Sustained Treatment as Prevention: Unprotected sex and increases in virological suppression after HAART initiation among participants in HPTN 052


1FENWAY INSTITUTE, BOSTON, MA, 2FRED HUTCHINSON CANCER RESEARCH CENTER, VACCINE AND INFECTIOUS DISEASE DIVISION, SEATTLE, WA, 3UNIVERSITY OF NORTH CAROLINA, DEPARTMENT OF MEDICINE, CHAPEL HILL, NC, 4FH360, WASHINGTON, DC, 5FRED HUTCHINSON CANCER RESEARCH CENTER, VACCINE AND INFECTIOUS DISEASE DIVISION, SEATTLE, WA, 6HARVARD MEDICAL SCHOOL/MASSACHUSETTS GENERAL HOSPITAL AND FENWAY HEALTH, BOSTON, MA, 7FH360, DURHAM, NC, 8STUTTGART UNIVERSITY, DEPARTMENT OF PATHOLOGY, BALTIMORE, MD, 9KENYA MEDICAL RESEARCH INSTITUTE CENTER FOR GLOBAL HEALTH RESEARCH, KISUMU, KENYA, 10UNIVERSITY OF WITWATERSRAND, DEPARTMENT OF MEDICINE, CLINICAL HIV RESEARCH UNIT, JOHANNESBURG, SOUTH AFRICA, 11CHIANG MAI UNIVERSITY, RESEARCH INSTITUTE FOR HEALTH SCIENCES, CHIANG MAI, THAILAND, 12INSTITUTO DE PESQUISA CLINICA EVANDRO CHAGAS, FIOCRUZ, RIO DE JANEIRO, BRAZIL, 13THERAL CARE MEDICAL CENTRE, VHS, CHENNAI, INDIA, 14NATIONAL AIDS RESEARCH INSTITUTE (ICMR), PUNE, INDIA, 15BOTSWANA HARVARD AIDS INSTITUTE, GABARONE, BOTSWANA, 16UNC PROJECT, LILONGWE, MALAWI AND UNIVERSITY OF NORTH CAROLINA, CHAPEL HILL, NC, 17COLLEGE OF MEDICINE-JOHNS HOPKINS PROJECT, LILONGWE, MALAWI, 18UNIVERSITY OF ZIMBABWE, HARARE, ZIMBABWE, 19UNIVERSITY OF WITWATERSRAND, PERINATAL HIV RESEARCH UNIT, JOHANNESBURG, SOUTH AFRICA, 20HOSPITAL GERAL DE NOVAL IGUAÇU AND LABORATORIO DE AIDS E IMMUNOLOGIA MOLECULAR-IQ/FIOCRUZ, RIO DE JANEIRO, BRAZIL, 21HOSPITAL NOSSA SENHORA DA CONCEIÇÃO, PORTO ALEGRE RS, BRAZIL, 22UNIVERSITY OF NORTH, SCHOOL OF MEDICINE, DEPARTMENT OF MEDICINE, CHAPEL HILL, NC.
HPTN 052 Methods

- HPTN 052 enrolled 1763 HIV-serodiscordant couples at 13 sites in 9 countries.
- HIV+ pts with CD4 counts between 350 and 550 cells/mm³ were randomly assigned to start HAART either immediately ("Early" arm) or when their CD4 cell count was < 250 cells/mm³, or they developed an AIDS-defining illness ("Delayed" arm).
- The current analysis evaluated changes in sexual behavior and virological control over time.
- GEE models assessed time trends of risk behaviors and compared the change between the two treatment arms, adjusting for baseline characteristics including gender, region, substance use, and HIV-1 RNA level.
HPTN052 – Percent of Heterosexual Participants Who Reported Unprotected Sex with Any Partner

percent of participants reported unprotected sex

Enrollment | Month 3 | Month 6 | Month 9 | Month 12 | Month 15 | Month 18 | Month 21 | Month 24
--- | --- | --- | --- | --- | --- | --- | --- | ---
Arm E | 805 | 836 | 823 | 809 | 805 | 746 | 635 | 552 | 458
Arm D | 855 | 828 | 826 | 821 | 806 | 742 | 849 | 562 | 463
Conclusions

• Self-reported unprotected sex decreased by 3 months and did not increase over 24 months follow-up
• Virological suppression approached 90% by 3 months and was sustained over 24 months
• By 24 months, only 1% of the pts who initiated HAART immediately had detectable plasma viremia and engaged in unprotected sex (potential transmitters) compared to 3% of the pts in the delayed arm (compared to 4-5% of both groups at the start of the study).
• Early initiation of HAART was associated with sustained virological suppression and behavior change, supporting the concept of “treatment as prevention.”
ACKNOWLEDGEMENTS

- Sponsored by NIAID, NIDA, NIMH under Cooperative Agreement # UM1
- Participants
- Site Staff

Thank You