Minimizing HIV transmission among HIV-discordant couples in resource-limited settings who choose to conceive

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Outline

• Heterosexual HIV transmission and intended pregnancy in resource-limited settings
• A harm reduction approach:
  • minimizing HIV transmission in the context of reproductive goals
• Supported strategies to minimize transmission
• Research into an expanded role for ART
• Recommendations
People living with HIV continue to have children

- Studies show that many men and women with HIV want to have children
- Most new HIV infections occur in women of child-bearing age within stable relationships
- Pregnancies associated with younger age, fewer children, prior infant death, fertility desire
- ART availability may increase fertility desire
- Current HIV prevention strategies do not account for fertility goals

Importance of family planning

• Maternal health
  • High peripartum mortality rates
  • Unsafe abortion
  • Women with fewer children have increased economic opportunity

• Pediatric health
  • High infant mortality rates
  • Sufficient birth spacing important to infant survival
  • Babies of mothers with HIV: IUGR, preterm delivery, HIV
  • Orphans

• High population growth rates exacerbate poverty and strain infrastructure
Reasons to have children

• Social
  • Partners, Family
  • HIV and stigma
    • No models of voluntary childlessness

• Economic
  • Children as resource
  • Maintaining relationships

• Cultural
  • Value placed on fertility

• Desire for “normal life”

A more nuanced approach to prevention

- Prevention strategies that recognize and account for fertility desire
- A harm reduction approach
  - Encourage elimination of risk when possible
  - Accept that for some risk behavior will persist
  - Offer strategies to manage risk and reduce exposure to harm
Goals of a harm reduction reproductive counseling strategy

1. Help individuals and couples to understand risks and make informed decisions about having children

2. Manage transmission risk with behavioral and biomedical interventions
   • Horizontal transmission
   • Vertical transmission

3. Link at risk individuals and couples to testing, care, ongoing prevention counseling
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Bujan 2007
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HIV transmission rate and viral load

Quinn 2000 NEJM, Attia 2009 AIDS
Behavioral modification plus suppressed VL

- Retrospective review of 62 serodiscordant couples
  - 40 HIV-positive men, 22 HIV-positive women
- Pre-treatment for STI’s, timed conception counseling
- All on ART with VL < 500 for 6 months
- 76 pregnancies, 68 healthy births
- 0 adult seroconversions
## Suppressive ART strategies

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### Suppressive ART strategies

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| 350-500   | Consider (ongoing trials) | • May benefit negative partner  
            |                                                 | • No clear benefit to positive partner  
            |                                                 | • Adherence, resistance                  |
| >500      | ?                  |                                                   |

CDC 2009, Kitahata 2009, Attia 2009
Harm reduction strategy: concerns

- Risk Compensation
  - Increased risk behavior will blunt effect of any prevention strategy
  - Some reassurance
    - Phase II PrEP trial, vaccine trials, PEP studies, microbicide trials

- Infrastructure
  - 31% of those in low and middle-income countries who need ART access treatment
  - 11% of HIV-positive pregnant women receive ARVs
Summary

- People with HIV want to have children
- Desired conception puts seronegative individuals at risk for HIV infection
- Harm reduction approach manages transmission in setting of ongoing risk
  1. Communicate risks and facilitate informed decision
  2. Behavioral, biomedical strategies to minimize risk
     - Circumcision, artificial insemination
     - Evaluation and treatment for STI’s
     - Intercourse timed to ovulation
     - ART-suppressed viral load
       - Potential role for earlier initiation and/or short-course ART
  3. Linkage to and retention in care
Acknowledgements

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