

NIH-Funded HIV Trial Networks: A family tree

1991
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1998

The beginning. The Pediatric AIDS Clinical Trials Group (PACTG) and the AIDS Clinical Trial Group (ACTG) were the primary US-funded networks funding research on treatments to block viral replication and treat opportunistic infections in adults and children living with HIV. ACTG 016 was the first trial of the antiretroviral AZT. The drug, which is still used today as part of combination therapy, was tested on its own as “monotherapy”. HIV Network for Prevention Trials (HIVNET) was focused on HIV prevention trials, including vaccine and non-vaccine studies such as HIVNET 016, a landmark trial that found two doses of nevirapine (one to mother and one to newborn) slashed rates of vertical transmission. The AIDS Vaccine Evaluation Group (AVEG) focused on early-phase vaccine research. Established in 1989 and funded through 1997, the Community Programs for Clinical Research on AIDS (CPCRA) was an NIH-funded research enterprise that focused on community-driven and -based treatment research.

1999
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2005

An era of expansion. Under the network structure launched in 1999, the HIV Vaccine Trials Network (HVTN) was distinct from the HIV Prevention Trials Network (HPTN). In this period, the HPTN launched the pilot phase of HPTN 052, the landmark study that showed that initiating antiretroviral treatment in people living with HIV at CD4 cell counts of 500 or above improved the clinical health of individuals and reduced the risk of onward transmission to primary sexual partners. The same period also saw the launch of the Step and Phambili vaccine trials by the HVTN.

2006
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2012

The “women’s prevention” moment. The Microbicide Trials Network (MTN) received funding in 2006 for trials focused on vaginal and rectal topical products (e.g., gels, rings, suppositories etc). In this period, the network launched VOICE—a study of oral PrEP and topical vaginal tenofovir gel—as well as trials of rectal microbicides. The INSIGHT network was created as a merger of two previous treatment-focused groups, and it launched ESPRIT, SMART and START, all trials of treatment in people living with HIV. They were designed to understand when to start ART, whether treatment interruptions were possible and how best to deliver lifelong ART. IMPAACT was launched as a merger of the PACTG and the perinatal science working group of the HPTN. During this time, initial results from HPTN 052 were released, showing benefits of treatment initiation at CD4 count above 500. Additional data were released from non-network PrEP and microbicide trials.

2013
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2020

The era of evidence. By 2013, non-network trials of a vaccine and a microbicide had shown efficacy. Daily oral PrEP was approved by multiple regulators, and in 2015 it was recommended by the WHO. Nearly nine million voluntary medical male circumcision procedures had been conducted worldwide, following clinical trial evidence released in 2006. The MTN moved ahead with rectal microbicide research and one of the two efficacy trials of the dapivirine ring, which showed modest efficacy. The HVTN and the HPTN jointly launched two large-scale antibody-mediated prevention (AMP) trials. HPTN also launched two long-acting injectable efficacy trials, and the HVTN began two large-scale vaccine trials.

2021
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2027

The future? NIH-funded prevention research networks will need to be able to identify and evaluate prevention options that people most at risk of HIV can use safely and consistently—in the context of an array of first-generation strategies like daily oral PrEP, dapivirine ring and possibly even long-acting injectable PrEP. The trials will be more complex to explain and recruit for and the science more sophisticated. Coordination around approaches to product selection, planning for product introduction and research that incorporates the needs and preferences of those most at risk of HIV will be as important as they have ever been.

