

CONTINUED LESSONS FROM VOICE

Z Mike Chirenje MD FRCOG
University of Zimbabwe, Dept. of Obstetrics and Gynaecology,
College of Health Science,
Harare, Zimbabwe



VOICE Study Summary

- VOICE was a RCT (N=5029) that assessed daily use of TDF, TDF-FTC or 1% TFV gel for HIV prevention in women 18-40yrs from SA, Uganda and Zimbabwe, Sep 2009 to June 2011
- Monthly HIV testing, pregnancy testing, risk reduction counseling, adherence counseling, condom supply, product supply done
- Quarterly plasma was collected for PK testing at the end of study
- Quarterly A-CASI adherence, risk behavior

The NEW ENGLAND JOURNAL *of* MEDICINE

ESTABLISHED IN 1812

FEBRUARY 5, 2015

VOL. 372 NO. 6

Tenofovir-Based Preexposure Prophylaxis for HIV Infection among African Women

Jeanne M. Murrain, M.D., Gita Ramjee, Ph.D., Barbra A. Richardson, Ph.D., Kailazarid Gomez, M.P.A., Nyaradzo Mgodzi, M.Med., Gonasagrie Nair, M.B., Ch.B., M.P.H., Thesla Palanee, Ph.D., Clemensia Nakabiito, M.Med., Ariane van der Straten, Ph.D., Lisa Noguchi, M.S.N., Craig W. Hendrix, M.D., James Y. Dai, Ph.D., Shayhana Ganesh, M.Med., Banning Mkhize, M.B., Ch.B., Marthinette Taljaard, B.S., Urvi M. Parikh, Ph.D., Jeanna Piper, M.D., Benoît Mâsse, Ph.D., Cynthia Grossman, Ph.D., James Rooney, M.D., Jill L. Schwartz, M.D., Heather Watts, M.D., Mark A. Marzinke, Ph.D., Sharon L. Hillier, Ph.D., Ian M. McGowan, M.D., and Z. Mike Chirenje, M.D., for the VOICE Study Team*

Main Findings

- Incidence of HIV was substantially higher than anticipated (5.7% overall, 8.7% <25yrs vs. 4.7% >25yrs, 7.5% unmarried vs. 0.9% married)
- Adherence to study products was low (30% TDF, 29% TDF-FTC, 25% TFV gel)
- Adherence was low especially among among young(<25yrs) and unmarried women
- Intent to treat analysis showed no protective effect of any of the 3 tested products

Pharmacological Measures of Adherence and Risk of HIV Acquisition in the VOICE Study, J.Dai et al (April 2015)

- 47% reduction in HIV infection rate among women with at least one plasma detectable TFV sample among adherers in gel arm (similar to 46% HSV-2 reduction J. MARRAZZO, R4P 2014)
- No sizable protective efficacy seen among adherers detectable TFV in the oral arms, possibly due to plasma detection not being a reliable measure of adherence in the oral arms
- This exploratory approach presented suggestive evidence of a prevention effect among gel users

CR I 2015

Conference on Retroviruses and Opportunistic Infections

Seattle, Washington, 23 - 26 February 2015

Correlates of Early PK Adherence In VOICE PrEP Trial Differ Between Oral and Vaginal Products- Van Der Straten et al

- **Oral arm:** Being from Uganda or Zim, no \$ support from partner, some risk perception, frequent alcohol drinking were associated with plasma PK detection Q1
- **Gel arm:** Being from Zim, >25yrs, partner support, some risk perception, no alcohol were associated with plasma TFV detection Q1

CR I 2015

Conference on Retroviruses and Opportunistic Infections

Seattle, Washington, 23 - 26 February 2015



Minor Drug Resistant Variants Infrequently Detected in Seroconverters from MTN 003 (VOICE) – Panousis et al

- 15/289 (5%) VOICE seroconverters had low frequency TFV and FTC resistance mutations detected by ASPCR
- Mutant detection was not associated with treatment arm or detectable TFV.
- Infrequent detection of FTC or TFV likely result of low product use in VOICE



IAS 2015

vancouver, canada

8th IAS Conference on HIV Pathogenesis,
Treatment & Prevention 19-22 July 2015



African women's perceptions of honesty and dishonesty about product use in the context of HIV prevention research during the VOICE (MTN-003) trial

Elizabeth Montgomery et al, July 2015.

- Widespread dishonesty when reporting on product use was acknowledged among VOICE participants because it is within human nature and fear of repercussions.
- When feasible, real-time adherence monitoring with feedback to participants should be implemented in future trials.

HIV prevention products preferred (IDI=68)

8 formulations presented (2 known)*



Vaginal Gel



Oral Tablets



Injectables



Vaginal Film



Vaginal Ring



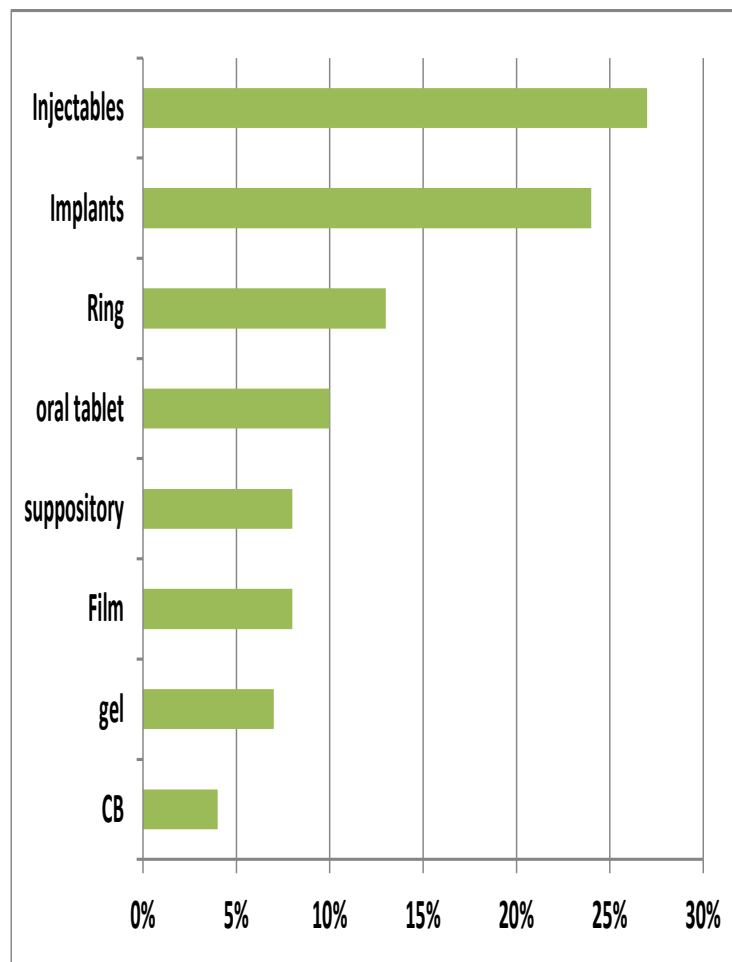
Barrier Methods



Vaginal Suppository/Tablets



Implants



MTH0030 Stage 2: Pictures of Possible Prevention Products

1

* Multiple selections allowed: Median preferred methods selected = 2 (range 0-6)



IAS 2015

vancouver, canada

8th IAS Conference on HIV Pathogenesis,
Treatment & Prevention 19-22 July 2015

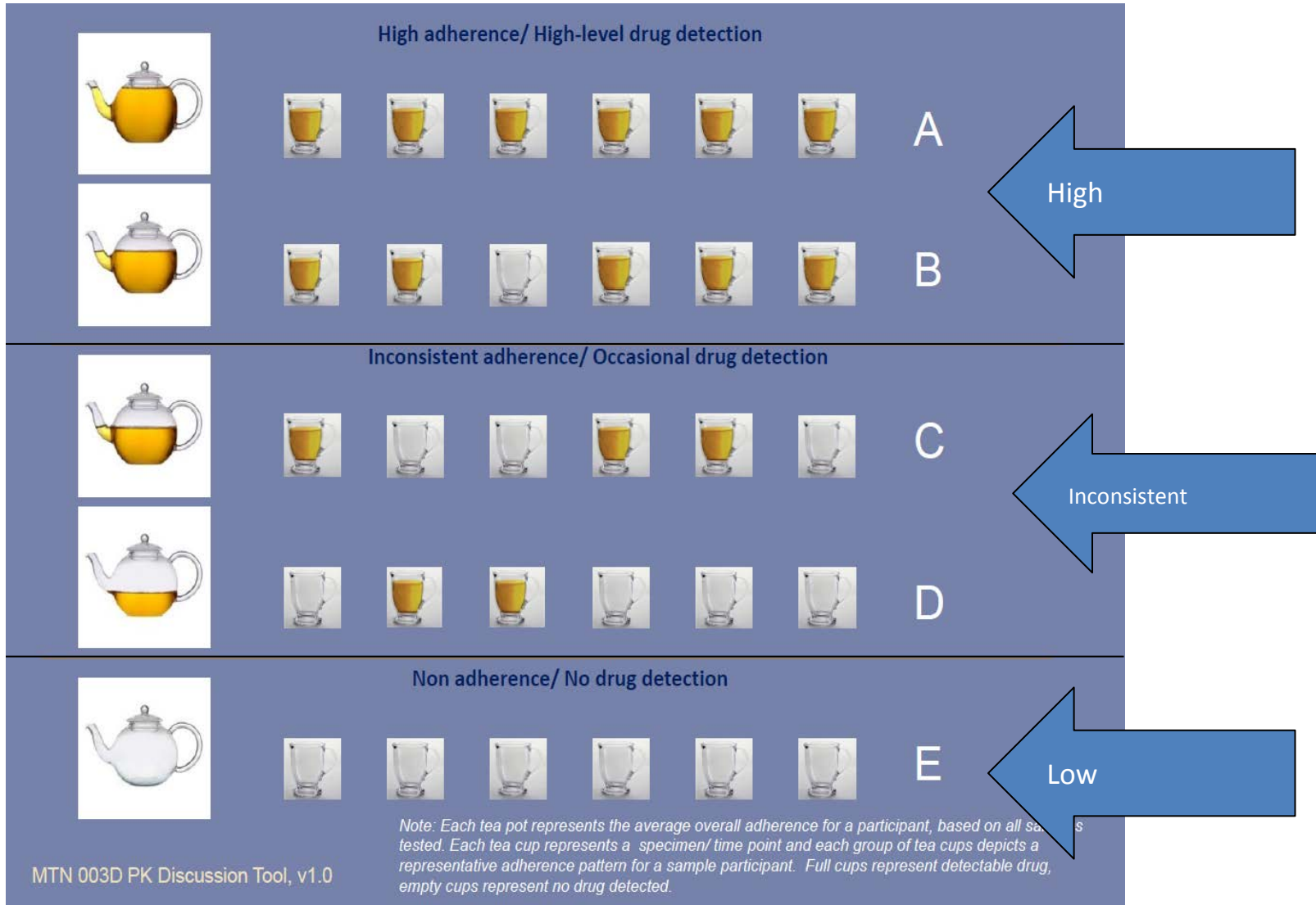
TUPEC505 - Poster Exhibition

HIV pre-exposure prophylaxis (PrEP) product preference among women in the VOICE-D (MTN-003D) study

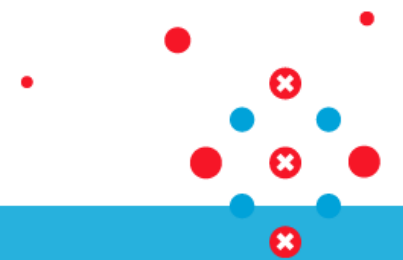
Presented by Ellen Luecke

- Participants were presented with 8 products and selected those they would be most interested in using in the future for HIV prevention.
- All products were selected by some women, but 81% preferred long acting methods (injectables, implants and rings)
- Different geographical and demographic (e.g. age and SES) were associated with different product preferences

Study tools



PK result 'Teapot' tool



'WE ARE OUR CHOICES'

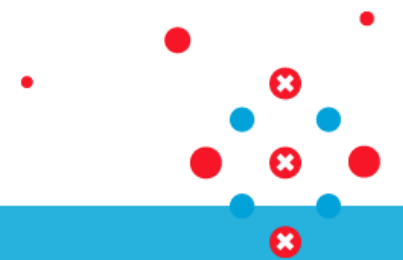
Jean Paul Sartre

Tools and strategies to enhance discussion of sensitive topics in the context of HIV prevention trials: the VOICE-D (MTN-003D) qualitative study

Ariane van der Straten

AIDS Impact Conference, Methods Symposium, July 30 2015 Amsterdam

- Pictorial teapot tool was perceived by staff and participants as helpful to explain PK results.
- Theme card exercise helped to systematically explore trial participation issues and adherence challenges.
- Use of visual and interactive tools stimulated candid discussions



'WE ARE OUR CHOICES'

Jean Paul Sartre

Women's journey into product non-adherence during VOICE in sub-Saharan Africa

Ariane van der Straten

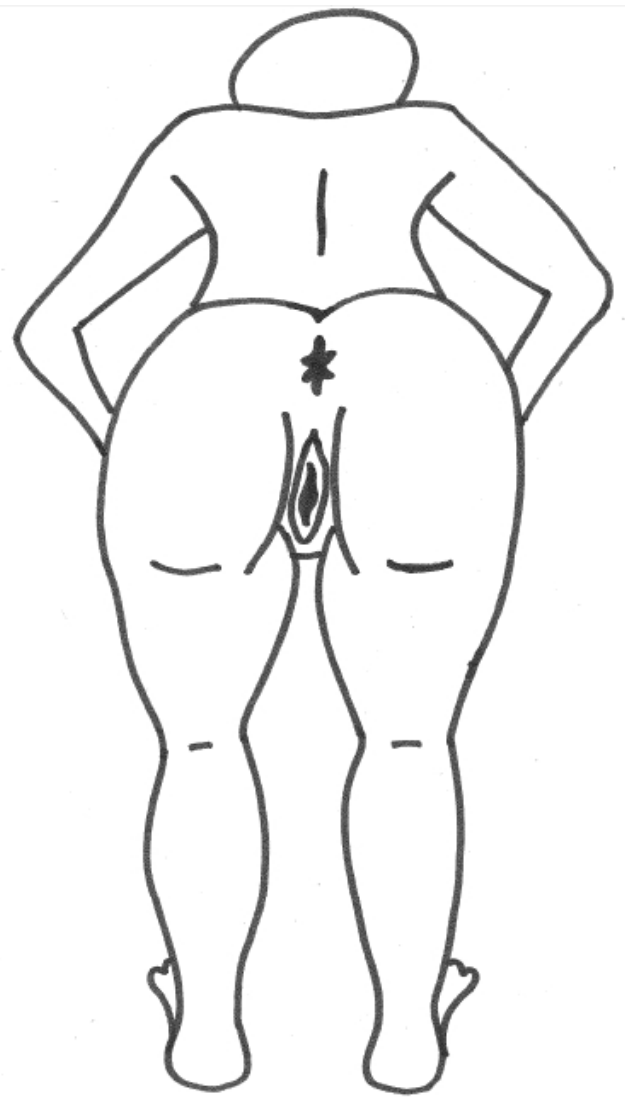
AIDS Impact Conference, Methods Symposium, July 30 2015 Amsterdam

- Varied adherence patterns and sub-patterns were reported among those with evidence of non-use based on plasma PK
- Mis-implementation appeared more common than permanent discontinuation, suggesting that many participants may have remained partially engaged with product regimen



Lost in translation: Language, Terminology and Understanding of Penile-Anal Intercourse in an HIV prevention Trial in South Africa, Uganda and Zimbabwe Zoe. Duby et al, 2015

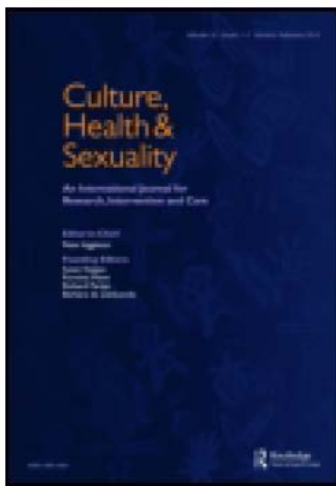
- Participants may have misinterpreted questions pertaining to heterosexual penile-anal intercourse (PAI) to refer to *vaginal sex from behind*, and subsequently misreported the behaviour
- Challenges in developing sexual behaviour terms for data collection instruments that strike a balance between being unambiguous and specific, while being culturally acceptable.





Condoms, Lubricants and Rectal Cleansing: Practices Associated with Heterosexual Penile-Anal Intercourse Amongst Participants in an HIV Prevention Trial in South Africa, Uganda and Zimbabwe, Z. Duby et al 2015

- Women demonstrated a lack of awareness of HIV transmission risks of PAI and none of the participants reported using condom-compatible lubricants for PAI.
- Participants described a variety of preparatory rectal cleansing practices.
- Some participants disclosed rectal use of the vaginal study gel.



Sexual scripting of heterosexual penile-anal intercourse amongst participants in an HIV prevention trial in South Africa, Uganda and Zimbabwe

Z. Duby et al July 2015

- Sexual scripting and decision making relating to penile-anal intercourse are driven by men (women reported engaging PAI to please partner)
- HIV transmission risks associated with penile-anal intercourse are exacerbated by taboos that impede effective sexual communication and condom negotiation.
- Interventions designed to prevent HIV transmission through penile-vaginal intercourse may not work for penile-anal intercourse.



Enter Keywords

All Issues

Search

Advanced Search

Search Jobs

JAIDS Journal of Acquired Immune Deficiency Syndromes:

1 October 2015 - Volume 70 - Issue 2 - p 212–217

doi: 10.1097/QAI.0000000000000715

Brief Report: Epidemiology and Prevention

Age-Disparate Partnerships and Risk of HIV-1 Acquisition Among South African Women Participating in the VOICE Trial

Jennifer Balkus et al

- Confirmed an earlier observation that having a partner >5 and >10 years at enrollment was not associated with HIV-1 acquisition among the 4077 participants enrolled at SA sites.

Original Article

Archives of Osteoporosis

December 2015, 10:3

First online: 14 February 2015

Factors associated with bone mineral density in healthy African women

Mgodi et al



- Among healthy premenopausal women, Total Hip and Lumbar Spine BMD was higher in Zimbabwe than Uganda.
- Additional factors independently associated with BMD included BMI, physical activity level, contraceptive use, and lactation



Enter Keywords

All Issues

Search

Advanced Search

Search Jobs

Bone Mineral Density Changes among Healthy African Pre-menopausal Women Participating in a Tenofovir-based HIV PrEP Study: The MTN-003B Study – B. Gati et al (Accepted Aug,2015)

- TDF-containing oral PrEP resulted in small but significant decreases in hip and spine BMD among young African women.
- The bone changes were reversible with TDF recipients having greater increases in BMD after stopping study medication.

Work In Progress Scientific Publications

1. Contraceptive Use and Pregnancy Incidence 1 among Women Participating in an HIV Prevention Trial - **Akello et al**
2. Improved Detection of Acute Infection in MTN 003 (VOICE) Using 4th Generation Antigen/Antibody Rapid Tests – **Livant et al**
3. Reporting of Adherence in the VOICE Trial: Did Disclosure of Product Nonuse Increase at the Termination Visit? – **Mensch et al**
4. How Presentation of Pharmacokinetic Results changed reports of product adherence: Experience from the VOICE-D study – **Musara et al**
5. Divergent Adherence Estimates with Pharmacokinetic and Behavioral Measures in the MTN-003 (VOICE) Study - **van Der Straten et al**
6. An Empirical HIV Risk scoring Tool to predict HIV-1 acquisition in African Women- **Balkus et al**
7. Robust Uptake of vaccination among HBV susceptible women in a high endemic region: Findings from the VOICE trial - **Mgodi et al**

ACKNOWLEDGEMENTS

- BIG THANK YOU to all First Authors and co-Authors
- VOICE Participants
- Our sponsors

Acknowledgements

MTN is funded by NIAID (5U01AI068633), NICHD and NIMH, all of the U.S. National Institutes of Health

