Many countries • Diverse populations • Combination approaches

**Biomedical Interventions**
- Antiretroviral treatment for prevention
- Antiretrovirals for pre-exposure prophylaxis
- Enhanced HIV testing, counseling, and treatment
- Treatment of sexually transmitted infections
- Treatment with medications to reduce drug abuse

**Behavioral Interventions**
- Innovative and culturally relevant counseling methods
- Intensive risk-reduction counseling
- Counseling to improve adherence
- Prevention of transmission by HIV-positive individuals

**Structural Interventions**
- Financial incentives for adherence to antiretroviral treatment
- Financial incentives for linking HIV testing to HIV care
- Financial incentives for school attendance

Prevention Now!
The HIV Prevention Trials Network (HPTN) is a partnership between scientists and communities around the world to develop, evaluate, and implement cutting-edge biomedical, behavioral, and structural interventions to reduce the transmission of HIV. We use randomized controlled clinical trials, designed and conducted according to the highest scientific and ethical standards, to identify the best combinations of interventions for the populations at highest risk of HIV infection worldwide. Through this work, we have achieved major scientific breakthroughs and helped shape the field of HIV prevention research both internationally and in the United States.

Global Partnerships

Our Sponsor
U.S. National Institutes of Health (NIH)
National Institute of Allergy and Infectious Diseases (NIAID) awards U01 AI068619, U01 AI068617, and U01 AI068613, co-funded by the National Institute of Mental Health, the National Institute on Drug Abuse, and the Office of AIDS Research

Our Research Partners
U.S. Centers for Disease Control and Prevention (CDC)
U.S. State and Municipal Health Departments
NIH-Sponsored Networks and Centers
- AIDS Clinical Trials Group (ACTG)
- International Maternal Pediatric Adolescent AIDS Clinical Trials (IMPAACT) Group
- Center for HIV-AIDS Vaccine Immunology (CHAVI)

- More than 80 research sites in 15 countries
- More than 50 clinical trials ongoing or completed
- More than 50,000 study participants followed
- More than 300 publications
HPTN research paved the way for the use of low-cost antiretroviral drugs to prevent mother-to-child transmission of HIV in resource-poor settings. The results of the landmark HIVNET 012 trial, published in *The Lancet* in 1999, demonstrated that single-dose oral nevirapine given to a mother in labor and to her infant within 72 hours postpartum could cut HIV transmission in half. Nevirapine provided a new, realistic alternative to the costly and complex zidovudine-based regimen used at the time.

HPTN demonstrated the feasibility of large-scale clinical trials to evaluate behavioral interventions among men who have sex with men. HIVNET 015 (also known as EXPLORE) was the first study to test a behavioral intervention using HIV infection as a primary endpoint among men who have sex with men in the United States. The results, published in 2004 in *The Lancet*, showed that an intensive one-on-one counseling intervention did reduce some risk factors for HIV infection, but the results were not statistically significant. This suggested that multi-component approaches to HIV prevention would be necessary to reverse the epidemic in this population.

HPTN demonstrated that standard suppression of herpes simplex virus type 2 is not an effective HIV prevention strategy. Although genital herpes had been cited as a risk factor for HIV acquisition, the five-country HPTN 039 trial found that daily acyclovir (a common antiviral drug used to treat genital herpes) did not reduce the risk of HIV infection among women and men with herpes simplex virus type 2. The results, published in *The Lancet* in 2008, helped to steer the network’s resources toward more promising HIV prevention strategies.

HPTN has been at the forefront of research on HIV prevention for injection-drug users. Early HPTN research established effective procedures for recruiting and retaining injection-drug users in HIV prevention trials. It also helped to characterize the behaviors that put this population at high risk of acquiring and transmitting the infection. This work paved the way for trials such as HPTN 058, which is testing whether long-term medication-assisted therapy can reduce HIV infection and death among opiate-dependent drug users.

HPTN demonstrated the promise of a vaginal microbicide gel to prevent HIV infection in women. In 2009, HPTN and the Microbicide Trials Network (MTN) presented the results of their collaborative HPTN 035 trial comparing the safety and effectiveness of the microbicide candidates BufferGel and PRO 2000. The results showed that BufferGel was not an effective microbicide. They also showed that PRO 2000 gel plus condoms reduced acquisition of HIV in women by 30 percent, but a lack of statistical significance suggested the need to pursue products with more specific antiretroviral properties.

HPTN helped to lay the scientific groundwork for advanced clinical trials of tenofovir gel, which later proved to be the first effective vaginal microbicide. In the HPTN 050 and HPTN 059 trials, network scientists conducted formative pharmacokinetic and safety studies of 1% tenofovir gel (a microbicide gel containing the antiretroviral drug tenofovir). The CAPRISA 004 trial, led by HPTN co-principal investigator Dr. Quarraisha Abdool Karim, subsequently showed that when used before and after sex, the same 1% tenofovir gel reduced HIV infections by 39 percent.

HPTN is a leader in the use of antiretroviral drugs for prevention. HPTN 052 is a seminal trial that will answer two key questions: Can antiretroviral treatment prevent transmission in serodiscordant couples? When should individuals infected with HIV start antiretroviral therapy? HPTN is also studying antiretroviral drugs as pre-exposure prophylaxis to prevent acquisition in uninfected individuals (HPTN 066, HPTN 067, and HPTN 069). This work will continue the momentum created by the iPrEx study and will address the next steps (different dosing regimens and next generation of drugs) for pre-exposure prophylaxis. HPTN 065 is a large study to determine the feasibility of linking HIV testing to HIV care and antiretroviral therapy as a combined strategy for preventing HIV in the United States. A sister study, HPTN 070, is being developed to determine the feasibility of this same strategy in sub-Saharan Africa.
Data from a 2010 report of the Joint United Nations Programme on HIV/AIDS (UNAIDS) show that the incidence of HIV has declined significantly in 33 countries since 2001. This encouraging news suggests that the work of the HPTN and other groups is having a global impact. Yet, data from the same report show that the epidemic has not declined in 30 other countries. Our international research portfolio is designed to reach populations that have not been reached before, using innovative biomedical, behavioral, and structural interventions to reverse the HIV epidemic.

- **The flagship HPTN 052 study among serodiscordant couples will answer two important questions.** This study of 1,750 couples in nine countries is helping to determine whether lowering the viral load of an infected partner with antiretroviral drugs can reduce the risk of HIV transmission to an uninfected partner, as well as to determine the appropriate timing for initiating antiretroviral therapy in order to achieve a better clinical outcome for the infected person.

- **The treatment of substance abuse has been linked to the reduction of HIV risk behaviors** for more than a decade, but no studies have been able to directly evaluate whether this type of treatment can prevent HIV infection. HPTN 058 is addressing this question with a large, randomized controlled trial to determine whether buprenorphine/naloxone tablets can prevent HIV infection and death among opiate injectors in Asia. The results will advance the scientific understanding of HIV prevention among injection-drug users.

- **Individuals with acute or early HIV infection may be responsible for a large proportion of all HIV transmission.** A study in sub-Saharan Africa suggests that transmission by individuals with recent infections could be up to 26 times more efficient than transmission by those with more established infections. HPTN 062 is evaluating the acceptability and feasibility of using an enhanced one-on-one counseling intervention to reduce risk behaviors among individuals with acute HIV infection. If this behavioral intervention proves acceptable and feasible, a larger study can be planned to test its effectiveness.

- **About 75 percent of young people ages 15 to 24 with HIV in sub-Saharan Africa are girls,** and most of them become infected during adolescence. HPTN 068 is determining whether the use of financial incentives to keep adolescent girls in school can decrease their risks of acquiring HIV.

**Diverse Populations**
- HIV-negative individuals
- Individuals with acute HIV infection
- Individuals with chronic HIV infection
- Heterosexual women and men
- Serodiscordant couples
- Men who have sex with men
- Adolescent girls
- Injection-drug users
Despite advances in HIV prevention and care, the rate of new HIV infections in the United States is no lower in 2011 than it was 10 years ago. An estimated 56,000 people still become infected each year, and HIV incidence is actually increasing in some populations, such as men who have sex with men. HPTN has revitalized HIV prevention in the United States through the design and implementation of the following studies, all of which are well aligned with the National HIV/AIDS Strategy:

- **HPTN 065 (also known as TLC-Plus)** is evaluating the feasibility of a multi-component strategy that enhances HIV testing and linkage to care plus antiretroviral treatment for HIV prevention. The study includes behavioral, biomedical, and structural interventions.

- **HPTN 064 (also known as the ISIS study)** is estimating the incidence of HIV among women living in 10 distinct geographic areas of the United States that have higher levels of HIV infection and poverty than surrounding areas. This study uses innovative approaches of ethnographic mapping and community engagement to identify the areas of highest risk of HIV acquisition.

- **HPTN 061 (also known as the BROTHERS study)** is testing the feasibility and acceptability of a multi-component community-wide intervention for black men who have sex with men. HPTN established the Black Caucus, which is composed primarily of influential men from this population, to provide additional guidance on the design and implementation of this groundbreaking trial.

HPTN helps spread the news about HIV prevention research in the United States through social networking sites like Facebook and Twitter. The network has also developed the website BlackMenStandTogether.org to reach out to men who may be interested in participating in HPTN 061.

*Photo: Lisa Marie Albert*
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<tr>
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<td>United States</td>
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This list provides a selection of key HPTN trials but is not comprehensive.
Community Engagement

Community involvement in HPTN is a true partnership. Building on previous initiatives under the HIV Network for Prevention Trials (HIVNET), we established a community working group to bridge the gap between our clinical research staff and the communities in which our study participants live. Each of our clinical research sites has at least one community advisory board (CAB), but community involvement goes beyond a purely advisory role. Community educators teach the local community about HIV prevention and clinical research, even when no trials are being conducted at a site. HPTN also dedicates resources to bridging gaps and forming alliances with individuals and organizations that are not part of a research site but still have an interest in our research agenda.

HPTN has contributed to community involvement in other HIV research networks by developing and sharing tools and instruments. We created the award-winning Research Ethics Training Curriculum for Community Representatives, designed to educate community representatives about their roles and responsibilities in the research process. In 2010, HPTN, MTN, and several clinical research sites in South Africa co-facilitated a community training workshop for five of the six networks supported by NIAID’s Division of AIDS (DAIDS) at the NIH. HPTN also played a leadership role in creating a cross-network community working group that helped to establish Community Partners, a diverse group that facilitates the inclusion of community priorities in the research of all six DAIDS-supported networks.

Contributions to Ethics

Through an ethics working group, HPTN integrates ethical considerations in the design and implementation of all of its clinical trials. The network includes ethicists on each of its protocol teams to ensure that ethical issues that arise during trial design and implementation can be addressed promptly. The working group also developed HPTN Ethics Guidance for Research to address ethical challenges in HIV prevention research, such as meeting local needs and priorities, offering appropriate care and treatment to study participants, and improving the informed consent process. The document has been widely disseminated and used to guide clinical trials around the world.

“ Including the community as a partner in our current research agendas has made the development and implementation of our clinical trials more efficient and informed.”

— Rhonda White, FHI
Evolution of the Network

**HIVNET**

HIVNET was established in 1993 with support from NIAID’s Division of AIDS at the NIH. Building on previous HIV vaccine trial-preparedness work funded by NIAID, HIVNET helped provide the stimulus and international infrastructure to allow HIV prevention science to flourish. The network helped create the scientific, political, and community buy-in for early clinical vaccine evaluation in Africa and the Americas. HIVNET also made substantial contributions to the prevention of mother-to-child transmission, the development of vaginal microbicides, the treatment of substance abuse, and the prevention of other sexually transmitted infections.

**HPTN I**

In 1999, HIVNET split into two new networks: the HIV Vaccine Trials Network (HVTN) and HPTN, which was tasked with addressing all HIV prevention priorities other than vaccines. HPTN continued to develop infrastructure at international sites and expanded to sites in China, India, and Thailand. HPTN’s international and U.S. agendas merged, and FHI (formerly Family Health International) became the network’s core coordination and operations center. A central network laboratory was created at Johns Hopkins University, and the Statistical Center for HIV/AIDS Research and Prevention (SCHARP) was established at the Fred Hutchinson Cancer Research Center. HPTN contributed important work on the second generation of topical microbicides and began the process of studying oral antiretrovirals for the prevention of HIV transmission and acquisition. The network also developed innovative research designs to evaluate interventions for injection-drug users and their social networks.

**HPTN II**

In 2006, HPTN was renewed with research agendas that complemented the agendas of HVTN, the newly created MTN, and the newly created IMPAACT group. HPTN’s top priorities include the use of antiretrovirals for prevention, the feasibility of recruiting populations most at risk of infection, the evaluation of multi-component interventions, and interventions to reduce transmission among injection-drug users. Within this framework, HPTN continues to develop and test innovative concepts such as incorporating financial incentives in its trial designs, testing antiretroviral drugs to prevent HIV transmission within serodiscordant couples and as pre-exposure prophylaxis, and evaluating the feasibility of interventions that could reach entire communities.

A research assistant for HPTN 064 talks to a potential participant in Harlem, New York. The study team is using innovative recruitment and retention strategies to reach women in areas of the United States with high rates of HIV and poverty.

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*Photos:* Depiction of individuals in photographs in this document does not indicate HIV status.

*For more information, please visit www.hptn.org*  
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