



What Test and Treat Entails

Improving Health Outcomes

Linkage to Care

Optimizing Test and Treat

TEST AND TREAT: A NEW PARADIGM FOR SLOWING THE SPREAD OF HIV

As the HIV/AIDS epidemic moves into its fourth decade, a new comprehensive strategy may offer hope for improving the care of people living with HIV/AIDS (PLWHA) and preventing transmission of the disease. This promising model is called “test and treat,” and its premise is as follows: HIV/AIDS can be eliminated from society if all adults are tested regularly and all infected persons are put on antiretroviral therapy (ART)—regardless of CD4 level. The jury is still out on whether this strategy is wise, but clinical trial findings demonstrating that patients with HIV who are receiving treatment are significantly less likely to pass on the infection suggest that the time has come to give serious attention to test and treat.¹ This issue of *HRSA CAREAction* is therefore devoted to examining the rationale, feasibility, challenges, and potential promise of this approach.

The U.S. Centers for Disease Control and Prevention’s (CDC’s) 2006 HIV testing recommendations seek to address wider scale HIV testing² (for example, they suggest HIV screening for people ages 13 to 64 in all health settings).³ The Ryan White HIV/AIDS Treatment Extension Act of 2009 (which authorized the Ryan White HIV/AIDS Program) also directed Part A and B grantees to seek early identification of PLWHA unaware of their status and link them to care. Those recommendations, in combination with effective ART, the availability of newer and simpler antiretroviral (ARV) drug regimens, and the need to control the HIV epidemic, have generated much interest in the test-and-treat strategy among researchers, policy makers, and providers. The driving factor, of course, is the clinical trial findings that PLWHA on ART are far less likely to transmit HIV to others.

DID YOU KNOW?

- ▶ When patients are on ART they are less infectious.
- ▶ The test-and-treat strategy has similar goals to the National HIV/AIDS Strategy.



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Early diagnosis of HIV, linkage to care, and reduction of viral load—and, thus decreased infectiousness—have always been priorities of HRSA's. In 2009, the Ryan White HIV/AIDS Treatment Extension Act specifically directed Part A and B grantees to seek earlier identification of people living with HIV/AIDS unaware of their status and link them to care.

We know when patients are aware of their status they're less likely to transmit the virus. Recent clinical research has also shown overwhelmingly that when people living with HIV/AIDS are adherent to antiretroviral therapy, they are far less likely to pass on the infection than those off-treatment.

This new research warrants evaluation of test and treat, a broad-based strategy for reaching, engaging, and treating people living with HIV/AIDS. In this issue of *HRSA CARE Action* we examine what test and treat entails, the feasibility of this model, the challenges associated with expanding treatment regardless of CD4 level, and what changes health reform and a National HIV/AIDS Strategy may mean for such an approach.

Examining potentially promising new strategies like test and treat is just one more example of how HRSA is always looking for ways to *do better* and *do more* for people living with HIV/AIDS.

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Cover: Finger-prick HIV testing in an outreach van in Brooklyn, N.Y.

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WHAT DOES TEST AND TREAT ENTAIL?

The test and treat approach is based on two theories:

1. Early diagnosis and treatment will decrease the risk of HIV/AIDS and non-HIV/AIDS-related health problems in PLWHA.
2. Reduction of viral load to undetectable levels will dramatically reduce the current transmission rate of HIV.⁴

Test and treat therefore has two goals:

1. Improve the health outcomes in people who do not yet know their serostatus.
2. Reduce HIV transmission, because PLWHA who are receiving treatment are far less likely to transmit infection to others.

To achieve those goals, the test-and-treat framework includes multiple systems of care that would include the following components:

- ▶ Testing and identification of PLWHA as soon as possible. (To read about testing requirements and consent, see www.kff.org/hivaids/upload/6094-05.pdf.)
- ▶ Linkage of people testing positive for HIV to HIV care—that is, ensure transition from test site to care setting using evidence-based linkage models, such as the Antiretroviral Treatment Access Study (ARTAS; see www.cdc.gov/hiv/topics/prev_prog/ahp/resources/factsheets/ARTASSII.htm) and offer ART, if the patient is eligible.
- ▶ Patient education to encourage self management and facilitate retention in care, adherence to treatment, and prevention of sexually transmitted infections (STIs).
- ▶ Supportive services for promotion of sexual health maintenance.
- ▶ Monitoring and evaluation of a test-and-treat strategy using HIV/AIDS Bureau (HAB) performance measures. (See <http://hab.hrsa.gov/deliverhivaids/habperformmeasures.html> to learn more.)

Rationale for Test and Treat

Test and treat is a comprehensive strategy that could make a significant difference in the HIV epidemic.⁵ As such, this article examines test and treat's two primary goals.

Improving Health Outcomes in People Who Do Not Know Their Serostatus

Several indicators support increasing the number of people aware of their HIV status. In the United States there are more than 1 million estimated PLWHA.⁶ According to the latest CDC estimates, approximately 50,000 new HIV infections occur each year,^{7,8} and of

Getting people tested and into treatment as early as possible is a practical goal. [However], we have a challenge in identifying people earlier and getting them into care.

—Melanie Thompson, AIDS Research Consortium of Atlanta

the more than 1 million PLWHA, an estimated 21 percent are unaware of their serostatus.⁹ The highest prevalence is in urban areas, where many people at high risk of HIV infection live. In some major cities, HIV seroprevalence exceeds 1 to 2 percent, and in the New York City population of men who have sex with men (MSM), it exceeds 13 percent.¹⁰ These data underscore the need to increase testing.

According to one meta-analysis, people unaware of their serostatus are more likely to engage in risky health behaviors, such as unprotected vaginal and anal intercourse, than are people who know their serostatus.¹¹ In addition, 35 to 45 percent of people with newly diagnosed HIV infection develop AIDS within 1 year after diagnosis, representing late entry into care (i.e., they enter care later in the course of the disease).¹² Many people present at emergency rooms with extremely compromised immune systems and AIDS-related complications and learn their HIV status only when tests are initiated. According to the North American AIDS Cohort Collaboration on Research and Design, the median CD4 count at time of presentation increased from 256 cells/mm³ in 1997 to 317 cells/mm³ in 2007. Given that the U.S. Department of Health and Human Services (HHS) guidelines recommend initiating ART at 350–500 cells/mm³,¹³ it is noteworthy that for this ten-year span, the median CD4 count at diagnosis indicated that ART should be initiated.

If fully implemented, test-and-treat programs could help increase the number of people receiving early diagnoses when their immune systems are relatively healthy and, furthermore, could produce a decrease in the number of people unaware of their status who, without HIV treatment, are more likely to infect others. It is clear that test-and-treat has the potential to save lives.

Reducing HIV Transmission

A growing body of evidence suggests that earlier treatment can extend lives and reduce mortality.¹⁴ A test-and-treat framework would start PLWHA on ART earlier in disease course than the current HHS recommendations and could have a major influence on the HIV epidemic. As more people with higher CD4 counts began and maintained treatment, infectiousness would decrease. Linkage to and retention in high-quality HIV primary care is essential for the strategy to work, however.¹⁵

Some ecological studies show that HIV incidence may be decreasing in locales with high ARV coverage. One study showed that by lowering average community viral load* in the city of San Francisco, HIV infections could be decreased. In addition, viral load monitoring could help public health professionals better allocate resources and evaluate prevention and treatment programs in a particular community. Such a tool is most likely to be effective in communities such as San Francisco, Boston, and Vancouver, where prevention, care, and treatment are well supported and implemented.

One of the major reasons to support the test-and-treat

approach is simply the effectiveness of ART in reducing HIV transmission. According to one source, even with the phenomena of drug-resistant virus and adherence difficulties only 15 to 25 percent of PLWHA on treatment have detectable virus.¹⁷ Moreover, evidence indicates that PLWHA with undetectable virus may not transmit the virus readily to others. In fact, the data are compelling that effective ART reduces sexual transmission. In one meta-analysis examining 11 cohorts of serodiscordant heterosexual partners in which the partner with AIDS was treated with ART and had <400 copies/mL, no HIV transmission occurred.¹⁸ One of the most exciting breakthroughs at the recent International AIDS Society Conference in Rome was a report of the HIV Prevention Trials Network (HPTN) 052 study showing that HIV-infected men and women who were on ART had a 96-percent reduced risk of transmitting the virus to their uninfected sexual partners.

Several studies have modeled test and treat, and the very concept of treating our way out of the epidemic has been around since the 1990s, according to Ward Cates, president for research at Family Health International.^{19,20} The most cited modeling study, by Granich et al., used South Africa as a test case and showed that a universal test-and-treat model could reduce incidence significantly.²¹ Most models are just that, however—concepts or estimates that come with many caveats and assumptions. The true test will be real-world scenarios implemented in communities of need.

To better assess the feasibility and effectiveness of a test-and-treat approach, the HIV Prevention Trials Network (HPTN) recently launched a 3-year controlled study, HPTN 065 (Box 1). The study includes an analysis of test-and-treat's effectiveness as a "prevention-with-positives" strategy. HPTN 065 marks an important step forward in determining the potential of a large-scale rollout of a test-and-treat strategy.²²

CHALLENGES TO IMPLEMENTATION OF TEST AND TREAT

Many challenges, ranging from HIV stigma to inadequate funding for testing, care, and treatment, must be addressed—and overcome—for the test-and-treat strategy to be fully effective at the individual level. New research would have to be completed in order to answer remaining questions regarding the framework's impact on local and regional public health.

Test and treat implementation has three main challenges:

1. Testing people at greatest risk
2. Providing adequate resources
3. Maintaining people in care in the face of systemic challenges.

If any component in the test-and-treat strategy framework, as outlined earlier (on page 2), is incomplete or underutilized (e.g., testing sites, inadequate coverage of ART), the entire strategy is likely to be less effective.

*Community viral load is the mean viral load in PLWHA in a given community; it is a population marker of transmission risk.

The main purpose of the 36-month HPTN 065 study, which began in 2010, is to assess a community-level test-and-treat strategy in the United States. The study, which is known as TLC-Plus (testing and linkage to care plus treatment) will evaluate the probability of program outcomes and assess the effectiveness of others.

The primary outcomes of the TLC-Plus package of interventions will be determined by measuring changes in key parameters in two intervention communities (Bronx, NY, and Washington, DC). Observations in four nonintervention control communities (Chicago, Houston, Miami, and Philadelphia) will help assess the influence of current trends in HIV testing and care expansion in the United States.

TLC-Plus uses innovative approaches, including a community focus, multicomponent strategies that include behavioral and medical interventions, analysis of routinely reported HIV

surveillance data to determine key outcomes, and partnership with local departments of health and the CDC.

This study is a proof-of-concept formative study. It will provide key information that could guide the design and anticipate the costs of a future large, randomized, community-level clinical trial evaluating full implementation of a test-and-treat strategy in the United States. Findings could also inform test-and-treat efforts in other developed countries.

More information is available at www.hptn.org/research_studies/hptn065.asp.

Source: Adapted from HIV Prevention Trials Network. *HPTN 065*. 2010. Available at: www.hptn.org/research_studies/hptn065.asp. Accessed May 31, 2011.

Testing People at Greatest Risk

HIV testing has expanded greatly since the epidemic began. In the early days, as a result of stigma, no consensus on the desirability of HIV testing existed. The notion of routine testing was fraught with privacy concerns, and a positive test was likened to a death sentence. Expansion of testing came about over the subsequent years as both a prevention strategy (to educate about HIV and risk behaviors) and in response to the availability of treatment with AZT. The attitudes toward testing changed dramatically in 1996 with the advent of combination therapy. Getting ART meant survival. Now, routine testing is seen in a more positive light, as a way to increase identification of people with HIV and get them into care and a way to educate people about HIV prevention.²³

People most at risk for HIV—minority or young MSM and people without access to health care, for example—are often the hardest to reach. Consequently, HRSA has launched many projects and initiatives to reach these groups. (See “National HIV/AIDS Strategy” section below.)

Providing Adequate Resources

According to Murray Penner, deputy executive director of the National Alliance of State and Territorial AIDS Directors (NASTAD), the current economic climate makes the resources needed for routine testing particularly challenging, because Medicaid in most States is not required to reimburse for it.

Pressure on State AIDS Drug Assistance Program (ADAP) resources has continued to increase over the years as a result of increased costs of care management, decreased mortality, more new drugs, and relatively stable infection rates. State ADAPs are struggling with the high cost of ARV medications, and the environment is not likely to improve any time soon, given the poor economy and its crippling effects on State budgets. At the same time, the number of people needing treatment has increased. According to NASTAD, as of August 11, 2011, a total of 9,217 eligible people were on ADAP waiting lists in 12 States, and an additional 19 States had contained

costs through measures including monthly caps on enrollment, formulary reductions, and restricting financial eligibility. Ten other States are considering tightening eligibility requirements in 2012.²⁴

The Ryan White HIV/AIDS Program is the payor of last resort for people with HIV. To help address treatment access challenges, the Ryan White HIV/AIDS Program now allocates more money to ADAP than to any other program component: \$885 million in FY 2011. State ADAPs also receive funds from their respective State governments. In addition, HRSA provided an extra \$25 million to States with ADAP waiting lists in 2010 to assist in reducing the size of their waiting lists. Still, need continues to outweigh available funding.

ADAPs, however, are not the only way for low-income PLWHA to access medications. Pharmaceutical assistance programs (PAPs) help some patients access medications (see <http://fairpricingcoalition.org>). Welvista, a new nonprofit partnership between a mail order pharmacy and Heinz Family Philanthropies, is working to fill the ADAP waiting list gap.²⁵ To ensure increased access to ART for PLWHA, however, PAPs also have to implement cost-containment measures, such as rebates from pharmaceutical manufacturers, improved drug purchasing and distribution systems, and pharmacy-based discounts on drugs (e.g., use of generics when available) (To learn more about HRSA’s efforts in addressing ADAP challenges, see www.youtube.com/watch?v=Zp7QNFw_1y8.)

AIDS service organizations are having to become ever more creative in meeting client needs and increasingly collaborative with local partners to reduce duplication of services and decrease costs. Even though President Obama requested an increase in the FY 2012 Federal budget for HIV/AIDS programs, programs continue to operate under serious financial constraints.

Data show that HIV testing is cost effective when compared to the expense of treatment for HIV/AIDS. A 2006 study found that the average lifetime cost of care for a PLWHA is \$618,900 over 24 years.²⁶ Additionally, some clinics and public hospitals

If we expand to [people] who are undiagnosed and need treatment, and then they stay on treatment, it will continue to push the AIDS Drug Assistance Program limit.

—Murray Penner, Deputy Executive Director, National Alliance of State and Territorial AIDS Directors

are eligible for 340b drug pricing which may assist in curtailing costs. The 340b program sets an upper limit on the price that drug manufacturers receive from covered entities for outpatient drugs. For information on whether your facility qualifies, you can inquire with your pharmacy director. Hospitals and providers may also participate in group-purchasing arrangements to reduce the cost of test kits. For information, contact your laboratory or purchasing directors. (For further details, go to www.hrsa.gov/opa/.)

What remains to be seen regarding access to HIV/AIDS treatment for low-income persons is the impact of implementation of the Patient Protection and Affordable Care Act and, specifically, expansion of Medicaid in 2014.

Maintaining People in Care: Systemic Challenges

While AIDS service organizations and other Ryan White HIV/AIDS Program grantees work together to remove patient-level obstacles to engagement and retention in care, systemic problems that prevent patients from accessing appropriate care must be overcome to make the test-and-treat model viable. For example, HIV testing and counseling may be a new endeavor at some community health clinics.

Various models exist to address systemic challenges and improve patient health outcomes. For example, the Louisiana State University (LSU) Health Care Services Division, which runs several public hospitals, and the Louisiana Office of Public Health (OPH) created a partnership called the Louisiana Public Health Information Exchange, or LaPHIE. The partnership was made possible through funding from HRSA's Special Projects of National Significance and sought to remove system-level barriers, improve organizational communication strategies, and enhance patient health outcomes. In short, LaPHIE established an electronic link between OPH clinics and LSU's electronic medical records system to link into care PLWHA who are not in care. OPH maintains the list of PLWHA in the State and also receives and tracks their CD4 and viral load test reports.

LaPHIE automatically generates a message that a certain patient is "out of care" if there is no CD4 or viral load test result reported for a year. If that patient then enters care at any of the LSU hospitals, a message shows up in the electronic records system. In addition, the doctor or nurse gets an instant message that the person tested HIV positive but is not currently receiving care, providing an opportunity to reengage that patient. In the program's first 14 months, 199 patients were identified as out of care, and of those, 89 have returned to care.²⁷ LaPHIE highlights what's possible when grantees join forces and look for innovative ways to overcome systematic challenges and, subsequently, improve clinical outcomes.

In the United States in 2003, approximately 67 percent of PLWHA receiving care were eligible for treatment on the basis of the 350 CD4 cells/mm³ threshold, yet 21 percent of those PLWHA were not being treated.²⁸ Among patients on ART, however, 80 percent were viral-load suppressed, meaning

that when they received continuous treatment, their infection decreased. These data underscore the importance of getting PLWHA into treatment and ensuring adherence (see Box 2). Although socioeconomic and other barriers have always thwarted the goal of getting PLWHA into care, and will continue to pose a problem even with increased testing and treatment, programs like LaPHIE illustrate that providers can successfully address some of the barriers.

The Patient Protection and Affordable Care Act, when implemented as written, will help remove several systemic barriers that stand in the way of people receiving HIV care. For example, the act will prohibit pre-existing condition requirements, so PLWHA cannot be dropped or denied insurance coverage. Coverage is required for young adults up to age 24 who are on their parents' insurance plan and lifetime caps on coverage will be removed. These changes and others are intended to improve access for people who might otherwise be without care or supported entirely by Ryan White. The Patient Protection and Affordable Care Act, coupled with the National HIV/AIDS Strategy, is a formidable intervention that should remove many systemic barriers. Implementation of the act is likely to improve the success of test and treat. (To read additional changes that the Patient Protection and Affordable Care Act would bring see, www.kff.org/healthreform/upload/8061.pdf.)

Linkage to Care

Widespread and timely access to treatment is required for a successful test-and-treat program. Because of poor or inadequate linkages to care or lack of patient follow-up on referrals, it is common for people diagnosed with HIV to delay treatment. Delays, however, affect individual health outcomes, and untreated PLWHA with detectable viral levels are at greater risk of infecting others.^{29,30}

A host of linkage-to-care models exist; their efficacy varies depending on the population and service context. Examples include ARTAS, described earlier. Coordination and collaboration among providers is critical.³¹ Many peer/patient navigator programs have had success in this area. Patient navigators are often nonmedical health care workers who assist patients in learning about their disease and steering them toward treatment and other services. Peer navigators and other linkage models help remove systemic barriers so that patients can better access the services they need. (To learn more about navigator programs in other disease contexts, visit <http://bhpr.hrsa.gov/grants/patientnavigator/outreachandprevention.html>.)

Linking people to care is only half the battle. Once patients are engaged, they must subsequently be retained in care. HRSA has examined this topic in detail and has recently launched a national campaign to examine the issue and identify best practices. (To access technical assistance materials, visit www.careacttarget.org/topics.asp#engaging; to learn about the campaign, see www.incarecampaign.org.)

Adherence is a problem with any lifelong therapy, although fixed-dose drug regimens and other innovations may have made it easier for PLWHA to achieve viral suppression. Regardless of the regimen, adherence must be supported and should be a part of patient education and counseling. Poor adherence has serious public health consequences, because missing doses may create drug-resistant virus that could be transmitted. The benefits of adherence are clear: Two recent studies found that 78 to 87 percent of people receiving ART had an undetectable viral load.

Some drugs may be toxic to patients with certain comorbidities, or competing life priorities may interfere with treatment. Some patients have intolerable side effects with treatment or may be reluctant to initiate treatment because they fear toxicities or unknown long-term side effects. Providers must address these and other challenges when working with

patients to achieve proper adherence to a treatment regimen.

For more information on adherence, see the AIDS Education and Training Center site: www.aidsetc.com/aidsetc?page=home-search&post=1&SearchEntry=adherence, and the TARGET Center site and search the TA library for “adherence”: www.careacttarget.org.

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Retention in Care

Several population-based studies in the United States have shown that a proportion of PLWHA fail to receive care in any year. According to one study, as many as 30 percent of newly diagnosed PLWHA did not attend their initial HIV primary care appointment in the period studied.³² Certainly, the number of PLWHA who receive care increases as the years progress. One estimate is that 75 percent of PLWHA receive care at the time of diagnosis and that 3 to 5 years later, 80 to 90 percent are in care.³³ Several cohort studies, however, show that in some settings, 22 to 44 percent of patients are entirely lost to follow-up. Lack of appropriate care translates to fewer people receiving ART, preventative care, and other medical services.^{34,35} Once the National HIV/AIDS Strategy and Patient Protection and Affordable Care Act are implemented, however, the Centers for Medicaid and Medicare Services, HRSA, and CDC will have collaborated to leverage resources and make programs more efficient.³⁶

OPTIMIZING TEST AND TREAT

Every component of test and treat must be optimized if the strategy is to be truly effective, as noted earlier. The existing health care infrastructure presents resource challenges, even where model programs for people with HIV have been created. For example, the HRSA Shortage Designation Branch develops shortage designation criteria and uses them to decide whether a geographic area, population group, or facility is a Health Professional Shortage Area (HPSA) or a Medically Underserved Area (MUA) or Population (MUP). Implementing a test-and-treat strategy would be particularly difficult in these areas as resources are already limited. As such, additional support would likely be warranted in HPSAs, MUAs, and MUPs to get a test-and-treat strategy to function optimally. (For more information, see <http://bhpr.hrsa.gov/shortage/>.)

Provider and patient education is critical in every component of test and treat. As clinicians who began providing HIV/

AIDS care at the start of the epidemic retire, new providers will need training. Programs such as the AIDS Education and Training Centers (<http://aidsetc.org/>) will continue to be the leaders in education. As health care reform is implemented and more people gain access to care, the number of patients entering HIV primary care will increase, as will the need for patient—and provider—education. These changes represent an exciting time in public health, but one of many new challenges. (To stay abreast of HRSA's latest publications on health care strategies see, www.hab.hrsa.gov/newspublications/index.html, www.careacttarget.org/index.asp, and www.hab.hrsa.gov/abouthab/partfspns.html.)

NATIONAL HIV/AIDS STRATEGY

One of President Obama's top HIV/AIDS policy priorities has been the development of the National HIV/AIDS Strategy.³⁷ The three priorities of the strategy are (1) to reduce HIV incidence, (2) increase access to care and optimize health outcomes, and (3) reduce HIV-related health disparities. Because test-and-treat goals dovetail with the National HIV/AIDS Strategy, the approach will receive support at the Federal level if it is demonstrated to be effective in joining research, outreach, and care services and treatment delivery. As Andrea Weddle, executive director of the HIV Medical Association, explains:

There are a lot of opportunities to see [Test and Treat] work on a larger scale despite the ambitious goals. On a national scale we need to realistically think about it as a targeted roll out; even the Affordable Care Act will roll out on a State-by-State basis. This is where the National HIV/AIDS Strategy [will] play a role using integration of existing programs and skills.

The National HIV/AIDS Strategy and health care reform are great steps forward in curtailing HIV disease in our country. The Ryan White HIV/AIDS Program will continue to remain intact and integral to achieving this goal. Other Federal initiatives to

TLC-Plus [Testing and Linkage to Care plus Treatment] is the foundation of the National HIV/AIDS Strategy, and we know best practices cannot be realized without good linkages to care and should be supported by all in the public and private sector, when and where necessary.

—Tiffany West-Ojo, District of Columbia Department of Health

help individuals and communities most disproportionately affected by HIV disease include the following:

- ▶ The Ryan White Program’s HIV/AIDS Quality Management Cross-Part Collaborative.
- ▶ The SPNS System Linkages and Access to Care initiative, and
- ▶ The HHS cross-agency 12-cities project. (The project supports and accelerates comprehensive HIV/AIDS planning and cross-agency response in the 12 U.S. jurisdictions that bear the highest AIDS burden in the country.)

Again, prevention efforts are necessary to decrease infection rates and, by extension, demand for ART. As such, these initiatives help further blend prevention and treatment services. In addition, they encourage strengthened cooperation among local, State, and Federal entities to increase effectiveness in decreasing HIV transmission.

HAB’s performance measures will also allow HIV providers to better monitor their quality of care delivery and help

identify areas for improvement. These uniform measures allow grantees to more readily share information and streamline their collaboration and evaluation.

Together, the HHS projects listed above work to increase health insurance coverage for patients who are un- or underinsured, foster stronger interagency collaboration, and encourage better coordination of HIV services across Ryan White HIV/AIDS Program Parts. The National HIV/AIDS Strategy, as reflected in the test-and-treat strategy, and the other Federal projects suggest that HIV/AIDS care is shifting toward a new paradigm in which fewer people will go undiagnosed. This shift would represent a more comprehensive strategy that would offer treatment as early as possible and increased support for caseworkers, clinicians, and caregivers. Recent legislation surrounding HIV and health care are important first steps as we move into this next decade of addressing HIV/AIDS in the United States.

➔ PROS AND CONS OF TEST AND TREAT ^{38,39,40}

PRO	CON
Widespread effective antiretroviral treatment may lower the community viral load.	Widespread testing and treatment has large financial cost implications; as more people are engaged into test and treat, more resources will be needed.
More people would benefit from treatment.	Many barriers to HIV testing remain.
Evidence shows test and treat works.	Modeling studies are flawed.
Test and treat would identify more HIV-positive people.	We may not be able to treat our way out of the epidemic.
The strategy would help mitigate health disparities.	Demand for treatment exceeds supply.
When risk reduction counseling is included in HIV testing, it allows providers to discuss risk behaviors and harm reduction to both HIV-positive persons as well as HIV-negative persons.	Behavioral disinhibition/risk compensation would compromise any decrease in incidence.
Test and treat would enable monitoring and retention for people who start treatment.	The current testing system makes capturing acute infections difficult.
Test and treat would help link and retain people in care.	Viral suppression may not be possible for everyone.
Test and treat would present opportunities for prevention with patients’ partners.	Current safety net resources should be used efficiently.
People would receive referrals to supportive services earlier in disease course.	Widespread treatment is unsustainable
People could begin treatment earlier in disease course.	Treatment initiation may take time. Unknown long term treatment toxicities.
Sexually transmitted infection screening, treatment, and sexual health education would be facilitated	Stigma and discrimination continue to exist.

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