

Management of fertility in the HIV clinical setting

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Content of Presentation

- Providing Context – T. Crankshaw
- Biomedical Interventions for Fertile and Infertile Couples – S. Mould
- Proposed Planned Pregnancy Clinic at McCord – J.Giddy



Fertility Desires

- Growing body of literature suggests that men and women living with HIV desire children
- Documented pregnancy rates approaching those in HIV-negative partnerships

Kakaire et al 2010, Peltzer et al. 2009, Nakayiwa et al 2006, Beyeza-Kashesya et al 2010, Kaida et al 2011, Guthrie et al 2007, Homsy et al 2009,



Unintended Pregnancy

- High rates of unintended pregnancy
- Globally
 - US: ~50%
- South Africa:
 - 61% all first pregnancies and 46% of all second pregnancies were unintended
 - 84% of all pregnancies in HIV-positive women are unintended

Forrest 1994, Finer and Zolna 2007, Department of Health, Medical Research Council & ORC Macro 1998, Rochat et al. 2006



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Unintended Pregnancy

- Major cause of MM and IM



Unintended Pregnancy

- Major cause of MM and IM
- Poorer:
 - Maternal mental health
 - Likelihood of B/F
 - Quality of Mother-Child relationship
 - Mental and physical health of child



Causes of Unintended Pregnancy

- Lack of knowledge/experience with contraception, no contraception, inconsistent/incorrect use of contraception, contraception failure
- Sexual coercion/abuse
- Lack of SRH knowledge
- Lack of planning/ambivalence



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- Complex nature of pregnancy intention in that many pregnancies are desired, but not explicitly planned
- Spectrum : unwanted \longleftrightarrow wanted
- Unwanted: Contraceptive options

Unintended Pregnancy

- Wanted:
 - HIV serodiscordance/
concordance
 - Vertical and horizontal HIV
transmission

GUIDELINE GUIDELINE ON SAFER CONCEPTION IN FERTILE HIV-INFECTED INDIVIDUALS AND COUPLES

L-V Bekker, V Black, L Myer, H Rees, D Cooper, S Mall, C Mnyani, F Comrade, J Makhabe, L Gilbert, S Schwartz

Ninety years ago the isolation of insulin transformed the lives of people with type 1 diabetes. Now, models based on empirical data estimate that a 25-year-old person with HIV, when appropriately treated with antiretroviral therapy, can expect to enjoy a median survival of 35 years, remarkably similar to that for someone of the same age with type 1 diabetes. It is high time we normalised the lives of people living positively with HIV. This includes the basic human right to conceive and raise children. HIV-positive individuals may be in serodiscordant relationships or in seroconcordant relationships. As health care providers, it is our responsibility to ensure we understand the opportunities and risks of natural conception in these scenarios, so that we can help our patients to make informed decisions about their own lives. Most of all, it is our duty to make family planning in the setting of positive prevention as safe as we can. This includes informed decisions on contraception, adoption, fostering, conception and prevention of mother-to-child transmission.

Some months ago a dedicated group of individuals, invited and sponsored by the Southern African HIV Clinicians Society, came together in Cape Town to devise guidance in this area, recognizing that there are ideal strategies that may be outside the realm of the resource constraints of the public sector or health programmes in southern Africa. This guideline therefore attempts to provide a range of strategies for various resource settings. It is up to us, the providers, to familiarise ourselves with the merits/benefits and risks of each, and to then engage patients in meaningful discussions. All the above, however, is based on the premise and prerequisite that the subject of family planning is actively raised and frequently discussed in our patient encounters.

1. INTRODUCTION

Across South and sub-Saharan Africa, the vast majority of HIV-positive individuals are adults of reproductive age. Before universal access to effective antiretroviral therapy (ART), traditional medical wisdom generally discouraged childbearing because of the risk of HIV transmission (both to uninfected partners and from mother to child) and the reduced survival of infected parents and children. In the era of ART, HIV/AIDS has come to be viewed as a manageable chronic illness. In addition to leading to dramatic reductions in morbidity and mortality of HIV-infected parents, use of highly active antiretroviral therapy (HAART) in Europe and North America has driven the virtual elimination of paediatric HIV infection, and in southern Africa PMTCT programmes have greatly reduced paediatric infections.¹

Although many patients feel uncomfortable discussing it with their health care providers, many HIV-infected adults are sexually active. In advanced HIV infection fertility is reduced, but the incidence of pregnancy increases with ART initiation,² through increased sexual activity and attitudinal changes in hopes and desires for the future. South Africa has an estimated 1 million births annually, and an estimated 29% of these occur in women living with HIV. Other southern African countries have similar antenatal HIV prevalence rates. A substantial proportion of these pregnancies are unplanned, despite effective contraception being a critical component of the prevention of mother-to-child transmission (PMTCT) of HIV/AIDS programme. However, many HIV-infected women and men want to have children, either immediately or at some time in the future. Reproduction is a basic human right,³ and for many women having a child is part of their life plan. Indeed, in many parts of southern Africa being without a child attracts significant stigma.⁴

In this context, dealing with issues of fertility and childbearing should be seen as part of routine HIV care. Clinicians are responsible for identifying and supporting the fertility desires of their HIV-infected patients – both in the interests of 'normalising' the lives of people living with this chronic infection, and to help ensure that conception, pregnancy and delivery take place with the least possible risk to the mother, her partner, and the resulting child.

Consensus Committee (for the Southern African HIV Clinicians Society) chaired by Linda-Gael Bekker and Vivian Black

Members: Helen Rees, Silke Dyer, Di Cooper, Karin Richter, Sumaya Mall, Coceka Mnyani, Francescine Comrade, Natalie Meryn, Charmaine MacDonald, Glende Gray, Ithania Makhabe, Karen Cohen, Karen Jennings, Fatima Sheik
Reviewed by: Karin Richter, Polly Clayden

We are indebted to Karin Richter and Polly Clayden for their insightful and helpful comments on this guideline document.

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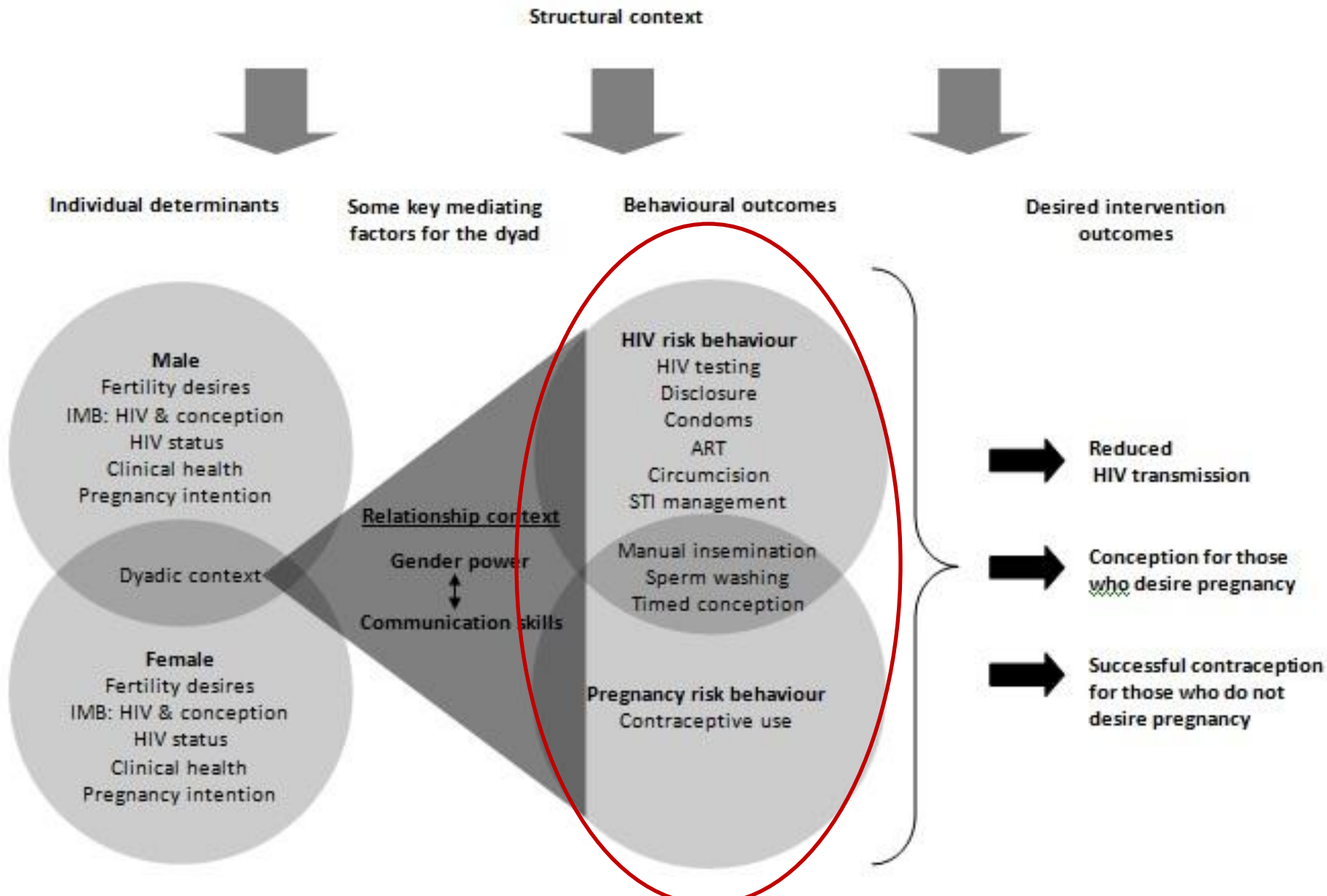
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Bekker L, Black V, Myer L, et al. (2011). Guideline on safer conception in fertile HIV-infected individuals and couples. The South African Journal of HIV Medicine June: 31-44.



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Conceptual framework of the processes and considerations involved in periconception decision-making and behaviour amongst heterosexual HIV serodiscordant dyads



Periconception Decision-Making

- Important for clinicians to understand the context of reproductive decision-making, perception of periconception risk, and periconception risk reduction behaviour
- Relationship factors, such as intimate partner violence, directly affected sexual risk behaviour
- Most HIV-affected couples do not seek family planning advice from HCP



Working with Individuals & Dyads

- Most couples were not aware of non-condom-based strategies to reduce the risk of horizontal HIV transmission.
- Misunderstanding over serodiscordance
- Key role of men in periconception decisions - unintended pregnancy by the female was often desired by the male
- Little discussion on sexual issues between couples



Non Biomedical Interventions

- Assessment of GBV, mental health, psychosocial
- Couples counselling as a way to promote:
 - Inclusion of men in discussions regarding contraception and safer sex practices
 - Good communication between the couple
 - Raise awareness of gender norms and GBV
- Parenting courses



Take Home Message

- For optimal outcomes do not only focus on biomedical care
- Awareness of the complex psychosocial contexts patients come from
- Recognition of the need to work within multidisciplinary teams
- Ensure strong referrals/linkages/in house psychological, psychiatric and social services



Structural context

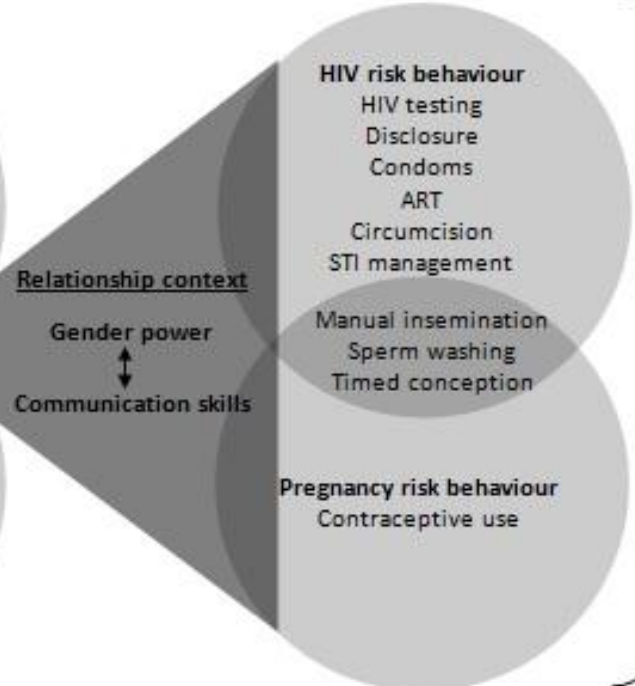
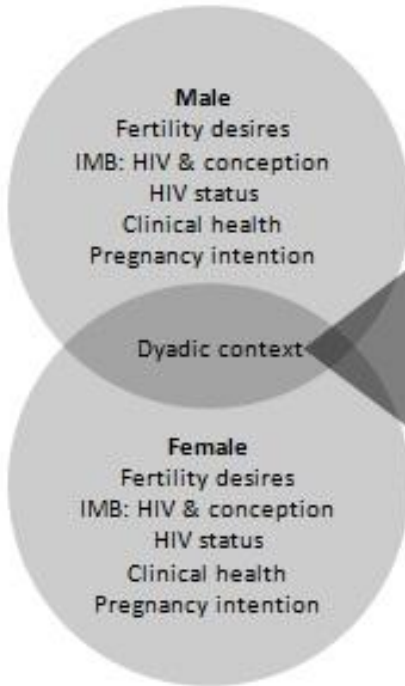


Individual determinants

Some key mediating factors for the dyad

Behavioural outcomes

Desired intervention outcomes



Reduced HIV transmission



Conception for those who desire pregnancy



Successful contraception for those who do not desire pregnancy

Expanded outcomes

Reduced Maternal, Perinatal and Infant M&M

Promotion of mental health

Strengthen families and relationships



Fertility desires

- In USA – approx 30% HIV infected individuals desire children
- SA study showed figure of approx. 50% (*Cooper 2009*)
 - Similar for men and women
 - Higher if lower no. of children and on ART
 - Only 19% of women and 6% of men discussed fertility with HCW



Concerns regarding fertility

- Transmission to partner
- Vertical transmission
- Sub fertility related to HIV
- Suboptimal obstetric outcomes
 - Including potential ADR's of ARV's
- Reduced life expectancy of parents



Life expectancy

- Western setting
 - Uk average life expectancy in HIV 66 yrs
(May, M 2010)
- Africa
 - Uganda general life expectancy 55yrs
 - Average survival post diagnosis of 25yrs in HIV pos
(Mills, EJ 2011)



Infertility

Patients usually attempt spontaneous conception first



Infertile couples overrepresented in preconception care



Always consider underlying infertility



Some infertility pointers

- Detailed history of any time periods off hormonal contraception
 - Ask specifically about consistency of condom use
- Previous treatment for PID
- Oligomenorrhoea / Metrorrhagia
- Pelvic pain / dyspareunia
- Previous pelvic surgery



Reasons for infertility - female

- PID
 - *Adisuyan 2008* showed higher HIV rates in Nigerian women with tubal occlusion than in general population
- Anovulation
 - 48% cycles anovulatory in study by *Clark 2001*
- Cervical dysplasia → LLETZ / cone biopsy
 - Sperm capacitation impaired by poor mucus



Reasons for infertility - male

- Sperm quality
 - Data are inconsistent
 - Most studies show reduced quantity and impaired motility in HIV pos men
 - ARV's may damage sperm
 - NNRTI's esp EFV seem to be worst

(Lambert – Niclot 2011)



General approach

- Detailed obstetric/gynae/HIV history
- Couple's baseline HIV status / CD4 / VL critical to effective management
- Counselling
 - Address risk of MTCT up front (<2%)
 - Most patients overestimate risk
 - Moderate expectations of success rates for certain interventions
 - Costs of interventions quite high
 - If underlying infertility – may be untreatable with resource constraints
- Folate 5 mg /day



Managing Horizontal Transmission

- Manage according to specific scenario

CONCORDANT : Both HIV pos

DISCORDANT : Male pos / Female neg
Female pos / Male neg



Concordant status

- HIV Superinfection risk poorly quantified
 - Can offer sperm washing if couple request maximum risk reduction
- Transmitted ARV resistance



Concordant status

- Aim for VL suppression
- Consider circumcision
- Timed intercourse
 - Calculate ovulation day
 - Basal body temp (0.2°C)
 - Consider ovulation induction
- Refer gynae if no conception in 9 months



Discordant status – male positive

TIMED INTERCOURSE

VS

SPERM WASHING



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Discordant status – male positive

- Aim for VL suppression regardless
 - No documented transmission with undetectable VL
 - HPTN 052 trial findings *(Cohen 2011)*
- Issues around timed intercourse
 - Viral load in semen vs plasma
 - 6% detectable semen with undetectable plasma VL *(Lorello 2009)*
 - ARV penetration into semen – TDF / FTC: 4-6x
 - Role of PrEP – esp. vaginal tenofovir



Discordant status – male positive

- Issues around sperm washing
 - Not feasible in resource constrained setting
 - McCord: approx R1600 per cycle overall
 - HIV remains detectable in some samples (not tested for locally)
 - Success rates
 - 14.5% per cycle (*Semprini – 1998*)
 - 19% per cycle (*Servasi – 2007*)
 - Up to 78% with repeated cycles
 - Similar to non HIV rates



Discordant status – male positive

- A practical approach?
- Ovulation induction useful adjunct
 - clomiphene citrate day 2 – 6
- Counsel on risks and success rates of techniques
- Remember effect of smoking/ alcohol on sperm quality



Discordant status – female pos

- Stop Efavirenz pre conception
- Self insemination
 - Condom vs clean specimen jar
 - Syringe to insert into upper vagina
- Less controversy around CD4 threshold for ARV's



Conclusion

- Address fertility desires otherwise patients will opt for unsafe conceptions
- Be aware of basic interventions for risk reduction
- Refer to gynae for infertility or male positive discordance

