



Current research work on positive prevention in South Africa: An update and way forward

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Plan (NSP)" during the SA AIDS Conference to be held at the Inkosi
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Outline of the presentation

- Background
- Available empirical evidence of effective positive prevention
 - Evidence 1: National population-based surveys in 2002 and 2005 amongst PLWHA who are aware of their HIV-positive status.
 - Evidence 2: Pilot study on Options for Health intervention in Durban, South Africa
- Other current studies on Options for Health
- Current studies on the Healthy Relationships intervention
- Another potential positive prevention intervention being tested in South Africa
- A new positive prevention intervention approach targeting acute HIV infections
- Way forward and Conclusions

Background

- The NSP identifies positive prevention (or prevention for positives) as one of the main strategies that should be used in the fight against HIV/AIDS.
- This has become imperative because of the wider availability of ART in general and scaling up of both VCT and PMTCT means that more and more South Africans are finding out about their HIV status.

Background (contd)

- Positive prevention is beneficial in two main ways:
 - as **primary prevention** whereby there is prevention of passing the HIV infection to the sexual partners with whom people who are living with HIV/AIDS (PLWHA) have sex.
 - Indeed some PLWHA continue to engage in unsafe sex practices and often do not disclose their HIV status.

Background (contd)

- as **secondary prevention** whereby PLWHA themselves are prevented from becoming infected by a different strain of HIV (secondary infection) to the one which they already carry and possibly are receiving some ART treatment in response to.
 - Indeed very few PLWHA, let alone many other people who are HIV-negative, know about the HIV status of their sexual partners.

Background (contd)

- To date, there are a large number of evidence-based positive prevention interventions that are available in the world.
- Most of, if not all of, them have been developed and successfully tested in the USA where they are also being rolled out (for a recent review, see Gilliam & Straub, 2009).

Background (contd)

- Although several positive prevention interventions have been developed and/or culturally adapted as well as are also currently being evaluated in South Africa, a major challenge is that there has been no audit of them that has been undertaken as yet.
- The same observation was also highlighted during a recent meeting of the SANAC Research Sector's Prevention Sub-Committee held 2 weeks ago.

Background (contd)

- To date, there are only two sources of evidence suggest that positive prevention works, namely,
 - National population-based surveys amongst PLWHA who are aware of their HIV-positive status.
 - the clinically-based Options for Health has been shown to be efficacious in South Africa.
- I will present these data first before presenting information on ongoing positive prevention studies being conducted by various teams throughout the country.

Available empirical evidence of effective positive prevention in South Africa

There are two main sources of this:

- Evidence 1: National population-based surveys in 2002 and 2005 amongst PLWHA who are aware of their HIV-positive status.
- Evidence 2: Pilot study on Options for Health intervention in Durban, South Africa

Evidence 1: Awareness of HIV status and condom use, South Africa

HIV status	<u>Condom use</u> HIV positive		<u>Condom use</u> HIV negative	
	2002	2005	2002	2005
Know status from test taken within 2 years	33%	66.2%	26%	50.8%

Evidence 1: Awareness of HIV status and condom use, South Africa (contd)

- This suggests the possible benefits of scaling up of ART during the past few years which includes some risk reduction counselling.
- It will be interesting to see if such evidence of successful positive prevention among PLWHA who are aware of their HIV status has improved further in the 2008 survey when compared to 2005 data.

Evidence 2: Pilot study on Options for Health intervention in Durban, South Africa

- The original Options for Health intervention is a theoretically-based, rigorously evaluated intervention that was developed by Jeff Fisher of the University of Connecticut and his associates in the USA in 2003.
- The intervention was successfully tested among doctors in two AIDS clinics, one in New Haven and the other in Hartford, both of them in Connecticut in the USA

Options for Health programme

- The intervention programme is aimed at assisting PLWHA who are patients at a clinic or hospital setting to practice safer behaviours so they do not transmit HIV to others or infect themselves or their partners with other pathogens.
- It involves a brief patient-centered protocol administered on an ongoing basis and on repeated occasions over the course of routine care, with the goal of decreasing HIV transmission risk behaviours among HIV-positive patients.

Options for Health programme (contd)

- The intervention is based upon the Information—Motivation—behavioural Skills (IMB) theoretical framework and employs Motivational Interviewing (MI) techniques as an intervention delivery system to convey critical HIV risk reduction information, motivation, and behavioural skills content.
- The South African revised version of the intervention is called *Izindlela Zokuphila* in Zulu.
 - Unsuccessfully in 2005 using doctors
 - Successfully in 2006 using lay counsellors

Pilot study on Options for Health intervention in Durban, South Africa (contd)

- Intervention was delivered to patients one-on-one by HIV counselors at each clinical care visit.
- Intervention was evaluated for feasibility, fidelity, and effectiveness.
 - Assessed sexual and drug use behaviours at baseline, 6, and 9 months using self-report measures.

Pilot study on Options for Health intervention in Durban, South Africa (contd)

Characteristics of Participants

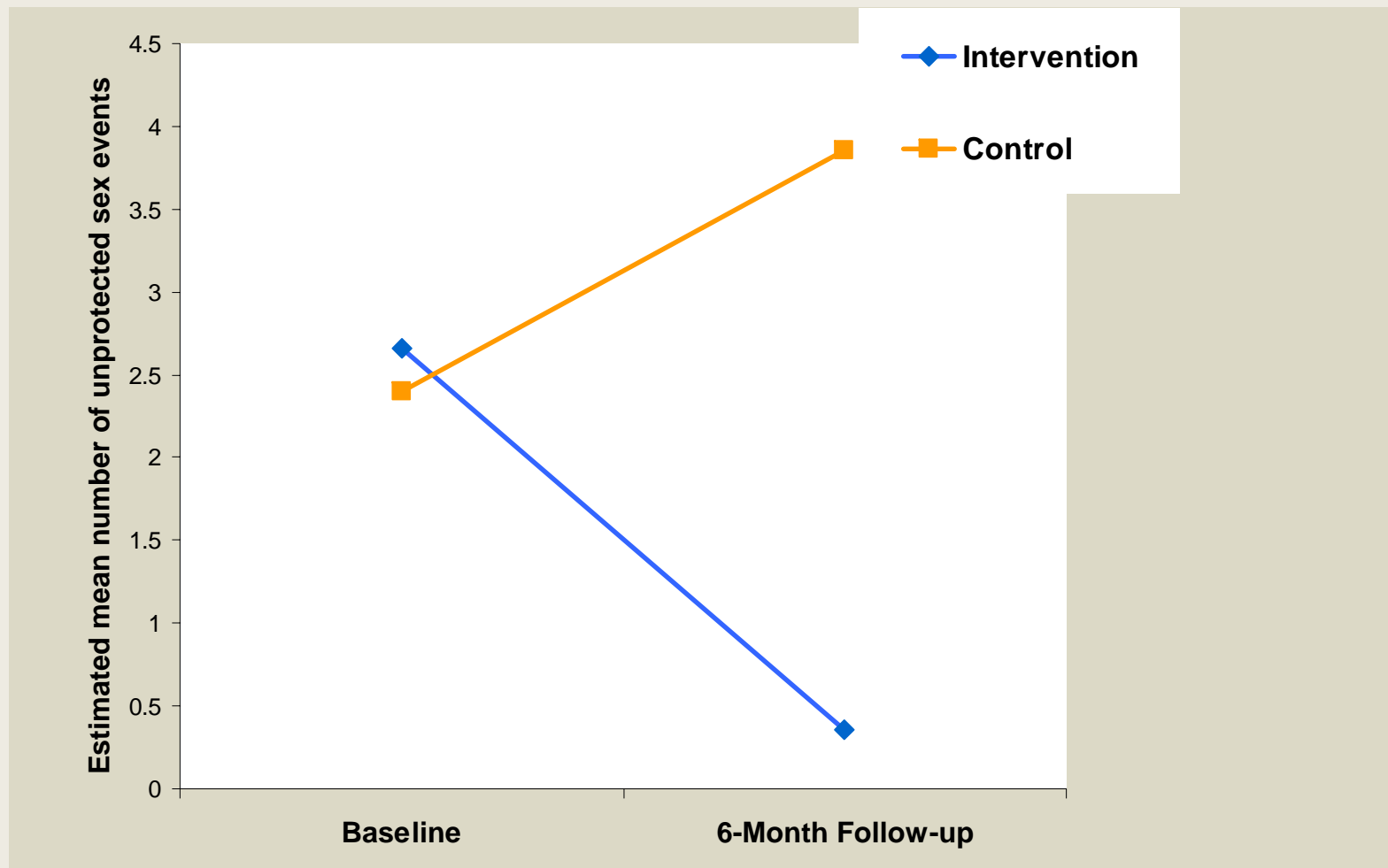
- Sample Size: **152** (69 males, 83 females)
- Mean Age: 34
- Ethnicity: **92%** Zulu, 2% Indian
- Employment Status: 71% unemployed
- Income: 56% said they didn't have enough money for food or basics
- HIV Disclosure: **97%** had disclosed their status to someone other than clinic staff
- Medications: **73%** currently on ARVs

Pilot study on Options for Health intervention in Durban, South Africa (contd)

Feasibility, Fidelity, and Efficacy

- Intervention was delivered in 99% of routine medical visits (216 of 218 visits) .
- Patient exit interviews and focus groups indicated that counsellors implemented the intervention in a supportive, helpful, and non-judgmental fashion.
- Counsellors reported that it was easy to learn and integrate into routine visits, and acceptable and beneficial to patients.
- Intervention was delivered with fidelity and included all requisite intervention steps.

Pilot study on Options for Health intervention in Durban, South Africa (contd) - Intervention Efficacy - Outcomes: Mean Number of Unprotected Vaginal and Anal Sex Events over Time



Poisson multilevel regression change over time analyses.
Interaction: *Event Rate Ratio* = .11 (.01 - .87)

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Pilot study on Options for Health intervention in Durban, South Africa (contd) - Intervention Efficacy - Outcomes by sex of participants

Study Arm	Women		Men	
	Baseline	Follow-Up	Baseline	Follow-Up
Intervention	3.12	0.60	2.19	0.11
Control	2.18	3.85	2.32	3.85

Mean # of unprotected events per sexually active participant

Conclusions about Options for Health evidence

- Individual risk reduction counselling for PLWHA is an important prevention strategy.
 - Offers the potential to link prevention with ARV care in Sub-Saharan Africa from the inception of the ARV rollout.
 - Revised OPTIONS intervention appears to be feasible to implement in an urban South African clinic and able to be implemented with fidelity.
 - Intervention appears to be effective at reducing unprotected sex in South Africa as it had done in the original version which was developed and tested in the U.S.A.

Other current studies on Options for Health (contd)

- Options for Health is currently being tested for effectiveness in a cluster RCT in 16 clinics (8 intervention and 8 control) in the Pietermaritzburg area by Jeff Fisher and his associates from University of Connecticut (UConn) working with their South African counterparts.
- This 5-year study which is funded by NIH is now nearly halfway through with its enrolment of participants.

Other current studies on Options for Health (contd)

- Options for Health has also been successfully culturally adapted for use in Southern Africa by HSRC-led SAHARA teams in Botswana, Lesotho, South Africa and Swaziland.
- The adapted version is being tested for generalisability by M. Chopra, L. Simbayi et al.'s WC team consisting of the MRC-HSRC-UWC-PAWC-CCT as well as the Fisher Team from UConn.
 - This 2-year study will employ cluster randomised controlled trial, where the intervention will be rolled-out in two sequential phases to Cape Town clinics.
 - The study recruit a cohort of 80 ARV patients (40 men and 40 women) from each of the 30 participating ARV clinics in the Cape Town area (15 intervention vs. 15 standard of care controls)
 - The pilot study at one clinic was successfully completed last year and the full study will commence in the next month or so.

Other current studies on Options for Health (contd)

- Our HSRC team led by K. Peltzer and myself using funding from the Melinda & Bill Gates Foundation's is currently implementing Options for Health at 20 clinics in the Gert Sibande District of Mpumalanga as an operational research or demonstration project.
 - We trained one VCT counsellor in each clinic to implement either Options for Health intervention to all clients found to be HIV-positive or Phaphama brief risk reduction counselling lasting for 60 min for those who are HIV-negative.
 - The project started last year and is now in its second year.
 - We hope to undertake some M & E to determine its impact in a year's time.

Other current studies on Options for Health (contd)

- Options for Health is also being implemented among the military in Mozambique by Jeff Fisher and his associates from UConn as part of the PEPFAR programme.
- It is being implemented as a small operational research project.

Current studies on the Healthy Relationships intervention

- A second positive prevention intervention being tested in South Africa is known as the Healthy Relationships.
- The original Healthy Relationships intervention is a theoretically-based, rigorously evaluated intervention that was developed in 2001 by Seth Kalichman and his associates (then of Wisconsin Medical College and now of the UConn).
- The intervention is based on social support groups.

The Healthy Relationships programme

- The Healthy Relationships intervention is a multi-session, small-group, skills-building programme for both HIV-positive men and women.
- The programme is designed to reduce participants' stress related to safer sexual behaviours and disclosure of their sero-status to family, friends, and sexual partners.
- The programme is based on Social Cognitive Theory, which states that persons learn by observing other people successfully practice a new behaviour.

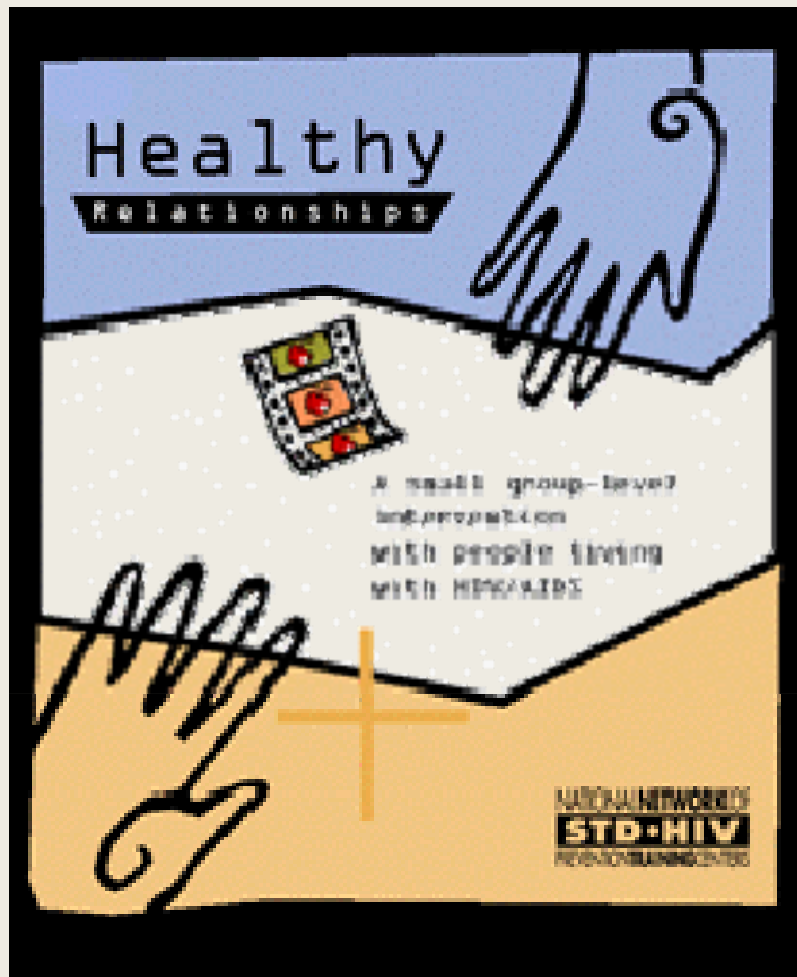
The Healthy Relationships programme (contd)

- Involves five 3-hour sessions
- Small Groups (n = 10 to 12)
- Paired Peer &/or Professional Counsellor Teams
- Focus on HIV Status Disclosure Skills & Safer Sex Negotiation Skills
- Heavy Reliance on Videotapes or Story Boards
- Use of Movie-Clips or Story Boards for Negotiation Skills

The Healthy Relationships programme (contd)

- This intervention has been found to be effective, and has been packaged and disseminated for community use as part of CDC's Diffusion of Effective behavioural Interventions (DEBI) initiative in the USA.
- The Healthy Relationships intervention is now part of the CDC's Replication (REP) Project which is packaging and disseminating the intervention for community use.

The Healthy Relationships programme (contd)



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The Healthy Relationships programme (contd)

- Healthy Relationships is now being implemented by over 300 agencies in several states throughout the USA and within statewide demonstration projects for the new CDC initiative for HIV prevention.
- It has also been successfully culturally adapted for use in Southern Africa by HSRC-led SAHARA teams in Botswana, Lesotho, South Africa and Swaziland led by me with collaboration from UConn.

Current studies on the Healthy Relationships intervention (contd)

- Two pilot studies to determine the feasibility, acceptability and fidelity, as well as test of concept have been successfully done in both Botswana and in South Africa.
 - Pilot Study 1: Botswana (D. Ntseane, L. Simbayi et al's SAHARA UB-HSRC-UConn team)
 - Pilot Study 2: PEPFAR-CDC-HSRC Marang project in Mthatha (L. Simbayi et al.'s HSRC-CDC-WSU-UConn team)
- The findings are currently being written up for publication

Current studies on the Healthy Relationships intervention (contd)

- Currently, a full PHE is being conducted among 120 groups (60 intervention vs. 60 standard of care controls) in the OR Tambo District of the Eastern Cape.
- The study will be completed by September this year.
- If successful, we plan to undertake some operational research to implement the intervention by providing training support group facilitators from local NGOs and PHC centres in all seven municipalities in OR Tambo District and then to also scale up the implementation of the intervention with other PEPFAR prevention partners throughout the country.

Another potential positive prevention intervention being tested in South Africa

- My HSRC research team working together with Seth Kalichman's of UConn is currently undertaking a RCT on a brief (60-min) risk reduction intervention that we call Phaphama2 in three PHC clinics in WC, GT and EC among 1800 STI patients.
- The project is for 5 years and is funded by NIH.
- While fieldwork in EC has been completed and it will also be completed in GT by next month, the main WC component will be completed by next year in July.
- The WC component involves both behavioural (reduction in risk behaviour) and biomarker (new STIs) outcomes

Another potential positive prevention intervention being tested in South Africa (contd)

- The GT component is now a positive prevention sub-study as it recruited over 250 HIV-positive people who were attending a wellness clinic next door to our project, 12-month follow-ups assessments will be completed next month.
- In the original pilot (efficacy) study for Phaphama brief (60-min) risk reduction intervention which we did in 2004 and was successfully replicated 2 years later, we observed that a few people who self-reported that they were HIV-positive also showed some reduction in HIV risk behaviour. This warranted us to recruit more PLWHA in the sub-study.
- The results of this sub-study should be available by July this year.

A new positive prevention intervention approach targeting acute HIV infections

- A new positive prevention approach that is gaining momentum targets reducing HIV transmission from persons acutely-infected (AI) with HIV or with early HIV infection (within 6 months) when a person has more viruses and is thus more likely to transmit them to others.
- Studies to both develop and evaluate new interventions are planned or currently underway by two research teams in South Africa
 - Team 1: M. Latka and Aurum team (based on personal information obtained during a SANAC Research Sector Prevention Sub-committee Meeting 2 weeks ago)
 - Team 2: S Friedman, L.Simbayi et al. NDRI-HSRC team with possible NIDA funding.

A new positive prevention intervention approach targeting acute HIV infections (contd)

- The main challenge to the proposed approach is how to identify AI cases to conduct the intervention on.
- The participants could come from amongst others women attending ANC especially whilst they are accessing PMTCT services.
- However, with improved testing, more and more people could benefit from such an intervention.

Way forward and Conclusions

- Up to four different positive prevention interventions are currently at various stages of development and/or evaluation in South Africa.
 - Two of them - *Phaphama* and *Healthy Relationships* will be completed this year - in June and September respectively.
 - Options for Health both in Pietermaritzburg and WC will take another 2-3 years to complete.

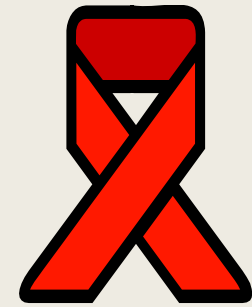
Way forward and Conclusions (contd)

- A new approach requiring urgent investigation are interventions for reducing HIV transmission from persons acutely-infected (AI) with HIV or with early HIV infection (within 6 months).
- There is a need to conduct more intervention studies like these and also to scale up those that are found to be effective as soon as possible.

Acknowledgement

- I wish to thank the following two people both of The Center for Health, Intervention, and Prevention (CHIP) at the Uconn in the USA for providing technical assistance with the cultural adaptation of their positive prevention interventions for use in Botswana, Lesotho, South Africa and Swaziland:
 - Prof Seth Kalichman with Healthy Relationships
 - Dr Debbie Cornman (who works with Prof Jeff Fisher) with Options for Health Intervention

THANK YOU



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