Behavioural change interventions including positive prevention for reducing the risk of HIV infection in South Africa

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Outline of presentation

- Background
- Behavioural change theories/models in HIV/AIDS
- Target behaviours that need to be changed in HIV/AIDS prevention
- Target groups for behavioural change interventions
- Behavioural change interventions for reducing the risk of HIV in South Africa
- Strategies to change behaviours
- Evidence that behavioural interventions are effective
- Positive prevention
- Evidence that positive prevention is effective
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Background

- In spite of the existing multi-intervention milieu for HIV prevention in our country, new HIV infections continue to occur unabated.

- One of the major reasons why this is occuring is because of the absence of theory-based behavioural interventions with strong evidence of their effectiveness, let alone efficaciousness.

- Indeed, most interventions appear mostly to provide information about HIV/AIDS, but they often do very little to motivate people to change or let alone teach them the requisite skills for enacting the desired behaviour change.

Background (contd)

- There are still many ordinary people who are not taking the HIV epidemic seriously and therefore are not changing their behaviour to prevent themselves from becoming infected.
- There are also many PLWHA who are unaware of their status and therefore are continuing to spread HIV unknowingly.
- Even some PLWHA who are aware of their status continue to engage in unsafe sexual practices such as having multiple partners and not using condoms correctly and consistently with their sexual partners.
- There is therefore a need to develop, culturally adapt or adopt theory-based behavioural interventions including those targeting PLWHA which are known as positive prevention interventions.

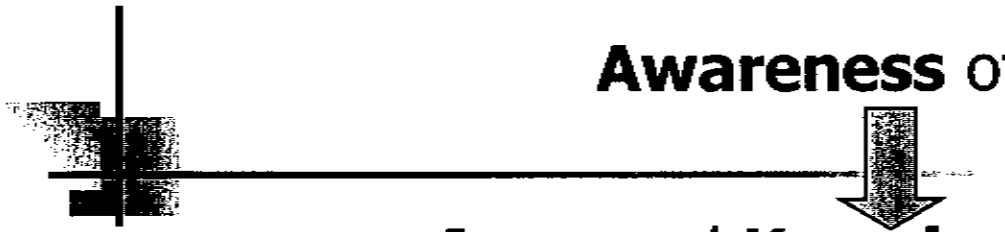
Theoretical basis for behavioural interventions

- Theories tell us why people do what they do. They can designate factors that should be targeted for change in intervention attempts.

- Models tell us how they do it. They explicitly articulate the presumed mechanisms by which the changes in behaviour will be brought about and guide the development of behavioural change interventions accompanying prevention campaigns.

- A behavioural intervention is a specific activity (or set of related activities) intended to change the knowledge, attitudes, behaviours or practices (KAPB) of individuals and populations, to reduce their risk of being infected with HIV/AIDS.

Assumptions on the KABP model



Awareness of HIV/AIDS

Increased **Knowledge** of HIV/AIDS

Positive **Attitudes** towards prevention measures

Positive **Behaviours** e.g. DRC

Positive **Practices** e.g. delayed sex, "zero-grazing"

Reduced prevalence of HIV/AIDS

Creation of a theory-based HIV prevention intervention

Elicitation

Assessment of pre-intervention levels of factors theorized to influence risk and preventive behavior

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Intervention

Design and implementation of targeted interventions to change factors theorized to influence HIV risk and preventive behaviour

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Evaluation

Evaluation of intervention impact on factors theorized to influence STD/HIV risk and preventive behavior and HIV preventive behavior

Target behaviours that need to be changed in HIV/AIDS

- The tendency to have multiple partners
- Having unprotected sex
- Having concurrent partners
- Lack of self-efficacy skills
- Failure to disclose one's sero-status to a partner
- Sharing unsterile needles with other drug users
- Delaying age of sexual intercourse

Target groups for behavioural change interventions

- School-children, Adolescents and Young people
- Women
- Adult heterosexual men and women,
- Injection drug users (IDUs)
- Men who have sex with men (MSM) and WSW
- Workers at high risk - Truck drivers, migrant workers, construction workers, farm workers, military, educators etc.
- Commercial sex workers (CSWs) and their clients
- PLWHA

Behavioural change interventions for reducing the risk of HIV in South Africa

- Jewkes et al., RCT of Stepping Stones behavioural intervention for *HIV prevention* in the rural Eastern Cape.
- Zimmerman et al. School-based *alcohol and HIV prevention* targeting teenagers in Pietermaritzburg.
- Smith et al. Adolescent *drug and HIV prevention* intervention programme in Mitchell's Plain, Cape Town.
- Jemmott et al. Adolescent *health promotion and HIV risk reduction* intervention in Mdantsane, East London.

Behavioural change interventions for reducing the risk of HIV in South Africa (contd)

- Simbayi, Kalichman et al. Theory-based brief HIV risk reduction counselling for STI patients in Cape Town [Phaphama] .
- Kalichman, Simbayi et al. Theory-based brief *Alcohol and HIV risk reduction* intervention for STIs patients in Cape Town [Phaphama Alcohol in clinic]
- Kalichman, Simbayi et al. Theory-based *Alcohol and HIV risk reduction* intervention for men and women who drink alcohol in Delft community [Phaphama Alcohol in community].
- Simbayi, Kalichman et al. Theory-based *Gender violence and HIV risk reduction* in Gugulethu [Phaphama Men].

Behavioural interventions for reducing the risk of HIV in South Africa (contd)

- **Bell, Bhana et al., Using CHAMP to *prevent* youth *HIV risks* in Kwadeda-Ngendlale (near Durban).**
- **Wechsberg et al., A woman focussed HIV prevention intervention to *reduce alcohol and other drugs (AOD) use, HIV risk behaviours and related violence*, in Pretoria.**
- **Celentano, Sweat, Coates, Richter et al., Community-based HIV *VCT intervention* programme *to change community norms* in Thailand, Tanzania, Zimbabwe and South Africa.**

Behavioural interventions for reducing the risk of HIV in South Africa (contd)

- Setswe, Ottenweller, Dickinson et al., Implementation and evaluation of *abstinence and faithfulness* among youth (ABY) interventions in five African countries.

- Goldstein, Japhet, Usdin, Scheepers et al., Soul City: Using a multimedia *edutainment* health communication intervention for social change.

- MRC Health Promotion Behavioural Interventions Research Unit. Design and implementation *bio-behavioural research interventions*.

Strategies to change behaviours

1. **One individual counseling session:** Discuss/refine risk-reduction goal, assess client's needs, and provide indicated referrals to Counseling & Testing and medical/social services.

2. **Two group sessions:** Identify the client's HIV risk and current stage of change, hear risk reduction stories, set personal goal and identify first step to reduce HIV risk.

3. **Two (or more) group social events:** Share meal and socialize, participate in planned HIV related risk-reduction activities, receive reinforcement for personal risk reduction.

4. **Two (or more) follow-up contacts:** Review client's progress in achieving risk-reduction goal, discuss barriers encountered, identify concrete next steps and discuss possible barriers/solutions, make referrals to C&T and medical/social services.

Evidence that behavioural interventions are effective

- **Systematic reviews provide evidence that behavioural interventions do reduce the risk of HIV infection in *IDUs, MSM, women, adolescents* and *youth, school-based programs, VCT, peer education programmes and other unsafe sexual behaviours.***

- **Behavioral interventions ... reduce rates of *unprotected sexual intercourse* in a number of different populations (1-4).**

- **Scientific evidence indicates that ... *changes in risky behavior* can occur as a result of well-designed interventions (5,6).**

- **A meta-analysis demonstrated that cognitive behavioral HIV interventions significantly reduce *HIV risk behaviors* (7).**

1. Jemmott JB, Jemmott LS, Fong GT (1992); 2. Kelly JA, Murphy DA (1994);
3. Rotheram-Borus MJ, Koopman C et al., (1991); 4. St. Lawrence JS, Brasfield TL,et al (1995);
5. Academy for Educational Development, (1996). 6.Oakley A, Fullerton D et al., (1996);
7. Kalichman SC, Carey MP, et al., (1996)

Evidence-based HIV behavioural interventions in the US

- CDC's AIDS Prevention Research Synthesis (PRS) project identified 18 best evidence, theory-based behavioural interventions demonstrating "*best evidence*" of efficacy for reducing HIV risk. They were targeted at heterosexual men and women, MSM, Youth, PLWHA and low income populations, etc.

- The compendium of HIV prevention interventions... contains about 24 "*other evidence-based interventions*", while "*promising-evidence*" HIV behavioural interventions are being evaluated.

Behavioural interventions that are effective for youth (1989-2001)

Type of Program	Number of Studies	Improved Knowledge and Attitudes †	Improved At Least One Behavior Among Some Participants †
All Programs	**39**	**32/35**	**22/29**
School	**21**	**17/19**	**9/14**
HIV/AIDS education	13	11/12	6/7
General RH* education	8	6/7	3/7
Mass Media	**6**	**5/6**	**5/5**
Media only	1	1/1	1/1
Media with social marketing	5	4/5	4/4
Community	**4**	**4/4**	**4/4**
Youth development	1	1/1	1/1
Peer education	3	3/3	3/3
Workplace	**4**	**4/4**	**2/2**
Health Facility	**4**	**2/2**	**2/4**
Youth-friendly services	3	1/1	2/3
Youth center	1	1/1	0/1

Source: Finger B, Lapetina M, and Pribila M eds. (2002). Intervention Strategies that Work for Youth: Summary of FOCUS on Young Adults. End of Program Report. Youth Issues Paper 1

Evidence that behavioural interventions are effective

UGANDA

- HIV prevalence declined (1991-8), 21.1% to 9.7% in all ANC, and to 6.4% by 2001. Supported by trends in male army cohorts.
- Wide range of sexual behaviour changes, 1989-95, focused on 65% reduction in sexual partners and networks.
- Increased condom use
- Social communication process: AIDS and PLWHA on the agenda of personal networks of friends and family
- Early population based AIDS reporting in all areas, later HIV testing.

UNITED STATES

- Declines in HIV among gay men and sexual behaviour changes apparent since mid-1980s. Lower declines in Black & Hispanic gay men
- Widespread social communication process: AIDS is on the agenda and PLWHA; accepted in white MSM; care networks developed.
- Early population based reporting, 500 AIDS cases by 1984 in San Francisco and later treatments.
- Declines in MTCT in 1990s, successful ARV treatment and declining mortality.

Evidence that behavioural interventions are effective

ZAMBIA

- Significant declines in HIV prevalence in 15-19 year old ANC clients, particularly in urban Lusaka.
- Evidence of behaviour changes, 1996-9, significant declines in casual sex and increased condom use.

THAILAND

- Estimated 90% decline in HIV incidence in Northern army conscripts (1991-5), 60% nationally, and lower declines in ANC and sex workers.
- Success of general population as well as targeted prevention activities.
- Visits to sex workers decline nationally, 22% to 10%, 1990-1993.
- Direct sex workers report 90% condom use.
- Population based surveillance.
- 1989 national sexual survey widely publicised and debated.
- Rapid political response to HIV trends.

Evidence that behavioural interventions are effective

SENEGAL

- HIV prevalence among pregnant women remains below 2%, despite higher levels in neighboring countries.
- Low general risk behaviours, 68% of women report no sex before marriage, only 10% of men, in urban Dakar.
- Successful prevention activities among sex workers, 97% condom use with last client.

BRAZIL

- HIV prevalence among pregnant women remains below 3% but not lower than neighbouring countries
- Substantial declines in HIV prevalence among MSM largely before ARV treatment introduced: 65% Rio de Janeiro, 1994-6
- Integrated public health approach including free ARVs since 1996.

Low-Beer D & Stoneburner RL (2004). Behaviour and communication change in reducing HIV: Is Uganda unique? *AJAR*, Vol 1(2).

Targeting PLWHA for prevention: Positive prevention?

- **Positive prevention is a new approach for stopping the spread of HIV/AIDS that focuses on PLWHA.**

  - **It is the main approach that is currently being used for HIV prevention in the U.S.A after the USA's Centers for Diseased Control and Prevention (CDC, 2003) recommended that HIV prevention be integrated into routine clinical care for HIV-positive persons in the USA.**

  - **Apart from preventing the transmission of HIV to uninfected sexual partners, positive prevention also prevents PLWHA from their own infection with STIs and the possibility of re-infection with more virulent strains of HIV than their current infections.**

  - **The availability of ARV treatment has further compounded the situation as treatment has become the focus of programming while prevention especially becomes more of a secondary concern especially among those taking ARVs.**

Behavioural disinhibition or risk compensation among PLWHA on ART

- With more and more PLWHA accessing ARV treatment, a potential negative effect is the possibility of increased risk behaviour as a consequence of treatment optimism (or behavioural disinhibition or risk compensation) associated with receiving ARV treatment. Howeyer, there is little empirical evidence of this in African countries .

- There is therefore also a need to continue promoting the sustaining of behaviour change for a lifetime even when PLWHA are feeling much better as a result of successful ARV treatment outcomes.

- For the positive prevention approach to successfully play its role in stopping the spread of HIV in South Africa, there is a need to promote HIV testing through strengthening the existing "Know your status" campaign.

Evidence that positive prevention is effective

- Two positive intervention programmes that could be adapted for use in Africa are:
  - the *Healthy Relationships* based on social support groups developed by Kalichman and his associates
  -
  - the clinically-based *Options for Health* developed by Fisher and his associates.

- Both are theoretically-based, rigorously evaluated interventions that were developed and tested in the USA.

Conclusion

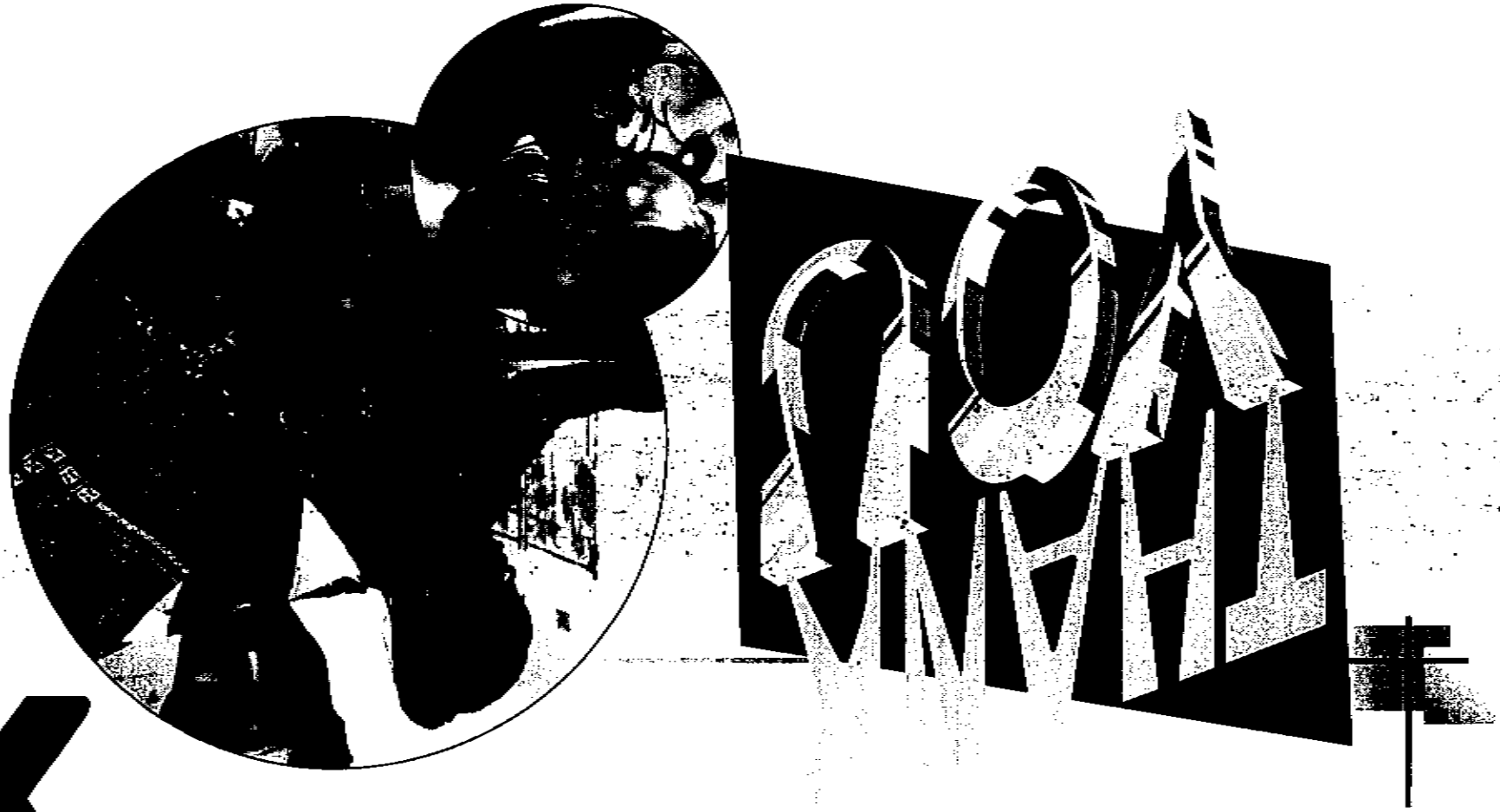
- Long-term/sustained behaviour change must be the goal of interventions.
- Need to focus on the community level, influencing norms and structure rather than focus on individuals and groups only.
- Must integrate behavioural interventions into existing programmes, interventions or care.
- Focus on higher-risk sexually active target groups.
- Assist behavioural science expertise to be truly interdisciplinary.
- Must also target PLWHA to practice safer sex and thereby promoting both primary and secondary prevention of HIV infection.

Evidence that positive prevention is effective

- There is a need to promote positive prevention among PLWHA as one of the strategies that countries in Sub-Saharan Africa use in the fight against the further spread of HIV infections by PLWHA who are aware of their status.
- Interventions developed overseas mainly in the west need to be culturally adapted and tested for their efficacy in Sub-Saharan African countries.
- One of the SAHARA multi-country and multi-site studies being implemented in eight countries – four in Southern Africa and two each in East and Central Africa, and West Africa, is testing the efficacy of *Healthy Relationships* intervention.
- Four Southern African countries are also doing the same for *Options for Health* intervention. In addition, this is about to be implemented among the military in Mozambique by Fisher's team using PEPFAR funding.
- The HSRC is also about to start two very large-scale trials in the Eastern Cape in South Africa to test the two interventions in the next 2-3 years in a project also funded by PEPFAR.

Targets for developing behaviour change interventions for the NSP

Activity	Interventions	2007	2008
Develop behaviour change interventions for the prevention of sexual transmission of HIV, adapted to different target groups	Theory-based behaviour change aiming to reduce risky sexual behaviours	Applied on average 3 sites per province = 27	Applied on average 6 sites per province = 54 sites
	Theory-based behaviour change aiming to reduce drug use (eg Mandrax, Cocaine, crack, tick, heroine)	Applied on average 3 sites per province = 27	Applied on average 6 sites per province = 54 sites
	Theory-based interventions to reduce alcohol abuse	Applied on average 3 sites per province = 27	Applied on average 6 sites per province = 54 sites
	Total sites	81 sites	180



The Healthy Relationships intervention programme

- The *Healthy Relationships* intervention , developed for use among HIV-positive men and women, is a multi-session, small-group, skills-building programme for men and women living with HIV/AIDS.

- 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 behavior.

The Healthy Relationships intervention 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 Behavioral Interventions (DEBI) initiative.
- The *Healthy Relationships* intervention is now part of the CDC's Replication (REP) Project which is packaging and disseminating the intervention for community use.
- It is now being implemented in several states throughout the USA and within statewide demonstration projects for the new CDC initiative for HIV prevention.

The *Options for Health* intervention programme

- The intervention programme is aimed at assisting people living with HIV/AIDS to practice safer behaviours so they do not transmit HIV and other STIs to others or re-infect themselves with other more virulent HIV strains.

- It was implemented in the US in an inner city HIV clinical care setting by health care providers and is currently being tested in Durban by Fisher's team and Cape Town, South Africa by our team.

- 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.

The *Options for Health* intervention programme (contd)

- The intervention is based upon the Information—Motivation—Behavioral 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 developers of the programme are also planning to undertake a large-scale randomised intervention trial in KwaZulu-Natal in South Africa funded by USA's NIMH during the next 5 years.

- Our team will also be piloting a very large trial in the Eastern Cape of South Africa using USA's President's Emergency Plan for AIDS Relief (PEPFAR) funding.