Preventing Mother to Child Transmission (PMTCT) in South Africa

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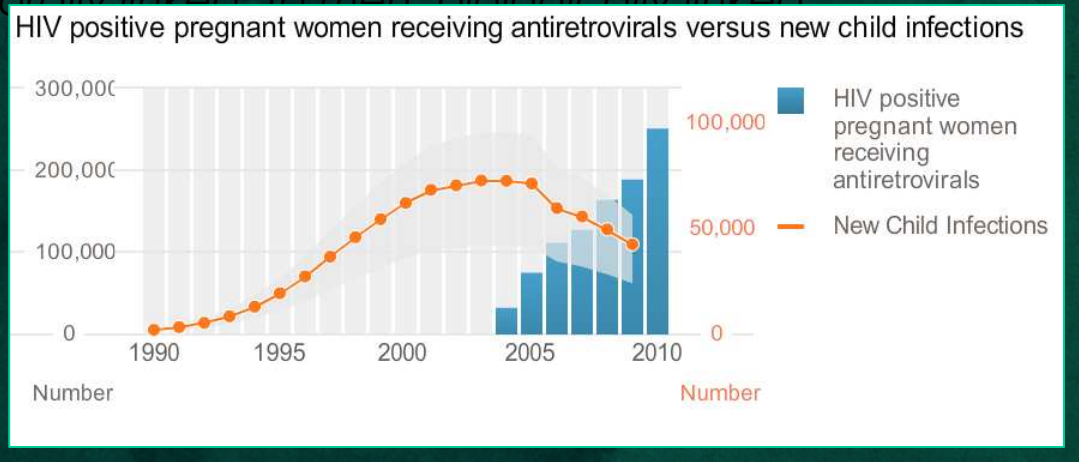
South Africa

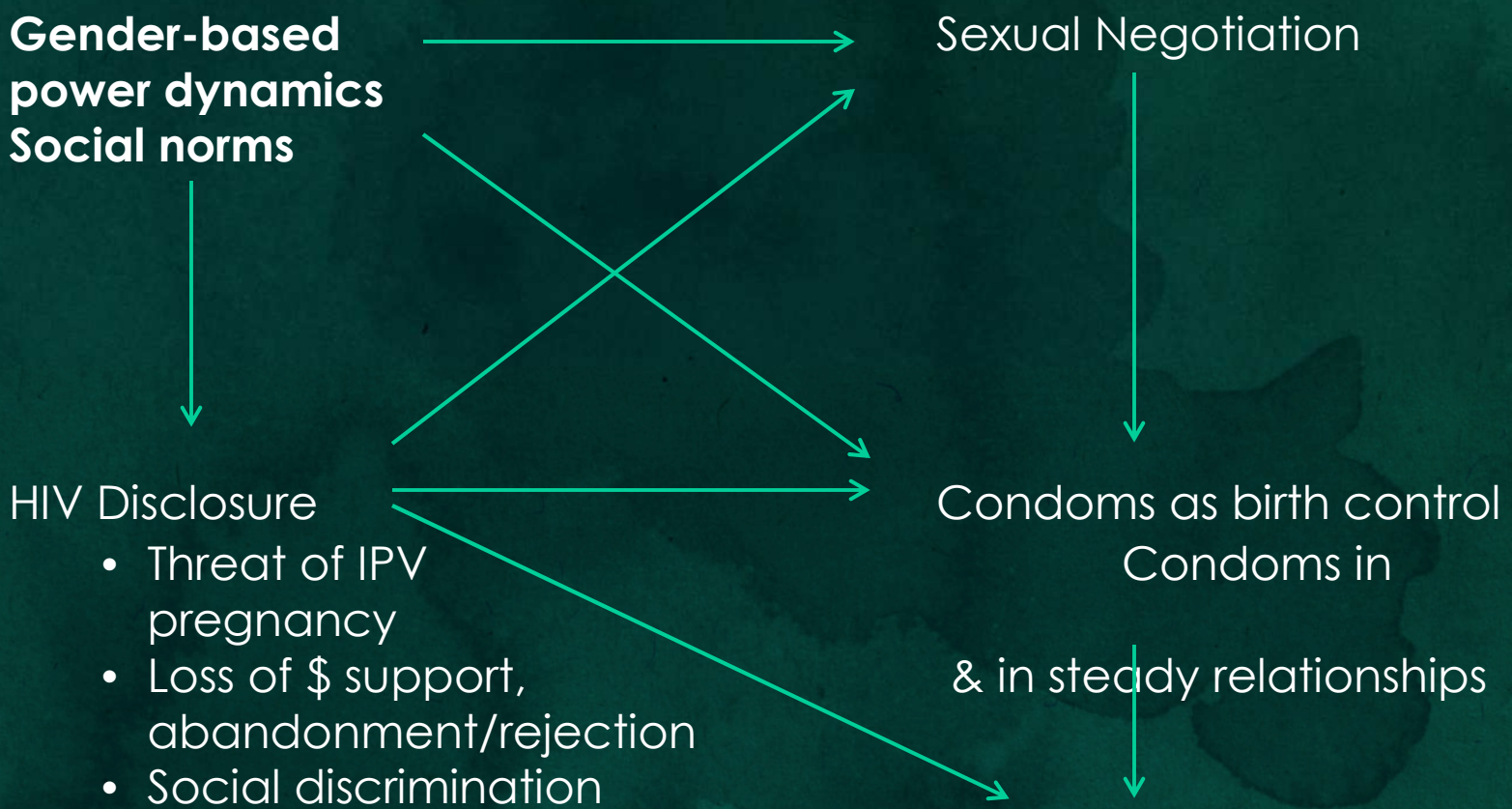
Population	50 million
•People living with HIV	5.6 million
•HIV prevalence	17.8%
•Women aged 0 -14 living with HIV	3.3 million
•Children living with HIV	330 thousand
•Annual AIDS Deaths	314 thousand
•Orphans due to AIDS aged 0 – 17	1.9 million
•Life expectancy 53	

Increased vulnerability

- Highest HIV/AIDS rates among women worldwide
  - ~35 - 40% diagnosed with HIV/AIDS during pregnancy
- Reduced Condom Use *normally associated with pregnancy*
- HIV- incidence is 4x higher for women in late stage pregnancy
  - 27.9% risk of seroconversion during pregnancy
  - Transmission to men doubles with a pregnant partner (Mugo et al, 2011, *AIDS)*
  - *Transmission to women behaviorally linked; to men, biologically linked*



Dynamics of risk within Couples



Study Aims

- Enhance male involvement during antenatal care among pregnant women living in rural north-eastern South Africa
  - Reduce unprotected sex
  - Enhance sexual communication and HIV knowledge
  - Increase potential for HIV disclosure and HIV testing by male partners
- Participants (n = 239 couples)
  - Women: 24 – 30 weeks pregnant
  - SA Protocol required: HIV Counselling & Testing (HIV +/-)
  - Enrolled women with male partners
- Recruitment sites: 12 Antenatal Clinics (ANCs) in South Africa
  - Gert Sibande and Nkangala districts of Mpumalanga provinces
  - HIV prevalence rates ranging from 15.4% - 36.8%
- Randomized by site: 6 Intervention; 6 control (similar rates, populations)

Intervention: Partner Plus

- Intervention: **4 weekly, 90 - 120 minute gender concordant group sessions**
- Couples HIV risk reduction and medication adherence intervention designed to enhance uptake of PMTCT protocol by increasing male involvement
- ***Plus PMTCT protocol***
  - *HIV, STI review*
  - *PMTCT protocol review*
  - *Adherence training*
  - *Sexual risk reduction training*
    - *male and female condoms, multiple partners,*
  - *Cognitive Behavioral skill training to enhance communication*
  - *Conflict resolution training & IPV prevention*
  - *Disclosure*
  - *Gender-relevant issues (Male circumcision, substance use)*

- Control: 4 time-matched sessions (health videos on diabetes, hypertension, alcohol use and exercise)
- ***Plus PMTCT Protocol***

PMTCT Protocol Standard of Care

Department of Health South Africa, 2010

- **All pregnant women should:**

Be encouraged to book early into antenatal care, as soon as they believe they are or are confirmed to be pregnant.

Receive routine antenatal care, including micronutrient supplementation.

Be offered information on the availability of PMTCT interventions during all health care consultations.

Be routinely offered HIV counseling and testing and encourage partner or spouse testing.

Be encouraged to involve partners or spouses in caring for the pregnancy.

Be counseled on safer sex and provided with condoms.

Be counseled on safe infant feeding options and assisted in making an appropriate feeding choice.

Be supported on the choice of infant feeding at all times.

PMTCT Standards of Care

National Department of Health South Africa, 2010

- **If seropositive, all pregnant women should:**

Receive routine antenatal care, including iron and folate supplementation.

Be offered information on the availability of PMTCT interventions at all health care consultations, and not only when visiting the antenatal clinic.

Be clinically staged and have a CD4 cell count taken on the same day as the HIV test is done, and preferably at the first ANC visit (or at the earliest opportunity).

Be screened for TB, in line with the BANC.

Be screened and treated swiftly for syphilis and other STIs, in line with BANC.

Receive regimens to prevent mother-to-child transmission of HIV **(PMTCT regimen**) OR lifelong ART if CD4 cell count <350 cells/mm3 (**ART regimen**).

Be offered appropriate PCP and TB prevention prophylaxis.

Be counseled on safer sex, family planning, postnatal contraception and partner testing.

- Women who **start lifelong ART in their pregnancy** should be monitored and managed, where possible, by the same provider in the same facility. They should receive follow-up from an antenatal healthcare worker **until at least 6 weeks postpartum,** before being referred for ongoing care to an appropriate facility.

Sample: Baseline

Demographics Males & Females:

- Mean = 28 years of age
- Mean = 1 child
- Mode = Unemployed (58%)
- Median = No income (49%)
- Median = ≤ 12 years education (53%)
- Mode = Rural residence (71%)

Men were older, more often employed, better educated, and earned more money than women.

- Unprotected sex (50%) both men and women
- Low (17%) – Moderate (29%) HIV/PMTCT knowledge
- Multiple partners: 10% (Women) &18 % (Men)
- No information on partner HIV status: 19% (Women) & 2% (Men)
- Incorrect information on partner HIV status:13% (Women) & 16% (men)
- Intimate Partner Violence: 45% of couples (≥ 1 act in last month)
- Verbal aggression: 77% couples (> 1 act in last month)

Post-Intervention Outcomes

- Rates of unprotected sex decreased
  - 32% (intervention) and 83% (control)
  - Intervention effect estimate : 51% reduction in the intervention compared to control
  - Decreased among participants in all conditions except among HIV- men
- Accurate disclosure of HIV serostatus
  - Increased among men in both conditions
  - Did not increase among women
- HIV-related knowledge
  - Increased in the intervention condition
  - Decreased in the control condition
- Negotiation as conflict resolution strategy
  - Increased among intervention condition participants
  - Did not increase among control condition participants
- Sex with partners outside the primary relationship
  - Decreased in both conditions

HIV Testing & Seroconversion

Baseline	Follow-up
F 32% HIV+ (n = 76)	82 HIV+
M 21% HIV+ (n = 38)	44 HIV +
• 76% elected test	• 82% elected test

11 % percent of couples were serodiscordant

Follow-up HIV Testing @ 32 weeks pregnancy

Intervention

- 0% sero-conversion (n = 0 of 82 negative women)
  - 15% (n = 12) of women did not elect re-test

Control

- 7.4% seroconversion (n = 6 of 81 negative women)
  - 20% (n = 16) of women did not elect re-test

Challenges & Recommendations

- **Reduced sexual risk behaviors**

  … with the exception of HIV seronegative men

  - Seronegative male partners: especially vulnerable

    - **Male engagement vs. involvement during antenatal care**
    - **More intensive, targeted, sexual risk interventions ?**

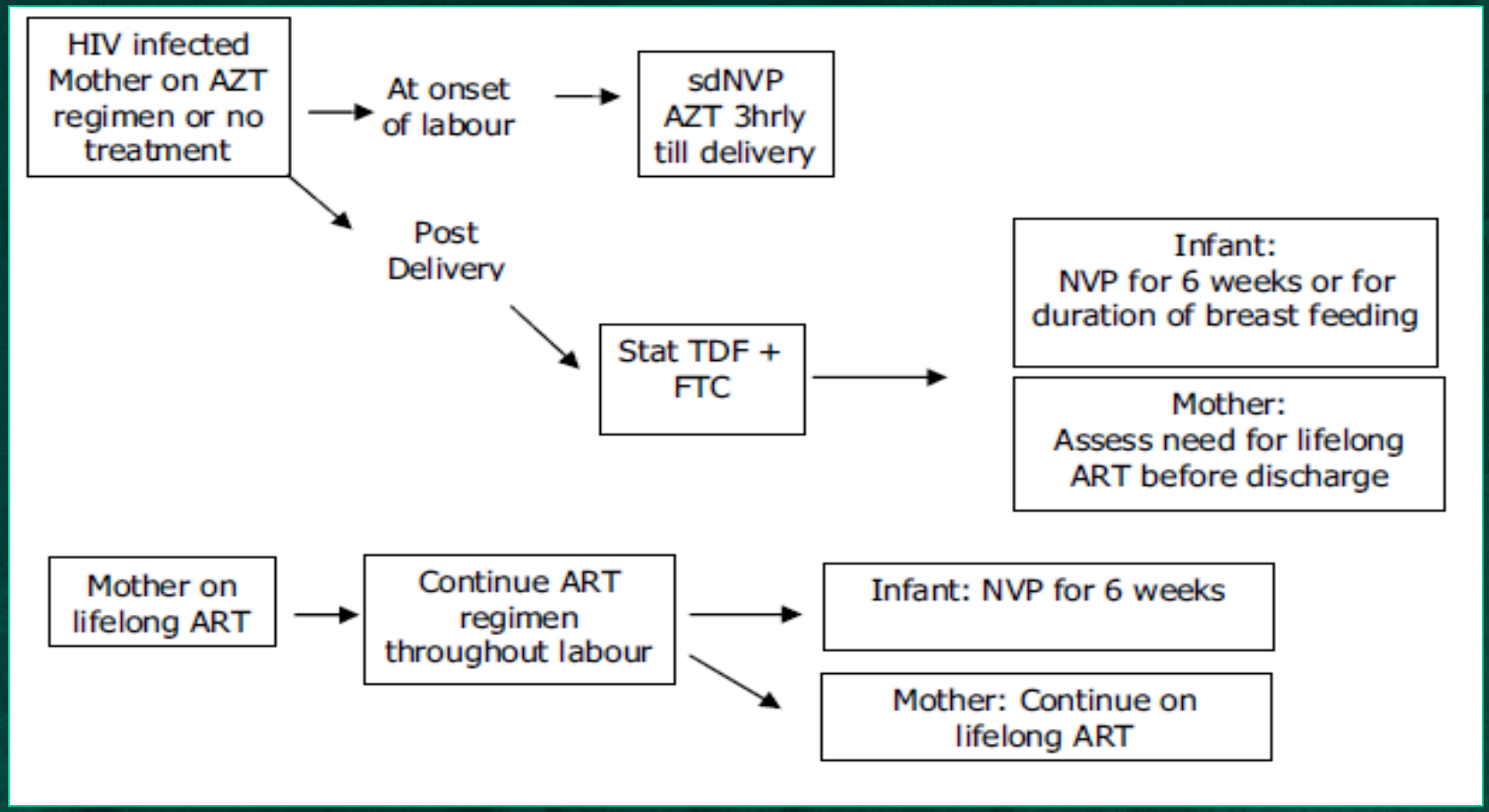
- **Disclosure**

  … increased among men but not women

  - "Women may have more to lose"
  - IPV increases likelihood of non-disclosure
  - Lack of male *engagement* in antenatal care => reduces mothers *engagement* in care & adherence to PMTCT protocol

    - **Facilitate the process of mutual disclosure with couples during this vulnerable period ?**

PMTCT Protocol Post Partum



Overall Post-Partum outcomes Mpumalanga Province Clinics

- Clinic post-partum rates of MTCT
  - 6 weeks: 5 – 20 %
- Clinic post-partum rates of MTCT
  - 6 months: an ADDITIONAL 5 – 20 %

Preliminary Outcomes: Infant Serostatus

	Total = 80	Intervention = 36	Control = 44
Died/Miscarried	13	7 (21%)	6 (14%)
HIV Negative	58	25 (76%)	33 (79%)
HIV Positive	4	1 (3%)	3 (7%)
Pending	5	3	2

PMTCT Protocol Standard of Care

Department of Health South Africa, 2010

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Be encouraged to involve partners or spouses in caring for the pregnancy.

Be counseled on safer sex and provided with condoms.

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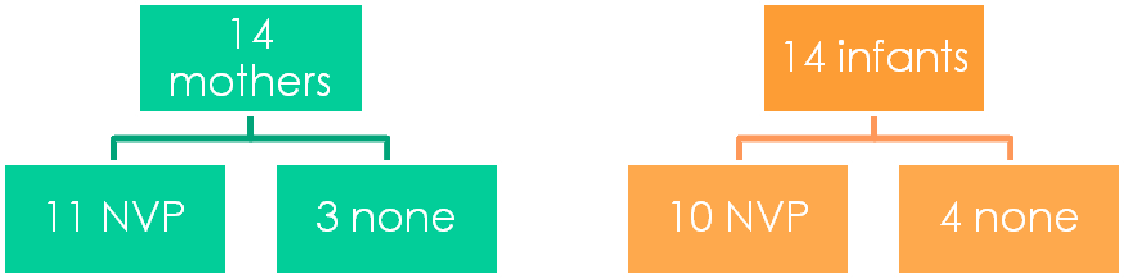
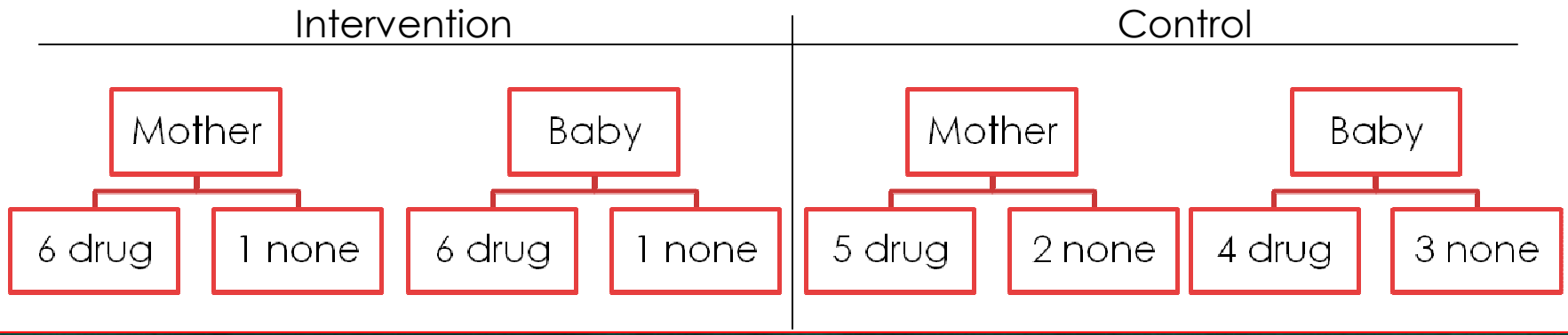
Be supported on the choice of infant feeding at all times.

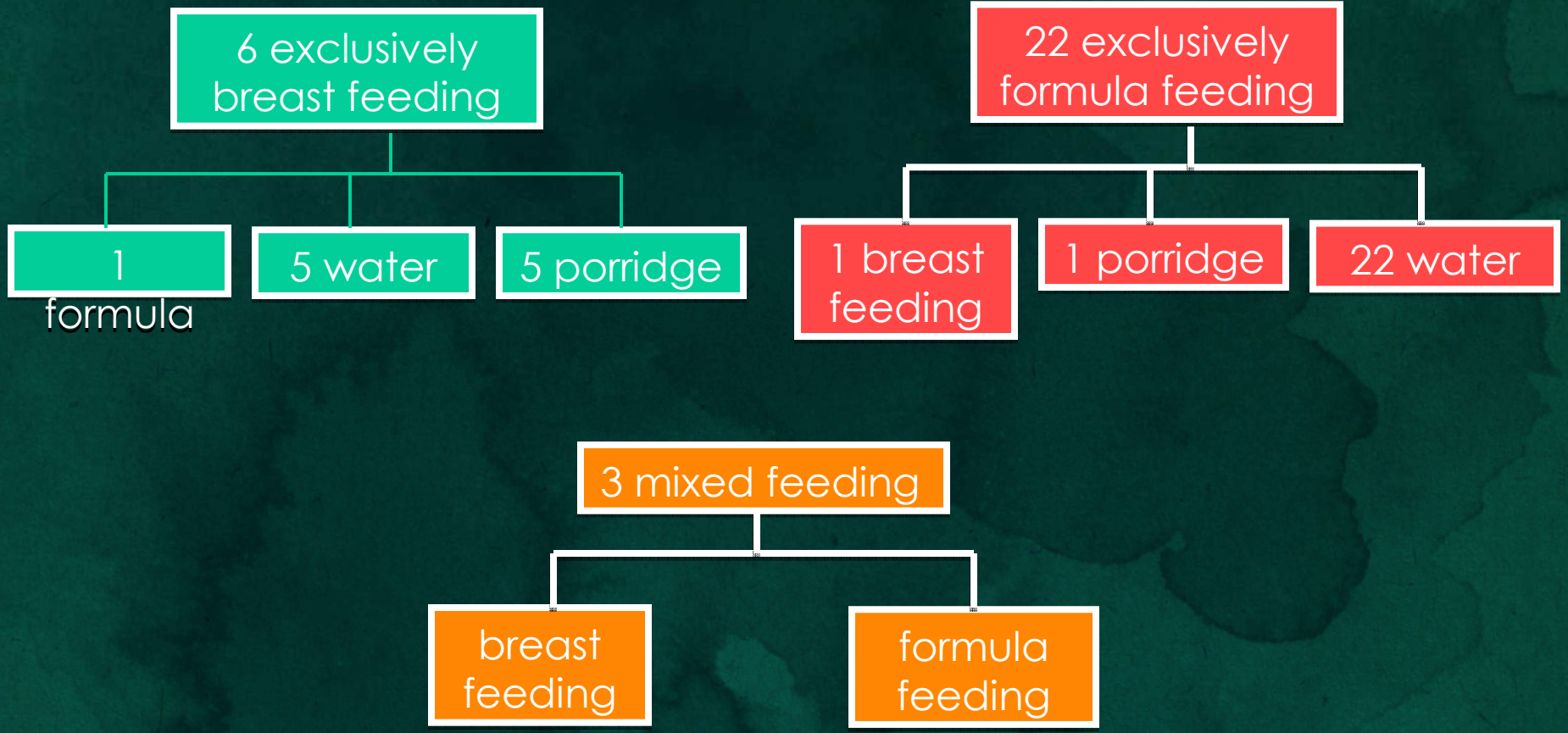
Preliminary Post-Partum Outcomes

Infants tested for presence of ARVs in blood



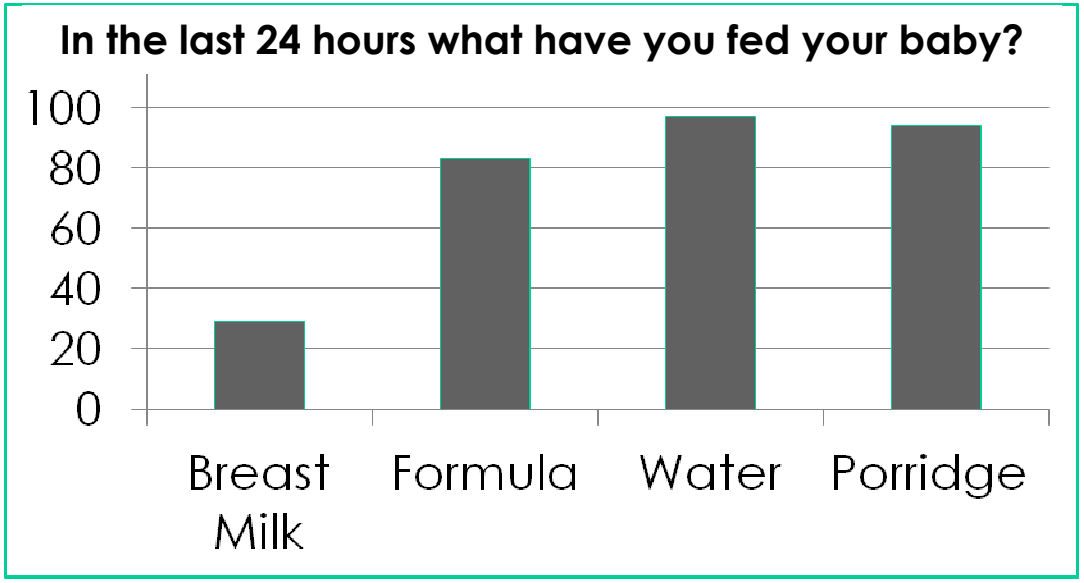


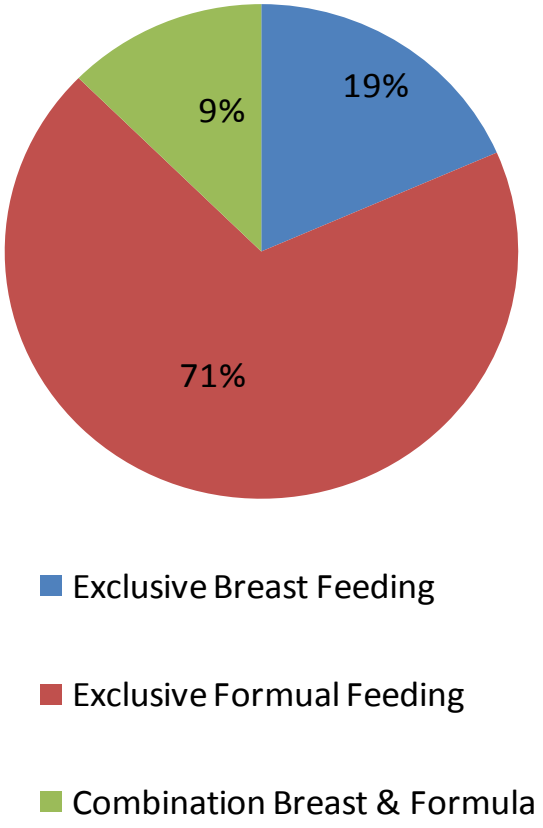
Preliminary Results: Feeding Practices



Preliminary Results: Feeding Practices

- **Challenges : Post-partum Feeding Practices**
  - Confusion surrounding safe feeding
  - Hunger



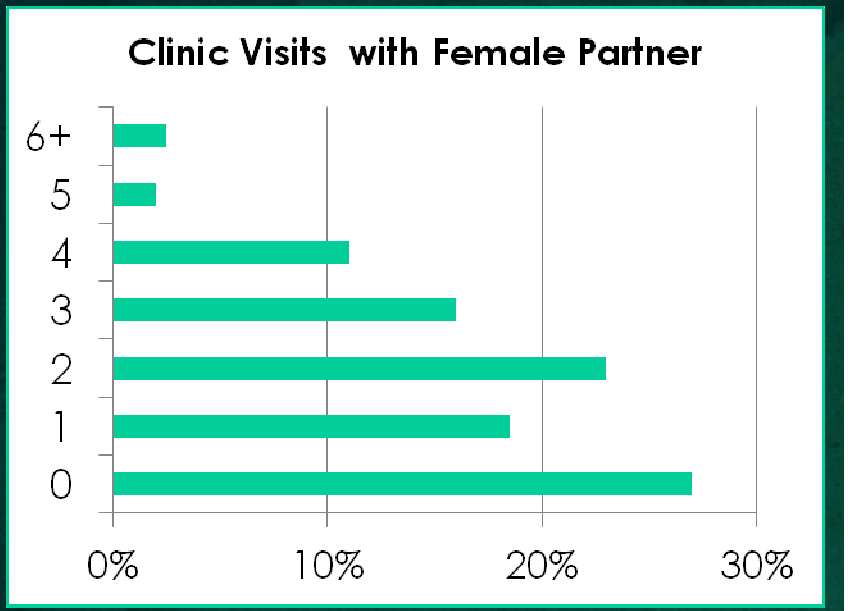


Attendance

- Conditions comparable
  - Group session attendance
  - Antenatal clinic visit attendance
  - Post-natal clinic visit attendance

- Number of clinic visits by women over the duration of the pregnancy
  Range: 2 -10 Visits
  - < 50% : 2 – 5 visits
  - 55 % : 6 -10 visits

- Evaluating Male Involvement



Challenges & Recommendations

- **Reduced sexual risk behavior**
- **Disclosure**
- **Infant Feeding Practices**
  - Confusion regarding safe feeding protocol
  - Coping with infant hunger and traditional feeding practices
- **Male engagement vs. Male involvement**
- **Stigma**
- **Intimate Partner Violence**
- **Long term PMTCT protocol adherence & retention in care**
- **Family planning and safer contraception practices**