nurses or some type of medical personnel." Cross was a fourth-year OB/GYN resident at the University of Texas Health Science Center at Houston. Many other black female physicians have shared their stories of being mistaken for nurses, physician assistants, dietitians, hospital food service employees and housekeeping staff (often after introducing themselves as doctors). 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 black female neurosurgeon. She shared similar experiences including being teased by white physicians about her dialect. She didn't sound "white enough" or parents of children she performed surgery on didn't believe she could be the neurosurgeon, demanded 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 having someone say "Hey, nurse" and the list goes on. Dr. Mae Jemison was the first black woman in space. Dr. Velma Scantlebury, the nation's first black female transplant surgeon; Family physician Regina Benjamin, MD, MBA, 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.

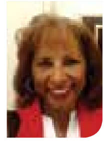
Success for African American women can be costly. Many successful people suffer from "imposter syndrome" which is defined as a collection of feelings of inadequacy that persist despite having success.[9] This syndrome hits women of color especially hard. Many black women suffer from chronic self-doubt 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 that we are not 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) this syndrome. Being told, you aren't good enough, you're less than or can only succeed because you benefit from affirmative action, becomes internalized narratives which can unconsciously become facts.

Women of Color Unite! Ted Yoho, Challenge a Woman of Color, You Lose!

A white male congressman put his privilege on full display when he accosted congresswoman Alexandria Ocasio-Cortez, calling her a fu*king bitch. After she took him to the proverbial woodshed, women of color continue killing the game! Congratulations to Senator Kamala Harris, our first black, South Asian and Jamaican female Vice-Presidential candidate. We are so proud of her! Don't worry, she is used to being called, "half-breed," "not smart enough" and yes, "Bitch." She knows how to succeed and gain strength in the face of racist misogynistic language.

And finally, a huge congratulations to my co-editor of this publication, Dr. Ada Stewart, the first African American woman elected President of the American Academy of Family Physicians. I'm beyond proud of her accomplishments. Thank you for your military service and being so committed to decreasing disparities within the healthcare system.

Like these extraordinary women, we must continue to address the disparities and barriers placed in the face of black female physicians. 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. **HIV**



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Prevention Inequities

PrEP Behaviors During the Pandemic

By Scott Brawley, MSW
AAHIVM Development Director
for Policy and Programs

THE COVID-19 PANDEMIC has exposed health disparities in unexpected places. In April and May, the American Academy of HIV Medicine sought to understand how shelter-in-place orders from state and municipal governments affected PrEP access and use. Presented as a late-breaking session at the 2020 Virtual International AIDS Conference, the Academy launched two surveys on PrEP Access and Use, one for patients and one for providers.

The Academy shared electronic surveys with its network of medical providers and via social media to PrEP users. These surveys were convenience samples, not a random sample. We used a snowball sample of PrEP users sharing the link via social media (twitter, Instagram and Facebook) and encouraged respondents to share the link with their network. The survey was open for 25 days during April and May at the height of U.S. shelter-in-place orders.

Notably, one-third (n=406) of PrEP users reported voluntarily stopping PrEP as they perceived lowered HIV risk and of those, only 11 patients lost access to PrEP. Similarly, nearly 90 percent of users self-reported reduced sex events, reduced sexual partners, and reduced use of technology to meet sex partners.

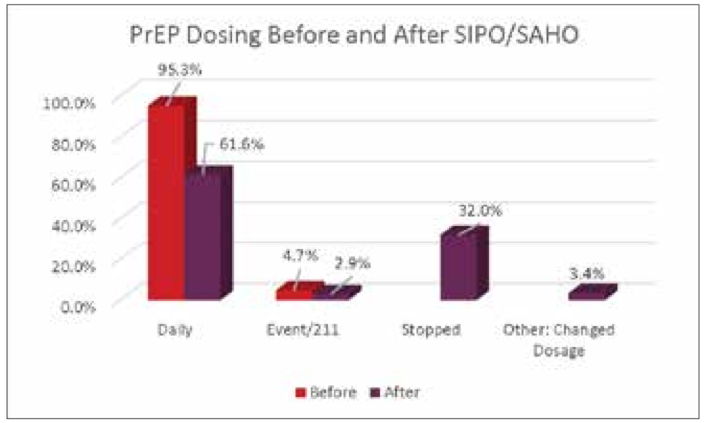
Interestingly, respondents to the PrEP users' survey were overwhelmingly white, cis-gender, gay men. Therefore, we immediately begin this conversation with health disparities emerging. Initially, the Academy placed the PrEP user survey on the PrEP Facts Facebook Page and asked several PrEP influencers to share the link with their networks potentially skewing the respondent pool.

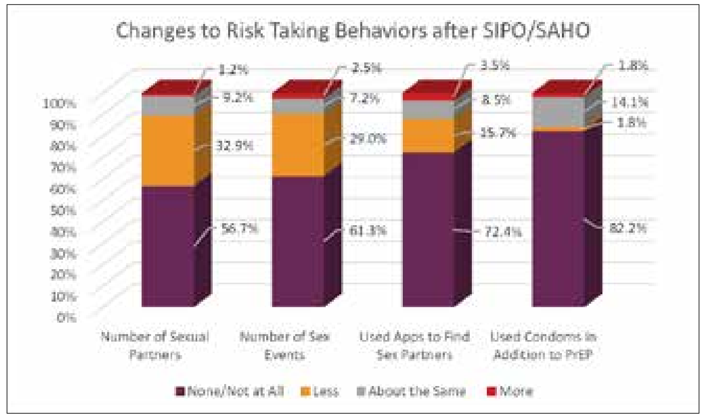
Conversely, among PrEP providers (n=189), 90 percent of providers responded that they were able to continue prescribing PrEP, even though shelter-in-place orders forced many to deal with practice limitations. Turning largely to telemedicine and altering recommended guidelines on HIV and STI testing and routine laboratory monitoring, medical providers continued to prescribe PrEP, although 40 percent of providers stopped prescribing PrEP for new patients and only offered refills. Nearly three-quarters of providers reported they had delayed recommended HIV and STI testing and routine laboratory monitoring. Sixty percent of providers ordered routine testing and monitoring off-site that was to be completed as soon as possible while 15 percent of providers eliminated routine testing and monitoring for established patients.

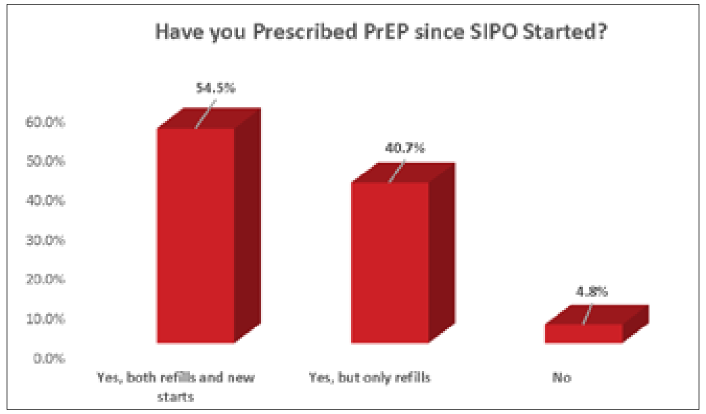
Another notable point, while one in five providers reported encountering a patient they believed had an STI that but were unable actually examine the patient or perform diagnostic testing, nearly half of providers empirically treated these individuals with antimicrobial therapy. Erring on the side of caution, PrEP providers tended to believe patients continued to engage in risk behaviors, contrary to PrEP users' self-reported risk.

What does this mean in terms of health disparities? The uptake of PrEP remains lower than anticipated and new HIV infection rates remain constant among communities and demographics where PrEP is not yet in the "prevention toolbox." This is specifically the case for same gender loving men of color, women of color and transgender individuals who all experience significant barriers to care.

In 2017, the CDC analyzed the 2017 National HIV Behavioral Surveillance (NHBS) data and found that Black and Hispanic MSM were significantly less like to know about PrEP as an HIV prevention option. Among those who had discussed PrEP with a healthcare provider within the past year, 68 percent of white MSM reported PrEP use, while only 62 percent of Hispanic MSM and 55 percent of black MSM reported PrEP use.[1]







Current clinical guidelines arose out of clinical trials demonstrating PrEP's efficacy; however, quarterly HIV and STI testing and laboratory monitoring serve as barriers to PrEP. Additional barriers include reliance on public insurance or free sexual health clinics, the need for transportation, and the wish to use telemedicine. The use of telemedicine could improve PrEP uptake among underrepresented populations. However, issues of broadband access, smart device access, or adequate cellular data are limited or problematic for low-income populations. If telemedicine is used, confidentiality issues arise when patients do not want family members or friends to that they are taking PrEP.

Another barrier to PrEP care is that we are essentially asking well people to adhere to a sick person model of care with quarterly testing. For those experiencing health disparities, asking well people to be vigilant about frequent and routine clinic visits can be a "heavy lift." Can we consider reducing the timing of HIV/STI testing and laboratory monitoring events from every three months to every four months? Can we supplement quarterly testing with home HIV testing with a photo of results uploaded to a patient portal? Is it possible to mail home STI test kits and swabs? How can providers reduce the burden of PrEP access for those already experiencing health disparities including barriers to PrEP uptake? What are some effective ways to facilitate engagement and retention of hard to reach populations who would greatly benefit from PrEP access?

In the coming months, the Academy will consider assembling an expert panel of PrEP prescribers to consider current guidelines and recommendations for PrEP, and make suggested modifications. Our members and credentialed providers have extensive experience in prescribing PrEP so, naturally, they are the group to best lead these efforts. Clearly, the COVID-19 epidemic has shifted how all of medicine is practiced, and PrEP is no exception. We have the opportunity to rethink PrEP, especially for those who experience the most barriers to it, now is the time for the Academy to lead this endeavor. **HIV**

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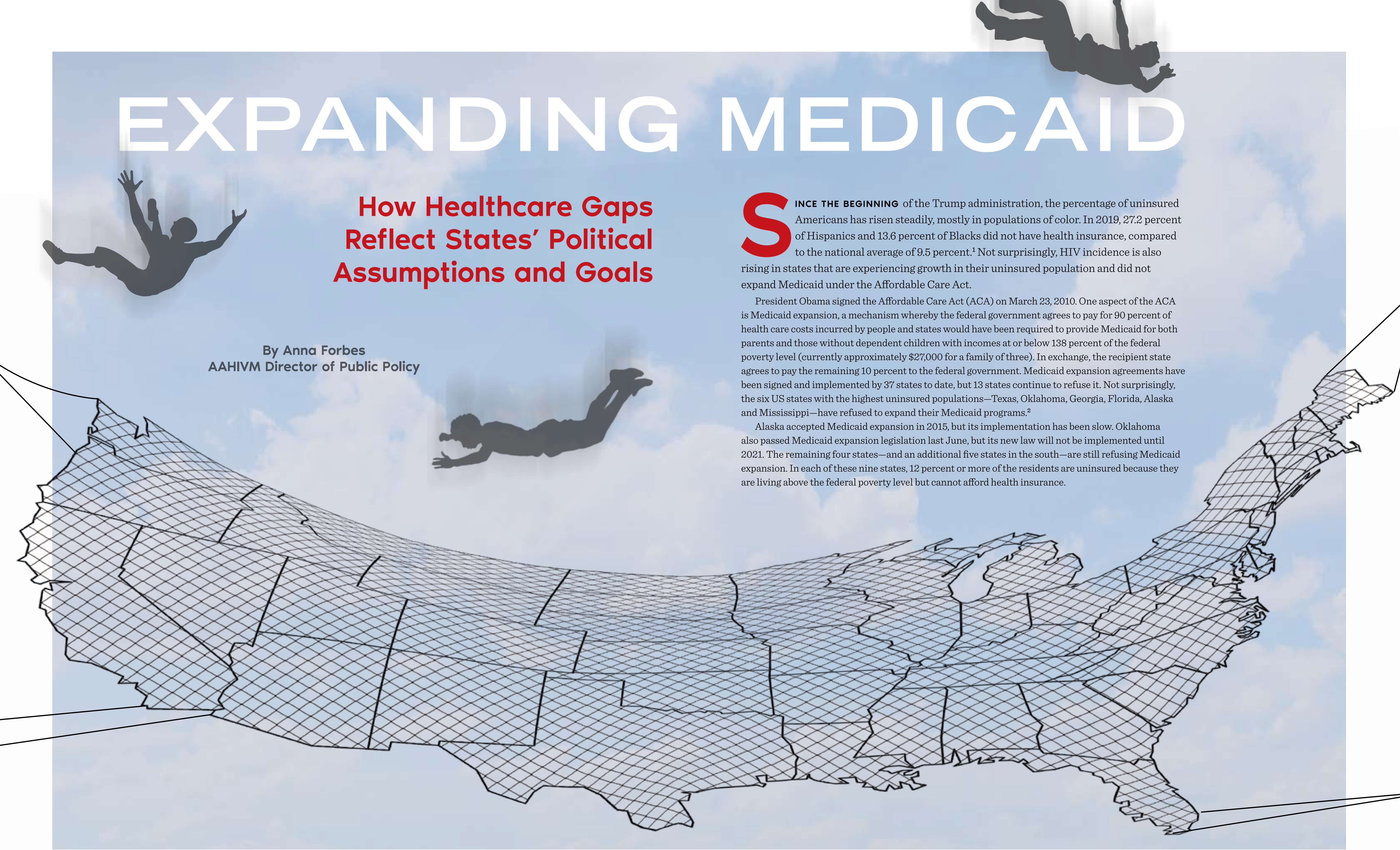


EXPANDING MEDICAID

How Healthcare Gaps Reflect States' Political Assumptions and Goals

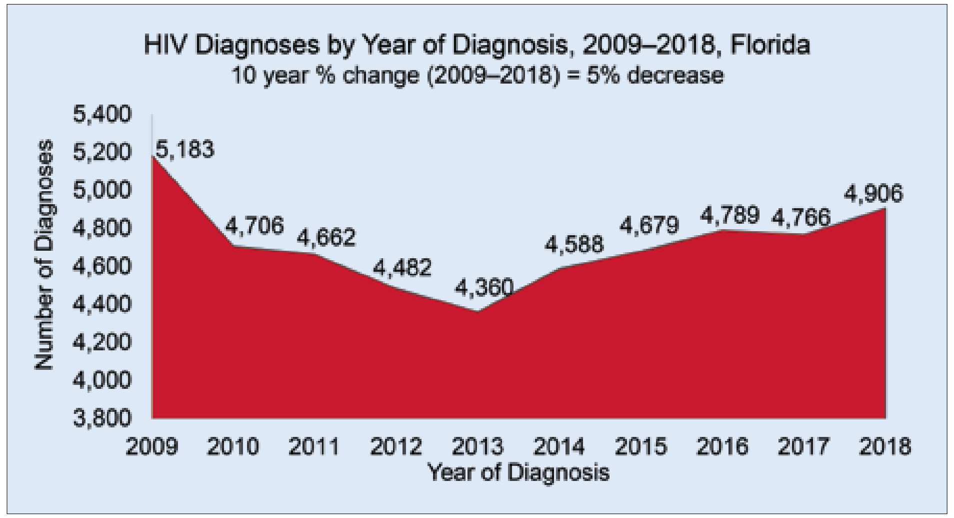
By Anna Forbes
AAHIVM Director of Public Policy

SINCE THE BEGINNING of the Trump administration, the percentage of uninsured Americans has risen steadily, mostly in populations of color. In 2019, 27.2 percent of Hispanics and 13.6 percent of Blacks did not have health insurance, compared to the national average of 9.5 percent.[1] Not surprisingly, HIV incidence is also rising in states that are experiencing growth in their uninsured population and did not expand Medicaid under the Affordable Care Act.

President Obama signed the Affordable Care Act (ACA) on March 23, 2010. One aspect of the ACA is Medicaid expansion, a mechanism whereby the federal government agrees to pay for 90 percent of health care costs incurred by people and states would have been required to provide Medicaid for both parents and those without dependent children with incomes at or below 138 percent of the federal poverty level (currently approximately $27,000 for a family of three). In exchange, the recipient state agrees to pay the remaining 10 percent to the federal government. Medicaid expansion agreements have been signed and implemented by 37 states to date, but 13 states continue to refuse it. Not surprisingly, the six US states with the highest uninsured populations—Texas, Oklahoma, Georgia, Florida, Alaska and Mississippi—have refused to expand their Medicaid programs.[2]

Alaska accepted Medicaid expansion in 2015, but its implementation has been slow. Oklahoma also passed Medicaid expansion legislation last June, but its new law will not be implemented until 2021. The remaining four states—and an additional five states in the south—are still refusing Medicaid expansion. In each of these nine states, 12 percent or more of the residents are uninsured because they are living above the federal poverty level but cannot afford health insurance.

SHUTTERSTOCK/ LIFESTYLE TRAVEL PHOTO/ BENGUHAN/ GRYNOLD/ ARKADIUSZ FAJER



In the southern states refusing to expand Medicaid, we are correspondingly seeing an increase in HIV incidence. In fact, in 2019, the CDC's annual HIV Prevention Progress Report classified "persons residing in the southern United States" for the first time as a specific population at increased risk of acquiring HIV—along with other classifications such as people of color and men who have sex with men.[3] Unfortunately, the poor political decision-making in these states is hurting the health of their populations, especially communities of color, and exacerbating deep-seated systemic racism.

In 2019, the Texas Alliance for Health Care reported that "Texas has 4.8 million Texans under the age of 65 without health insurance—17 percent of the population, a rate almost double the national average."[4] Last April, Texas Governor Gregg Abbott accused the federal government of being coercive in trying to force Medicaid expansion upon his state.[5] In its blunt response, the Texas Medical Association replied that, "those [Texans] who lack insurance coverage typically enjoy far worse health status than their insured counterparts."[6] Their assertion was bolstered by national research done at University of Michigan and published in the National Bureau of Economic Research.[7] It showed that 15,600 deaths were averted when 3.7 million low-income Americans who had been uninsured received coverage through Medicaid expansion. The annual rate of Texan deaths alone that could have been averted per year was 730.[8]

With many of those uninsured unwilling to get HIV testing due to the costs, this could account for the disturbing number of late diagnoses in Texas. In 2018, 91,764 Texans were documented as having HIV, with 19.9 percent receiving late diagnoses.[9] Over one fifth of those late diagnoses were in heterosexual women, the highest rate of any of Texas' newly HIV tested sub-group. Florida, with 46 new cases per 100,000 people in 2017, had the highest incidence of HIV in the nation, followed by 24.[9] in California and 22.1 in Texas.[10] Within Florida, Miami's rate of new HIV infections is four times that of the national average, with 54 new diagnoses per 100,000 people—the highest new HIV rate in the country. Four other Florida cities made it into the national top ten list for new case rates: Fort Lauderdale at 45 per 100,000, West Palm Beach at 23, and Jacksonville at 26.[11]

The state's extraordinarily high rates are tied to the policies of former Florida Governor Rick Scott, now representing Florida in the US Senate. As governor, Scott forced the state's Health Department to return a total of $70 million in federal CDC and Ryan White program funding for Florida's state HIV/AIDS programs. State health departments across the country routinely accept such funding and Marlene LaLota, Administrator of Florida's HIV division, said there was no problem with this funding process before Scott took office. Once in place, however, Scott decided that the state did not need specific federal funding and returned it, forbidding LaLota to discuss his decisions with anyone in the legislature, the governor's office or even with her co-workers, under threat of dismissal. When the story finally came out in 2019, LaLota told the Guardian that "Rick Scott had us all on lock-down."[12]

LaLotta resigned in 2016 and, in early 2019, Scott left his gubernatorial position to take assume his Senate position in Washington. Florida's new governor accepts federal funding and Florida's state HIV/AIDS division is still in the process of being restored.

The rate of HIV infections declined in Florida for five years between 2010-2015, only to increase sharply from 2016 to 2018—the defunding years. In that time, Florida reported the highest number of new HIV diagnoses in the country. Since then, Florida's HIV incidence rate is still climbing, increasing by nearly 11 percent through 2017—the highest number of new HIV diagnoses in the country.[12] This increase is mainly in populations of color with the rate of Black males living with an HIV diagnosis is 4.4 times that of white males, the rate of Black females 17 times that of white females, the rate of Hispanic/Latino males 1.9 times that of White males and Hispanic/Latino women 2.5 times that of white females.[13]

In Georgia, a total of 54,600 Georgians were living with HIV in 2018. Of these, 2,501 were diagnosed that year.[14] About 25 percent had an AIDS diagnosis at the time they test positive.[15] The rate of uninsured Georgians rose to 13.7 in 2018; the third-highest rate nationally after Texas and Oklahoma.[16] Black men comprised the largest percentage of Georgians with HIV in 2018. According to Carlos del Rio, co-director of the Emory Center for AIDS Research (CFAR), studies done at Emory show that these men "don't have more partners or indulge in riskier sexual behaviors than their white counterparts."

> **Medicaid expansion appears to be a win-win from the states' perspective–giving health insurance to millions of low-income adults and offering financial support to safety-net hospitals, without any adverse effects on state budget.**

Then COVID-19 hit. In Georgia, the Governor re-opened the state for business on April 24, against the objections of Atlanta's Mayor Keisha Lance Bottoms, among many others. By July, NPR reported that Georgia's hospitals were so overloaded due to COVID-19 that their desperate administrators were contacting hospitals all across the southeast to see if any of them could take some of their patients.[17,18] Mayor Bottoms told NPR that "up to 80 percent of people in the state of Georgia who have been hospitalized are African American."[17]

Access to care for uninsured people in rural Georgia is harder to obtain than in its cities. Nine of the state's 159 counties—all of them rural—have no physician[19]. This shortage of health care providers and clinical sites only compounds the high levels of poverty and disease in these communities. The numerous disparities faced by people in such setting were overwhelming even before COVID-19.

Amber England, leader of the Oklahoma's recent, successful Medicaid Expansion Campaign, said, "in the middle of a pandemic, Oklahomans stepped up and delivered lifesaving care for nearly 200,000 of our neighbors, took action to keep our rural hospitals open, and brought our tax dollars home to protect jobs and boost our local economy.[20]

Supporting advocacy in the states that have not yet accepted Medicaid expansion is arguably a critical next step toward overcoming some of our country's shocking health disparities. According to the New England Journal of Medicine (NEJM) "Medicaid expansion appears to be a win–win from the states' perspective—giving health insurance to millions of low-income adults and offering financial support to safety-net hospitals, without any adverse effects on state budget... Skyrocketing number of uninsured, and fragility of our health care system offer compelling reasons for non-expansion states to take another look."[21] **HIV**

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CLINICAL RESEARCH

UPDATE

JEFFREY T. KIRCHNER, DO, AAHIVS
AAHIVM Chief Medical Officer

FEATURED LITERATURE:

Buchacz K, et al for the HIV Outpatient Study (HOPS). **The HIV Outpatient Study—25 Years of HIV Patient Care and Epidemiologic Research**. *Open Forum Infectious Diseases – volume 7, issue 5, May 2020*. https://doi.org/10.1093/ofid/ofaa123

As we pass the 39th anniversary of the report of the first cases of AIDS in the United States (MMWR, June 5th, 1981) many aspects of this disease, including its epidemiology and clinical outcomes, have significantly evolved. Several longitudinal research cohorts have been vital in providing data while monitoring progress along the HIV care continuum. This paper is from the HIV Outpatient Study (HOPS) which is a diverse cohort of HIV patients from 8 U.S. sites including Portland, Denver, Chicago, and Philadelphia. The authors looked at their key published findings since its inception in 1993. They synthesized data including trends in health outcomes (1993–2017) and mortality (1994–2017) for 10,566 patients. The HOPS has contributed to identifying new conditions (eg, lipodystrophy) and noting a significant reduction in mortality with earlier use of ART in persons with HIV. They also uncovered associations between select antiretroviral drugs and cardiovascular disease. Also, in this cohort the median CD4 cell count of participants increased from 244 cells/mm3 to 640 cells/mm3 from 1993 to 2017. In 2010, 84 percent of HOPS participants had a most recent HIV viral load <200 copies/mL, compared with 92 percent in 2017. The HOPS documented major declines in morbidity from opportunistic infections and a significant decline in HIV-related mortality from 121 to 16 per 1000 person-years between 1994 to 2017. These data can also be used for monitoring trends in infectious and comorbid conditions, immunologic and viral suppression status, retention in care, and survival. They are also helpful to inform progress towards “Ending the HIV Epidemic.”

AUTHOR’S COMMENTARY:

Since 1993, the HOPS has been detecting emerging issues and challenges in HIV disease management. This database is one of several observational cohorts of persons with HIV that continue to play an important role in characterizing and defining many aspects of HIV disease. Others include the WIHS, MACS, NA-ACCORD, VACS, and D:A:D. These research groups continue to be an invaluable data source and help inform national and international guidelines for clinical practice. I wrote a piece for the HIV Specialist in 2017 describing these individual cohorts in greater detail. Below is a link to that paper. https://www.mdmag.com/sap-partner/aahivm/observational-cohorts-what-they-have-taught-us-about-hiv-disease

FEATURED LITERATURE:

Vecchio AC et al. and the AIDS Clinical Trials Group 5199 and 5271 study team. Distal Sensory Peripheral Neuropathy in Human Immunodeficiency Virus Type 1– Positive Individuals Before and After Antiretroviral Therapy Initiation in Diverse Resource-Limited Settings. ***Clinical Infectious Diseases.*** July 1, 2020; 71(1):158–65

Distal sensory peripheral neuropathy (DSPN) has been a known complication of HIV infection for many years—although the prevalence appears to have declined in the post-ART era. This study from the International Neurological Study Trials Group (ACTG- 5199) assessed the prevalence of DSPN in seven resource-limited settings for ART–naive people living with HIV (PLWH) compared with matched participants who were not HIV infected and also in PLWH virally suppressed on ART. Subjects (n=860) with a CD4+ count <300 cells/mm3 at baseline underwent a standardized neurological examination and functional status assessment before and every 6 months after starting ART. Matched individuals (n=2400) not HIV infected underwent the same clinical examinations at a single visit. Associations between covariates with DSPN at entry were assessed using the $\chi 2$ test. Persons with HIV who were virally suppressed on ART were evaluated using generalized estimating equations. Prior to ART initiation, 21 percent of PLWH had neuropathy compared to 8 percent of those who were not HIV-infected. **The overall prevalence of DSPN among those virally suppressed on ART decreased from 20 percent at week 48 to 15 percent at week 144 and 10 percent at week 192**. Longitudinally, DSPN was more common in older individuals and those with less education. Persons with HIV and DSPN were more likely to report inability to work and depression than those without DSPN. There was no association observed between specific ART regimens and DSPN.

AUTHOR’S COMMENTARY:

DSPN is another one of the older HIV-related clinical conditions that appears to be less frequently diagnosed in the post-ART era. This may be, in part, due to lack of neurological screening of patients. The reported prevalence remains high in patients, especially those who are not on ART. The data from this study are consistent with historical observations that many, but not all patients with DSPN will improve with viral suppression and immune recovery after starting ART. However, chronic neuropathic pain and sensory loss can lead to unemployment, depression, and increased medical costs. More research is needed to improve methods for prevention and treatment of DSPN.

FEATURED LITERATURE:

Poynten, IM et al. The Natural History of Anal High-grade Squamous Intraepithelial Lesions in Gay and Bisexual Men. *Clin Infect Dis.* 2020 Apr 28; doi: 10.1093/cid/ciaa166.

Gay and bisexual men (GBM) have the highest incidence of anal squamous cell cancer (SCC). The presence of HIV increases the likelihood of SCC, most of which are caused by human papilloma virus (HPV) subtypes 16 and 18. High-grade Squamous Intraepithelial lesions (HSIL) precede anal cancer. However, both prevention and treatment remain hindered by the lack of data on the natural history of HSIL. This Study of the Prevention of Anal Cancer (SPANC) was conducted from 2010 to 2018. It included 617 GBM men of whom 64 percent were HIV-negative and 36 percent HIV-positive. All subjects were > 35 years of age with a median age of 49 years. Participants had anal cytology and high-resolution anoscopy (HRA) done at baseline and at three annual visits. A composite HSIL diagnosis (cytology ± histology) was used. There were 124 incident HSIL cases over 1097 person-years of follow-up (11.3 / 100 PY). Major predictors of a higher incidence of HSIL included: age <45 years, HIV positivity, having a prior SIL diagnosis and presence of HPV-16 subtype. **During 695 person-years of follow-up, 153 men with high-grade SIL cleared the lesions**. Predictors of clearance included: age < 45 years, having anal intraepithelial neoplasia (AIN) 2 rather than AIN-3, having smaller lesions and non-HPV-16 subtype. Clearance was not related to HIV status. Only one patient progressed to anal cancer. The authors believe these data strongly show that not all anal HSIL detected by screening requires intervention. Men who had persistent HPV-16 subtype are less likely to clear HSIL and are more likely to benefit from treating these lesions with surgery or ablation.

AUTHOR’S COMMENTARY:

This is the largest published study to date looking at the progression of HSIL in a cohort of GBM. Overall, these data are encouraging in that the progression rate from HSIL to anal cancer was only about 0.2 percent per year. They can provide a point of shared decision making for some patients regarding treatment versus continued surveillance. However, HPV infection is obviously a dynamic process for many GBM with a potential for both clearance of low-grade lesions but also the risk of new HPV infections. Another recent study from France (CID 2020; 221:1488-93) found 24-month clearance rates of 32 percent for HPV-16 compared to 54 percent for HPV-18. Although many HIV programs perform anal Pap smears in their MSM population there are still no formal guidelines regarding this practice. For clinics that are doing anal Pap smears, it is important to have a system for follow-up of abnormal results including availability of high-resolution anoscopy and treatment protocols in place. Continued uptake of HPV vaccination in younger MSM should also decrease the incidence of new infections.

FEATURED LITERATURE:

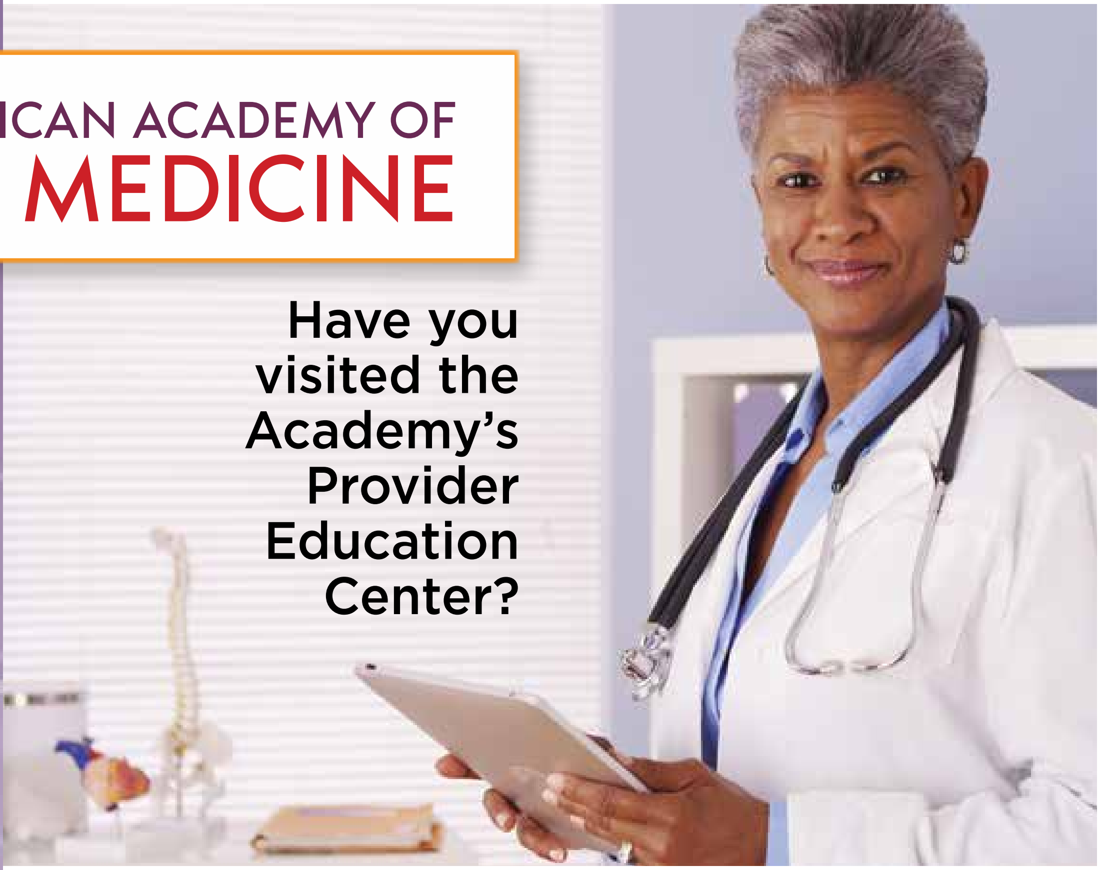
O’Halloran, JA. et al. Integrase Strand Transfer Inhibitors are associated with lower risk of incident Cardiovascular Disease in People Living with HIV. *JAIDS March 25, 2020 – Publish Ahead of Print. doi: 10.1097/QAI.0000000000002357*

Historically several classes of antiretroviral drugs including protease inhibitors (PI) have been associated with an increased risk of cardiovascular disease (CVD) and myocardial infarction in people living with HIV (PLWH). A similar association with integrase strand transfer inhibitors (INSTI) has not been looked at in observational cohorts such as D:A:D. This retrospective study used the IBM® MarketScan® databases for commercially insured and Medicaid patients to identify those initiated on ART between 2008 and 2015. The primary outcome was “major adverse cardiac event” (MACE) that included a composite of acute MI, ischemic stroke, coronary artery bypass grafting (CABG) and percutaneous coronary intervention (PCI). The authors estimated hazard ratios (HR) and 95 percent confidence intervals (CI) for the association between INSTI and a MACE. Other associations including smoking and use of lipid lowering agents were factored in. During the 8 years of this study, 20,242 patients initiated ART. Twenty-five percent were started on an INSTI, 55 percent on an Non-NRTI, and 20 percent on a PI. There was a total of 203 MACE events. These events included acute MI in 16 vs 66 patients, stroke in 24 vs 54, CABG in 2 vs 9, and PCI in 7 vs 25 of INSTI users compared to patients started on a PI or NNRTI-based regimen. **Overall Integrase-based ART regimen was associated with a significantly lower risk of a MACE (21% / HR 0.79) compared to non-INSTI-based regimens**. For this cohort, INSTI-based regimens were associated with a 21 percent decreased risk of incident CVD.

AUTHOR’S COMMENTARY:

This data was first presented in 2019 at CROI in Seattle and now published. As noted, most of what we know about ART use and CVD risk has come from the D:A:D cohort which identified several PIs and abacavir with an increased risk. This information may be useful for reassuring our patients, although CVD risk in general is complicated and impacted by smoking, lipids, diabetes, and genetics along with other factors. Weight gain with INSTIs has been increasingly reported and this could offset the reduced CDV risk seen in the study. More research from other cohorts along with longer follow-up is definitely needed to clarify and help stratify our patients’ ongoing CVD risk as they age with HIV. **HIV**

AMERICAN ACADEMY OF
HIV MEDICINE



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