

# **Renewal of the HIV Clinical Trials Networks**

## **Status Report**

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September 24, 2024



National Institute of  
Allergy and  
Infectious Diseases

# Setting the 2034 Research Agenda

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- **Every 7 years, NIH competitively reviews its HIV network funding, addressing significant changes in research priorities**
- **By establishing a forward-looking agenda now, NIH will determine the focus and structure of its HIV clinical trial networks through 2034**



# Network Competition Timeline

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- Spring 2024: Launch process with network presentations to SWG
- **Summer until Dec 2024: Input from the stakeholders (investigators, community, etc.)**
  - Webinars, blog posts on selected topics, thematic discussions, townhalls, written feedback
- **Fall 2024: Preliminary discussion at ARAC and other advisory committees**
- **Jan 2025: Formal presentation to ARAC of the refined network and units structure for approval**
- **2025: Begin RFA authorship**
- **Winter/Spring 2026: Publish RFAs**
- **Summer/Fall 2026: Applications due**
- **Winter/Spring 2027: Review**
- **Sept 2027: Applications to Council**
- **Dec 2027: Earliest start date**

# Network Community Engagement – Contributions

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- Inform network research priorities
- Participate in scientific committees
- Participate on protocol teams
  - Voice questions/concerns about trials and their development, implementation and outcomes
  - Assure appropriateness of informed consents
- Advocate on behalf of clinical trial participants
- Educate to increase knowledge around areas of HIV research, increase awareness of trials
- Interpret and disseminate research results
- Promote ethical research practices



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HIV VACCINE  
TRIALS NETWORK

# Network Evolution

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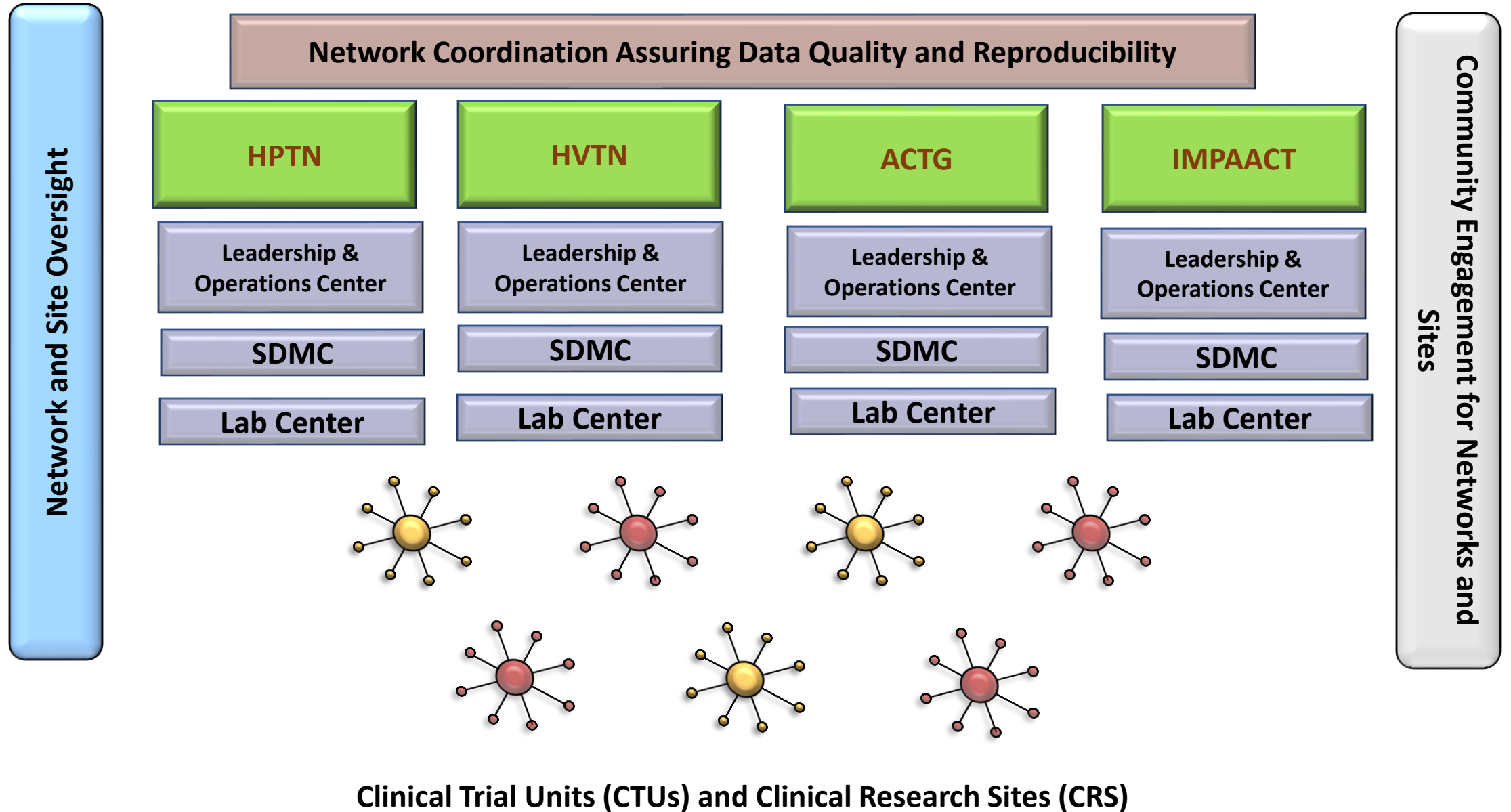
- **NIH proposes to maintain four leadership groups**
- **The overarching themes of this renewal are innovation and collaboration**
  - **In this current grant period, the groundbreaking studies often sprouted from collaborations**
- **Moving forward collaboration will be essential as we build implementation research into our plans**
  - **Implementation research projects will originate through partnerships with implementors—CDC, HRSA, PEPFAR and others**
- **Equipping the clinical trials enterprise with the tools to maintain readiness for pandemic response is essential**

# Finishing the Current Cycle

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- **What can be accomplished prior to the end of the current grant cycle?**
- **What adjustments in structure and scientific direction should be made to accelerate the pace of discovery?**

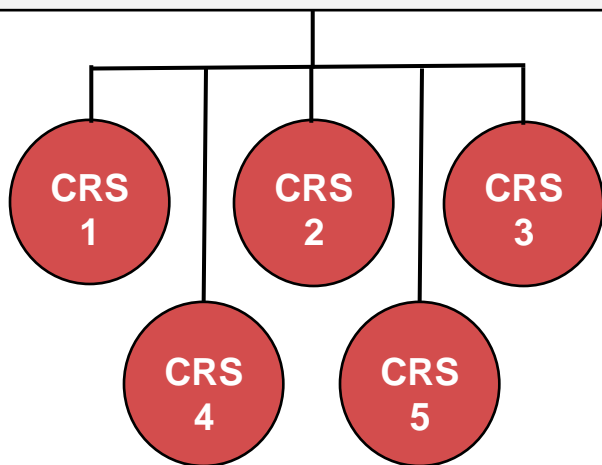
# HIV/AIDS Network Structure



# FY2028 Network Structure - CTU and CRS Affiliate with Multiple Networks

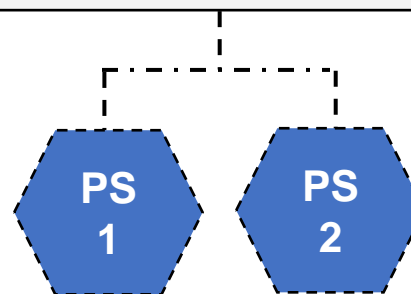
## Clinical Trials Unit

- Administrative capacity
- Shared resources
- Mentoring and oversight



### Clinical Research Sites

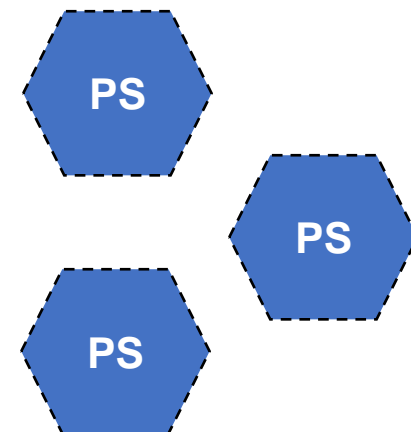
Scientific Contributors & Trial Implementers



### Protocol Specific

### Clinical Research Sites

Short Term Trial Implementers



### Protocol Specific

### Clinical Research Sites

Short Term Trial Implementers




# HIV Prevention

- **Strategic Goal:**

- Supporting biomedical research on prevention interventions that can change clinical practice and reduce HIV incidence

- **Background:**

- Several proven HIV prevention methods for use in combination or on their own are currently available (e.g., ART for prevention of vertical transmission, voluntary adult male circumcision, pre-exposure prophylaxis (PrEP) and post-exposure prophylaxis (PEP), U=U/treatment as prevention)



Prevention of Vertical Transmission	HIV Testing/ Counseling	Pre-exposure and Post-exposure Prophylaxis	Blood Supply Screening
Microbicides	Clean Syringes	STI Treatment and Prevention	Voluntary Adult Medical Male Circumcision
Treatment of Substance Use	Person Centered Delivery of Prevention Services	Treatment as Prevention	Condoms



# HIV Prevention: Future Directions

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- **Partnerships in prevention research**
  - Community, AVAC, TAG
  - Bill and Melinda Gates Foundation, Population Council
  - Institutes at NIH
  - USG partners – CDC, HRSA, SAMSA, (IHS?), PEPFAR, USAID, FDA
  - International government partners
  - Industry
- **Advance new strategies to reduce vertical transmission, through clinical trials of new strategies integrated with coordinated prevention and treatment methods**
- **With choice as a goal, what prevention methods best meet the needs of the most vulnerable populations, domestically and globally?**
- **Through partnerships:**
  - Address challenges to uptake and adherence to prevention tools
  - Define efficient and cost-effective delivery methods that can significantly reduce HIV incidence

# HIV Vaccines

## ■ Strategic Goal:

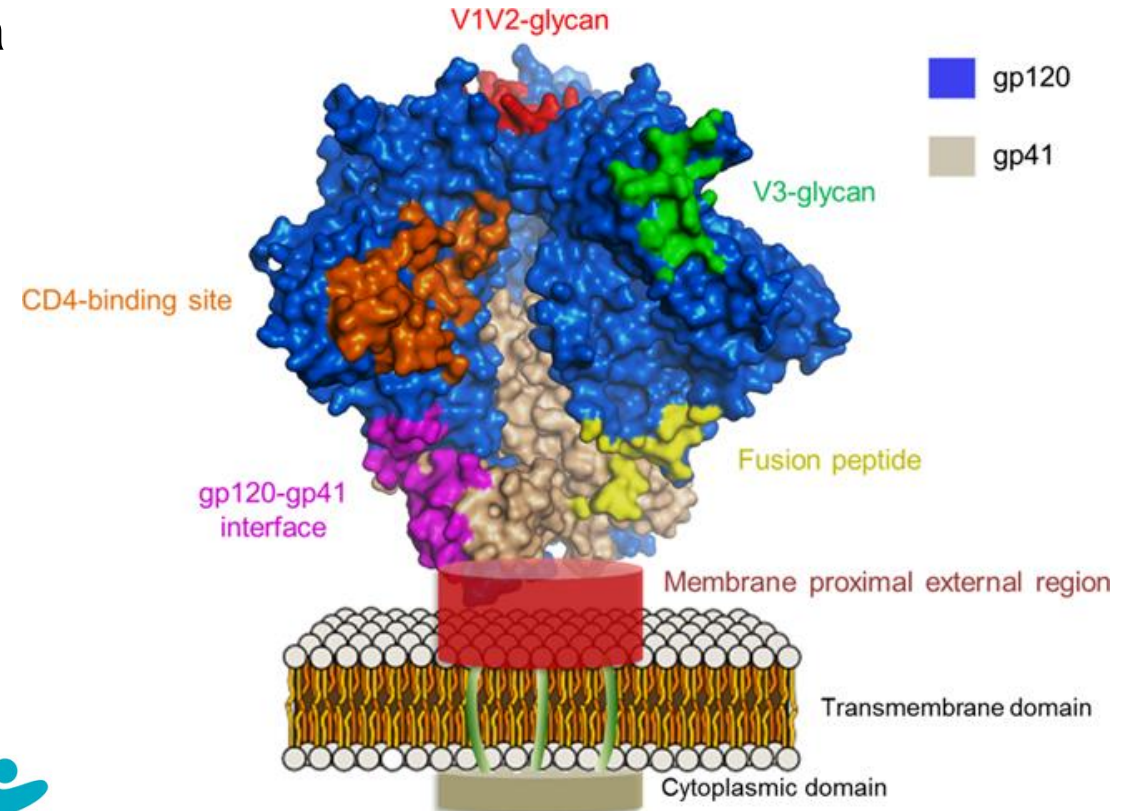
- Committed to the discovery and development of a safe and effective HIV vaccine, which remains a key component for ending the HIV epidemic

## ■ Background:

- Fostering novel ways to develop vaccines that trigger production of broadly neutralizing antibodies (bNAbs) and enhanced cell mediated responses that eliminate infected cells



HIV VACCINE  
TRIALS NETWORK



# HIV Vaccines: Challenges & Future Directions

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## ■ Challenges:

- Pace of GMP manufacturing processes, both protein and mRNA immunogens
- Need to advance rapid, iterative, and innovative trial designs

## ■ Partnerships in vaccine research:

- Community, AVAC, TAG
- Vaccine Research Center, additional NIAID funded development programs
- Bill and Melinda Gates Foundation, IAVI
- NIH Institutes, USAID, other USG partners
- Pharmaceutical company partners

## ■ Future Plans:

- Advance vaccine designs to simultaneously target multiple bNAb epitopes on Env
- Identify and harness other arms of the immune system that synergize with the protective activity of bNAbs (T-cells, NK cells, innate immunity, etc.)
- Evaluate HIV vaccines across the life span when ethically acceptable
- Explore HIV immunogen activity in PLWH
- Explore different vaccine delivery platforms
- Expand work on TB vaccines

# HIV Therapeutics

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- **Strategic Goal**

- Advance therapeutic strategies to treat HIV and HIV-associated co-infections and co-morbidities across the life span. Therapeutics research seeks to provide to all PLWH the means to achieve a healthy life span and a bridge to a HIV cure.

- **Partnerships in therapeutics research**

- Community, AVAC, TAG
  - Institutes at NIH
  - USG partners—HRSA, CDC, USAID, PEPFAR, USAID, FDA
  - Bill and Melinda Gates Foundation, TB Alliance
  - Industry



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# HIV Therapeutics: Challenges & Future Directions

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## ■ Challenges, areas of emphasis

- Maintaining adherence to ART regimens/emergence of drug resistance
- Advance safer, easier to administer regimens, including long-acting combinations
- Define prevention and treatment interventions for the highest priority comorbidities
- Addressing the polypharmacy associated with treatment of co-infections and co-morbidities
- For all PLWH
  - Seek equitable access to the most effective ART as well as prevention and treatment regimens for HIV associated comorbidities
  - Advance HIV cure research in a global manner

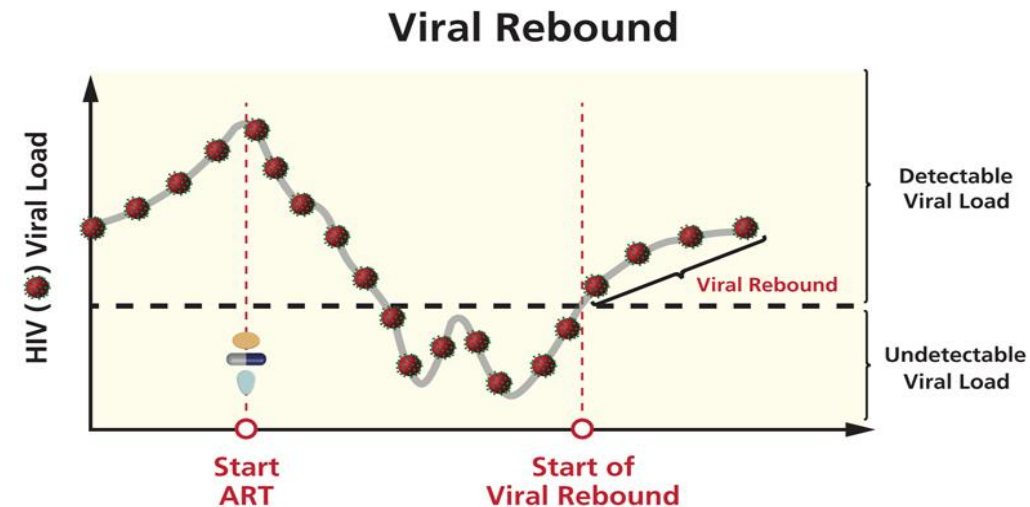
## ■ Future Plans:

- Develop new long-acting and sustained release treatments for global use
- Develop novel point-of-care and home-based diagnostics to measure viral load
- Expand and improve tools for monitoring adherence through hair (ENLIGHTEN) and urine (PUMA)
- Improve maternal and child treatments to be on par with non-pregnant adult options
- Optimize pediatric daily and long-acting ART
- Develop new treatments including using bNAbs
- Enhance the safety, address adherence challenges and side effects of treatment for life
- Improve implementation at scale through partnerships

# HIV Cure

## ■ Strategic Goal:

- Develop strategies to eradicate replication-competent HIV reservoir (cure) or control viral rebound without HIV eradication in absence of ART (sustained virologic remission)
- Advance cure strategies into evaluation in an equitable manner and across the life span as some as it is ethical and feasible



# HIV Cure: Challenges and Future Directions

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## ■ Challenges:

- Identify and characterize HIV reservoirs
- Develop strategies to target and eradicate HIV reservoirs
- Modifying bNAbs to eradicate HIV reservoirs
- Tailoring HIV curative strategies to the individual

## ■ Future Plans:

- Develop a pipeline of cell and gene therapies for HIV cure
- Advance combinations of strategies into adults and children as rapidly as is feasible
- Advance cure research into populations in an equitable manner and across the life span
- Link cure research in children to prevention of vertical transmission activities



**Questions?**