Since the first cases of HIV/AIDS were reported in 1981, an entire generation has grown up in the shadow of a global pandemic. Today, more than 1.1 million people in the United States are living with HIV/AIDS—more than at any time in the history of the disease—and an additional 50,000 are diagnosed each year.

For more than 20 years, the Health Resources and Services Administration’s (HRSA’s) Ryan White HIV/AIDS Program has been at the forefront of the Nation’s response to HIV—both treating those living with HIV/AIDS and curbing the further spread of the virus—and the program will continue to lead the way in the Nation’s efforts to turn the tide on this disease.

When the landmark AIDS Clinical Trials Group (ACTG) 076 resulted in breakthroughs in preventing the perinatal transmission of HIV, for example, Ryan White HIV/AIDS Program providers were able to quickly and deftly implement new protocols. Treatment availability, increased screening, and provider clinical acumen have helped reduce perinatal transmission from as many as 2,000 HIV-positive babies born in 1990 to an estimated 127 in 2011.

When shifts have occurred in the epidemic, the Ryan White Special Projects of National Significance (SPNS) program has been there to research the best practices for addressing new challenges. Together with the HRSA AIDS Education and Training Centers (AETCs), the SPNS program has educated the Nation about replicating best models of care.
A generation without HIV/AIDS may be in sight. Such a powerful statement would have been unthinkable in the early days of the epidemic when death and desperation allowed no thought for any time but the present. Today, those words aren’t just a hollow dream; they are a reality made possible by tireless effort on behalf of the Ryan White HIV/AIDS Program and the entire HIV/AIDS community.

While the path to an AIDS-free generation is visible, the journey will not be easy. To move forward, we must use the best tools available. We now have an AIDS-Free Generation Blueprint to help guide our efforts, and we are investing in research and initiatives that target our hardest-hit populations. Through the SPNS Integrating HIV Innovative Practices (IHIP) project and increased collaboration across HAB divisions, we are ensuring that the latest best practices in HIV care are disseminated to providers. The recently created HIV Care Continuum Working Group will bolster our Federal collaboration and aggressiveness in meeting the goals of the National HIV/AIDS Strategy.

We must remove any roadblocks between patients and care. This means fighting stigma and discrimination wherever they arise, and ensuring that HIV testing is widely available, confidential, and culturally sensitive. We recognize the value in collaborating across borders of all kinds—institutional, cultural, and international—in order to reach our ambitious goals.

By doing these things we can, and will, turn the tide against HIV/AIDS.

Laura W. Cheever
Associate Administrator for HIV/AIDS, HRSA

and provided lessons learned that have enabled providers to offer their patients high-quality, evidence-based care.

The Ryan White HIV/AIDS Program assists HIV-positive individuals with necessary care and treatment services, including lifesaving antiretroviral therapy (ART) that we now know can also dramatically reduce the risk of sexual transmission to an uninfected partner.

Major advances in the treatment and prevention of HIV/AIDS have emboldened many to ask, for the first time in decades, “Can the next generation be AIDS free?” With many experts now answering a resounding “Yes,” this issue of HRSA CARE Action is devoted to efforts underway in HRSA-supported communities to build a foundation that will enable today’s children one day to live in a world in which no new HIV infections occur and deaths from AIDS are rare.

A BLUEPRINT FOR AN AIDS-FREE GENERATION

In 2011, the Honorable Hillary Clinton, then U.S. Secretary of State, first coined the phrase “AIDS-free generation.” In Clinton’s vision, an AIDS-free generation is one in which

- virtually no children are born with HIV.
- as children become teenagers and adults, they are at far lower risk of becoming infected with HIV than they are today.
- those who do acquire HIV have access to treatment that helps prevent them from developing AIDS and passing the virus on to others.

Just months after making this landmark statement, at the 2012 International AIDS Conference in Washington, D.C., Clinton took a bold step toward turning her vision into action. She tasked the President’s Emergency Plan for AIDS Relief (PEPFAR), a State Department-led initiative that HRSA supports, to help build and strengthen health systems in the countries hardest hit by HIV/AIDS, with developing a blueprint to stamp out the disease worldwide. The blueprint is guided by three key strategies:

- **Treatment as prevention**: Effective ART reduces by 96 percent the risk that a person living with HIV will transmit the virus to a partner.
Mother-to-child transmission: Today, 1 in 7 new HIV infections worldwide occurs through mother-to-child transmission. In 2010, PEPFAR helped prevent an estimated 114,000 babies from being born with HIV.8

Male circumcision: Male circumcision is a low-cost procedure that reduces the risk of female-to-male transmission by more than 60 percent. PEPFAR has financed 75 percent of the 1 million male circumcisions for HIV prevention around the world since 2007.8

These three interventions, when used in combination with other scientifically proven prevention strategies—such as condom use and access to clean needles—offer a historic opportunity to drive down the worldwide rate of new HIV infections.

A DECLARATION TO END AIDS
Building on the momentum generated by PEPFAR’s Blueprint for an AIDS-Free Generation, a declaration to end HIV/AIDS was issued in July 2012 at the XIX International AIDS Conference (AIDS 2012), a biennial conference attended by thousands of medical experts, health care professionals, activists, and people living with HIV/AIDS (PLWHA) from around the world. The “Washington D.C. Declaration,” named for the city where the conference was held, grew out of a partnership between the International AIDS Society (IAS), the International AIDS Conference, and the University of California, San Francisco (UCSF).

“In a scenario unthinkable just a few years ago, we now have the knowledge to begin to end AIDS in our lifetimes. Through this declaration, we stand together to call on world leaders across all sectors to provide increased resources, visionary leadership, and a full-fledged commitment to seize the opportunity before us,” said Elly Katabira, president of the IAS and international chair of AIDS 2012.9

Diane Havlir, chief of the UCSF Division of HIV/AIDS at San Francisco General Hospital and Trauma Center and U.S. co-chair of AIDS 2012, agreed: “While we undoubtedly still need a cure and a vaccine, we can save millions of lives with the knowledge we have today if we fully implement the proven strategies we now have to treat those living with HIV and prevent new infections.”9

The Washington D.C. Declaration issues a worldwide call to action to “turn the tide” on the global AIDS pandemic. It encourages leaders at levels of government, health systems, and academic and nongovernmental organizations to join forces in enacting nine key strategies:

- An increase in targeted new investments;
- Evidence-based HIV prevention, treatment, and care in accordance with the human rights of those at greatest risk and in greatest need;
- An end to stigma, discrimination, legal sanctions, and human rights abuses against those living with and at risk for HIV;
- Marked increases in HIV testing, counseling, and linkages to services;
- Treatment for all pregnant and nursing women living with HIV and an end to perinatal transmission;
- Expanded access to antiretroviral treatment for all in need;
- Identification, diagnosis, and treatment of tuberculosis (TB);
- Accelerated research on new tools for HIV prevention, point-of-care diagnostics treatment, vaccines, and a cure; and
- Mobilization and meaningful involvement of affected communities.8

HRSA’S ACTIONS TO END AIDS
The goal for an AIDS-free generation is a shared one. Several of the strategies outlined in both the PEPFAR HIV/AIDS blueprint and the Washington D.C. Declaration have been HRSA imperatives for many years. We will continue to do our part to move toward this goal by using the treatment cascade to prioritize and target resources in communities served by HRSA grantees.

The HIV/AIDS treatment cascade is a way to show, in visual form, the numbers of individuals living with HIV/AIDS who are actually receiving the full benefits of the medical care and treatment they need. “A significant number of people living with HIV ‘fall off’ at various stages along the treatment cascade, and only a minority of persons with HIV actually achieve viral suppression,” says Michael Evanson, senior policy analyst in the Division of Policy and Data within HRSA’s HIV/AIDS Bureau (HAB).

In 2011, the U.S. Centers for Disease Control and Prevention (CDC) analyzed HIV surveillance datasets, viral load and CD4 laboratory reports, and other published data to develop national estimates of the number of HIV-infected people at each step of the treatment cascade. They found that, for every 100 PLWHA in the United States, an estimated8

- 80 are aware of their HIV status,
- 62 have been linked to HIV care,
- 41 stay in HIV care,
• 36 receive ART, and
• 28 are able to adhere to their treatment and sustain undetectable viral loads.

In July 2013, the White House announced a call to action for a multidisciplinary approach to reduce dropoffs across the continuum of HIV care to achieve an AIDS-free generation. It called for renewed and intensified efforts at each point of care of the treatment cascade:

- Diagnosis
- Linked to care
- Retained in care
- Prescribed ART
- Viral suppression.

“Getting people tested so they know their status is an important first step,” says Evanson. “But that’s only one part of the job—next we need to make sure they are linked to care if they test positive, start treatment right away, stay in care, and so on to really break the cycle of transmission.” Individuals at high risk for HIV infection and who test negative should also be educated about HIV/AIDS transmission and prevention strategies.

As part of this call to action, the White House created the HIV Care Continuum Working Group. The purpose of that task force is to gather information from Federal agencies on HIV testing and care, review HIV research, and recommend ways to accelerate and improve HIV treatment and care.

HRSA’S SPECIAL PROJECTS OF NATIONAL SIGNIFICANCE SYSTEM LINKAGES INITIATIVE

In the Ryan White HIV/AIDS Program’s more than 20-year history, HRSA has made much progress in increasing engagement at every stage of the treatment cascade to break the cycle of HIV transmission in the United States. Key to these efforts is HRSA’s Special Projects of National Significance (SPNS), a program with a long history of developing innovative service models that span the continuum of HIV care, from diagnosis to viral suppression. Projects funded through SPNS include behavioral change interventions, intensive case management, patient navigation, life-skills training, literacy training, and home-based outreach specifically targeting the populations hardest hit by HIV/AIDS.

One of the most recent SPNS projects to address the treatment cascade is the Systems Linkages and Access to Care for Populations at High Risk of HIV Infection Initiative (the Systems Linkages initiative), a multistate demonstration project and evaluation of innovative models of linkage to and retention in HIV care. Grantees in six states (Louisiana, Massachusetts, New York, North Carolina, Virginia, Wisconsin) are targeting people who are unaware of their HIV status, defined as “any individual who has not been tested for HIV in the past 12 months, or any individual who has not been informed of their HIV test result (HIV positive or HIV negative), or any HIV-positive individual who has not been informed of their confirmatory HIV test result.” Grantees also focus on bringing patients back into care if they have fallen out and on keeping patients’ viral load suppressed through the use of antiretroviral medications.

OTHER HRSA INITIATIVES ADDRESSING THE CARE CONTINUUM

HRSA supports initiatives that specifically target people at different stages of the care continuum. Improvements at each stage, when taken together, have the potential to significantly curb HIV infection and transmission in the United States.

Diagnosis

An estimated 232,700 HIV-positive people in the United States are unaware of their HIV infection. They cannot engage in treatment that reduces morbidity and mortality, may participate more often in high-risk HIV transmission behavior, and have a higher risk of transmitting HIV to others than do those who are aware of their HIV infection. Furthermore, by the time they are diagnosed, many of these people already have advanced disease, placing them at greater risk of poor health outcomes and increasing the likelihood that they will transmit the virus to others. Improving HIV diagnosis—the first stage of the treatment cascade—through widespread HIV testing is therefore critical. In this context, the recent approval of an HIV over-the-counter test by the U.S. Food and Drug Administration (FDA) will provide a crucial new tool for early diagnosis and facilitate linkage of a larger number of HIV-positive individuals who were previously unaware of their infection to clinical care.

Since 2006, the CDC has recommended routine screening for HIV as part of regular medical care for everyone in the United States aged 13–64 years. This recommendation was bolstered last year when the U.S. Preventive Services Task Force (USPSTF) expanded its
own recommendations by calling for routine HIV screening for all Americans aged 15–65. Prevention of HIV is also more cost effective than treatment of HIV. Under the Affordable Care Act, most insurers are required to cover preventive services that are recommended by the task force and receive an “A” (strongly recommended) or “B” (recommended) rating. These guidelines are expected to increase reimbursement for HIV testing, which receives a USPTF “A” rating, thus removing one of the barriers to widespread testing.

HRSA has several initiatives underway to support routine HIV testing in the communities it serves. A primary example of this is HRSA’s AIDS Education and Training Centers (AETCs), which offer technical assistance and training to more than 50,000 providers to expand HIV testing in medical care settings. AETC training specifically focuses on providers who serve minority populations, the homeless, rural communities, incarcerated persons, and other communities that are disproportionately burdened by HIV/AIDS. Working in close collaboration with the AETCs is the HRSA Bureau of Primary Health Care (BPHC), which supports community health centers serving some of the Nation’s most vulnerable and underserved communities. The BPHC ensures the provision of care in accordance with evidence-based clinical guidelines and also works toward the goal of increased HIV testing. For more information, see www.aids-ed.org and www.hab.hrsa.gov/abouthab/partfeducation.html.

**Linked to and Retained in Care**

In a recent study on clinician practices and attitudes, 95 percent of respondents support early ART use for their patients. Of those patients who engage in care, missed visits are common and have been associated in the short term with delayed initiation of ART and in the long term with poor clinical outcomes. HRSA is committed to improving linkages to and retention in care to ensure that people with HIV/AIDS remain in or return to care to reap the full benefit of ART.

HRSA’s in+care Campaign, for example, aims to examine best practices and develop service models that bring patients back to care and keep others from falling out of care. Founded in partnership with the National Quality Center, the in+care Campaign was specifically designed to facilitate local, regional, and State-level efforts while building and sustaining a learning community among Ryan White HIV/AIDS Program grantees. There were 612 sites that signed up to participate in the Campaign. As an offshoot of the in+care initiative, Partners in+care, a growing community for PLWHA, was launched to bolster efforts to help PLWHA stay in care or get into care. Partners in+care activities are designed for and by PLWHA with the primary purpose of engaging them in the in+care campaign. See www.incarecampaign.org for more information.

**Prescribed ART**

The advent of ART in the mid-1990s has helped countless people infected with HIV/AIDS live longer, healthier lives. Only recently, however, was it recommended that all adults and adolescents testing positive for HIV, regardless of CD4 count, should begin ART. Previously, many providers waited to initiate ART until evidence showed that the patient’s immune system was severely compromised. “Starting therapy later allows the virus to take a greater hold and also opens the window for [the] infected person to pass the virus on to others,” says Evanson. “Ideally, you want people on ART as soon as possible.”

The new recommendation, developed by the U.S. Department of Health and Human Service (HHS) Panel on Antiretroviral Guidelines for Adults and Adolescents, a working group of the Office of AIDS Research Advisory Council is based, in part, on a growing body of evidence demonstrating that the same treatments used to keep the virus in check can also prevent its transmission. People on ART are far less infectious than those not on ART because the drugs used in ART substantially suppress the amount of HIV in the body—so much so that a recent study found that the use of ART in primarily heterosexual HIV-infected individuals could reduce HIV transmissibility by 96 percent.

Using ART not only as a treatment but also as a prevention tool—a strategy known as “treatment as prevention”—offers a powerful new line of defense in stopping the spread of HIV/AIDS, especially when used in combination with proven prevention practices such as the use of condoms and clean needles.

One of the most exciting forms of treatment as prevention is pre-exposure prophylaxis (PrEP), in which people who are at high risk of acquiring HIV take medication to reduce that risk. In July 2012, the FDA approved Truvada (tenofovir/emtricitabine) for use in PrEP, making it the first drug of its kind to be so approved. Truvada is an oral, once-a-day pill that combines two drugs commonly
used for HIV treatment. Studies that formed the basis for the FDA approval showed that Truvada, when used consistently by HIV-negative individuals, could reduce the risk of acquiring HIV infection.\(^{21}\)

**Viral Suppression**

Unfortunately, despite the benefits of ART and the availability of fixed-dose drug regimens that have made it easier to achieve viral suppression, barriers to care and treatment persist and, without their removal, undermine health outcomes.\(^{22}\) HRSA/HAB is addressing this issue through a spectrum of core medical services that include HIV counseling and patient education on the importance of treatment adherence. In recent years, this shift toward supporting medical case management has assisted in increasing treatment access and HIV medication education.

In addition, SPNS projects have a long history of tackling adherence issues. A case in point is the Enhancing Linkages to HIV Primary Care and Services in Jail Settings (Jails Initiative), which has a strong adherence component. The Jails Initiative targets HIV-infected men and women while they are incarcerated, as well as during the transition from local jail facilities to primary medical and behavioral health care in the community. One of its grantees, AID Atlanta, developed and implemented a project to increase the medical treatment adherence rate of HIV-positive “releasees” by immediately linking them to primary care while also providing coordinated services, including enhanced case management, inpatient and outpatient substance abuse treatment, housing, and other supportive services.

Other SPNS projects that address treatment adherence include the Enhancing Engagement and Retention in Quality HIV Care for Transgender Women of Color initiative, the Building a Medical Home for Multiply Diagnosed HIV-positive Homeless Populations initiative, and the Enhancing Access for Women of Color initiative. Importantly, all SPNS projects contain a strong evaluation component and require grantees to disseminate their findings, with a goal of potential replication by other Ryan White HIV/AIDS Program grantees and other health care providers.

**TURNING THE TIDE ON HIV/AIDS**

With so much progress in recent years in the treatment and prevention of HIV/AIDS, we are beginning to see that an end to AIDS is no longer elusive. But with so many lives still in the balance, we must press forward toward the visions put forth in both PEPFAR’s blueprint and the Washington D.C. Declaration, as well as through our efforts at addressing the treatment cascade. We now understand that this vision cannot be accomplished without a shared, concerted effort aimed at curbing new infections and improving the health of PLWHA across the continuum of care. Only such an effort will create the sea change needed to make the next generation an AIDS-free one.
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