

Papua New Guinea:

Prevention of parent-to-child transmission of HIV: The importance of testing to prevent newborn infections

Business for Health Meeting



Presentation Outline

- Overview of HIV situation in Papua New Guinea
- How do children become infected with HIV?
- How do we prevent children from becoming infected with HIV, Hepatitis and Syphilis?
- Actions we need to take to improve testing of pregnant women to support the triple elimination of HIV, Hepatitis and Syphilis
- Role of Businesses in the prevention of HIV transmission and uptake of interventions for the PPTCT

Background

PNG Total Population – **11,781,559** million people (F: 5,638,974 & M: 6,142,585)

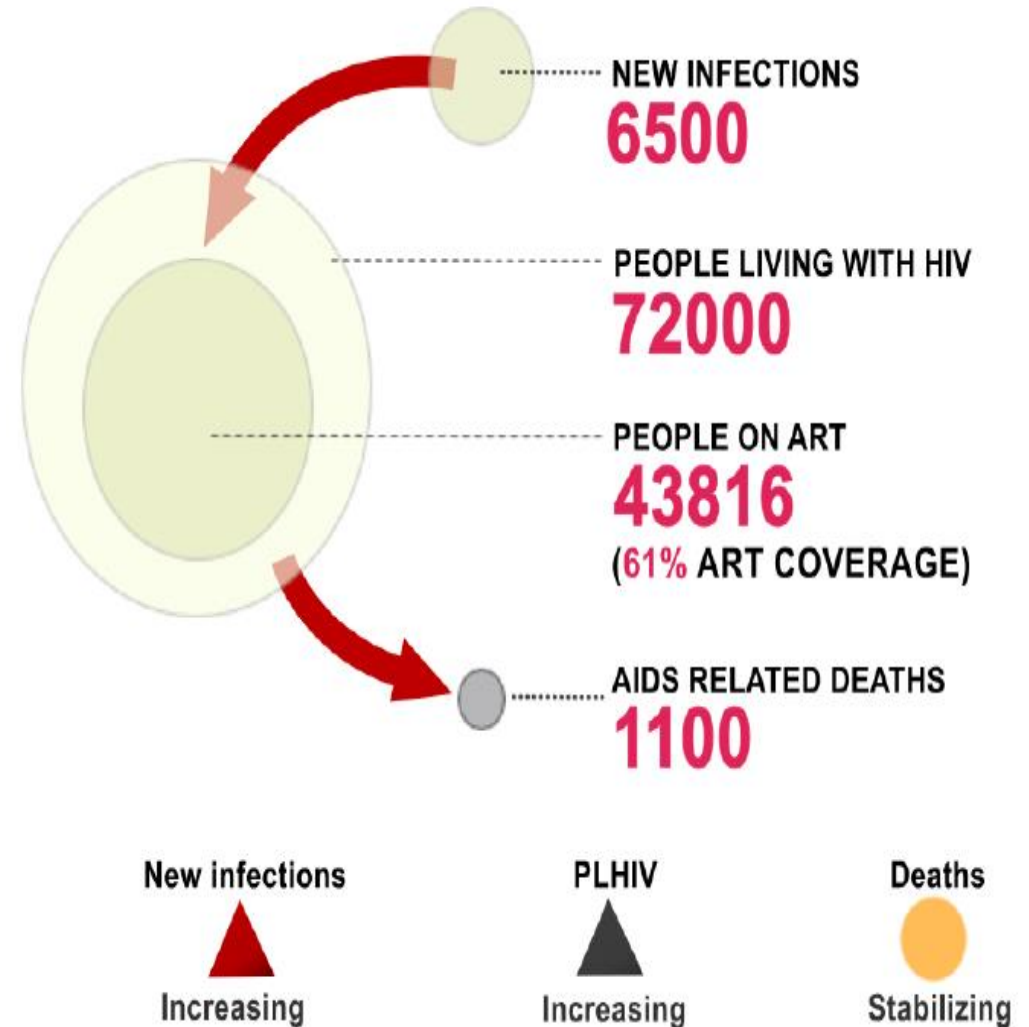
% of women of reproductive age (15-49) -55.4%
= 3,123,992

Expected Pregnant women (annually) – 471,262

Number of under-5 Children (0-4) – 1.65m million

ANC Attendance – 4th Visit – 49%

Delivery in a health facility – 55%



Source: 2023 Spectrum Estimates, PNG

Background

Projected Population – 11,781,559
(87% live in the rural areas)

Provinces – 22

Districts – 96

LLGs – 296

Wards – 6,375

Total number of HFs – 3,856 (Number Open – 2,031 (52.7%), **Closed or status unknown** – **1,825 (47.3%)**)

Primary

- Level 1 – 3,061 (Aid Post 1,276 open and **1,785 closed – 58%**)
- Level 2 – 487 (Health Subcenters – 35 closed)
- Level 3 – 282 (Health Center – 5 closed)

Secondary

- Level 4 – 8 (District Hosp)
- Level 5 – 16 (Provincial Hosp)

Tertiary

- Levels 6 - 1

Transmission of HIV



SEXUAL TRANSMISSION

Mother to child Transmission of HIV

Exposure to blood and blood products

Timing for PTCT

Transmission of HIV from the mother to the infant can occur during:

- ❑ Pregnancy
- ❑ Labour and delivery
- ❑ Breastfeeding

Without intervention, the overall PTCT rate is 20-45%

PMTCT - Prevention Mother to Child Transmission

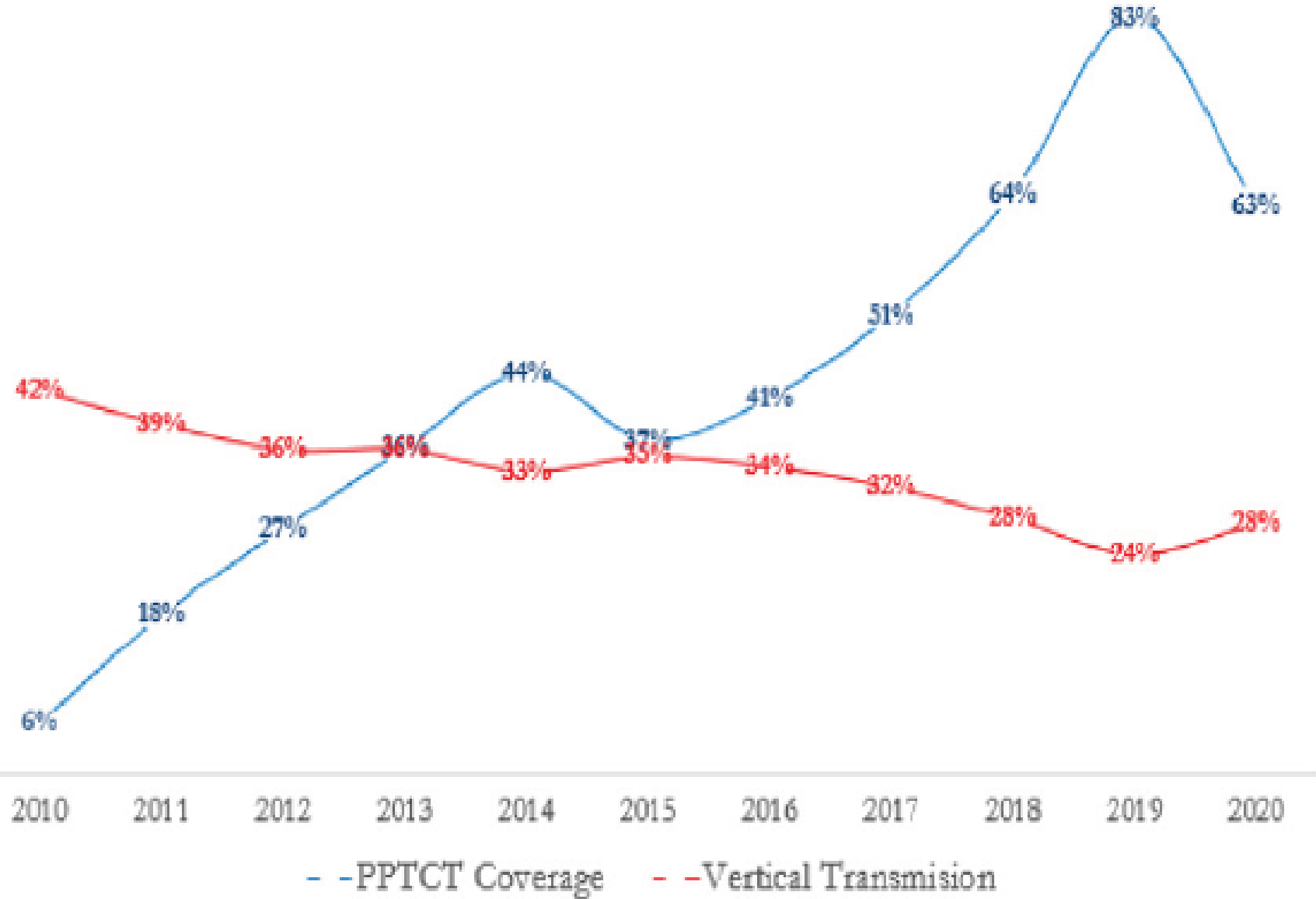
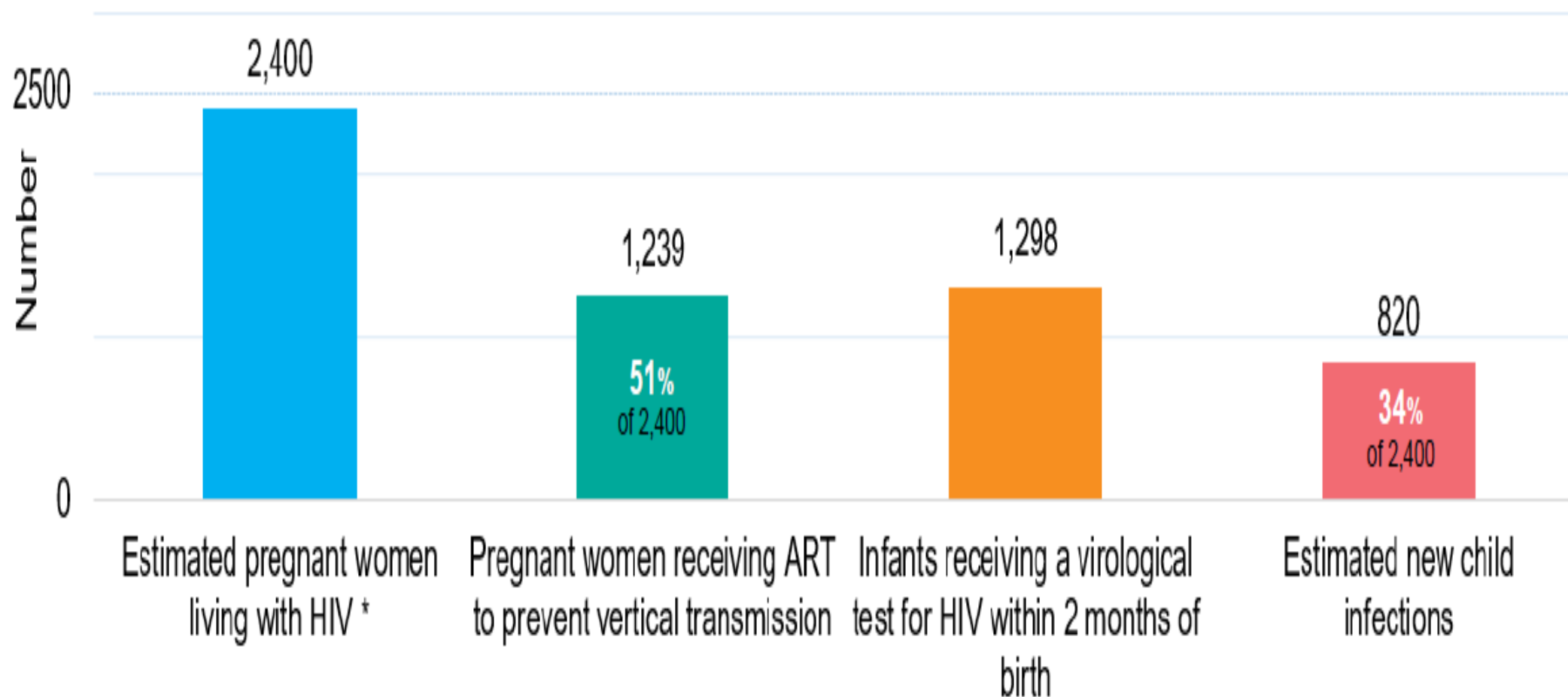


Fig 7: PPTCT Coverage Trend | Source: eNHIS

PMTCT Cascade, 2022



Source: 2023 Global AIDS Monitoring Report, PNG

Factors Increasing Paediatric Infections in PNG

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- ↑ prevalence HIV in women of childbearing age
 - Low status of women in society
 - Women less likely to negotiate safer sex
 - ↑ GBV
 - low levels of education and literacy
 - poverty
 - additional social determinants of health

- Lack of access to available interventions to prevent mother to child transmission
 - Family planning
 - PPTCT programs
- Delays in starting eligible pregnant women on ART
- Low rates of Antenatal care and Supervised Delivery
- Exposed infants not getting ARVs and safest breastfeeding

Effect of HIV on Pregnancy

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More complications, including increased risk of:

- ▣ Spontaneous abortions
 - ▣ still birth
 - ▣ Pre-term deliveries
 - ▣ Low birth weight infants
 - ▣ Bacterial pneumonia, Urinary Tract Infections (UTIs) and other illnesses
 - ▣ Postnatal infections especially after surgical delivery
- ▣ **It is critical that pregnant women with HIV and their infants get the best possible antenatal, intra-partum and postpartum care**

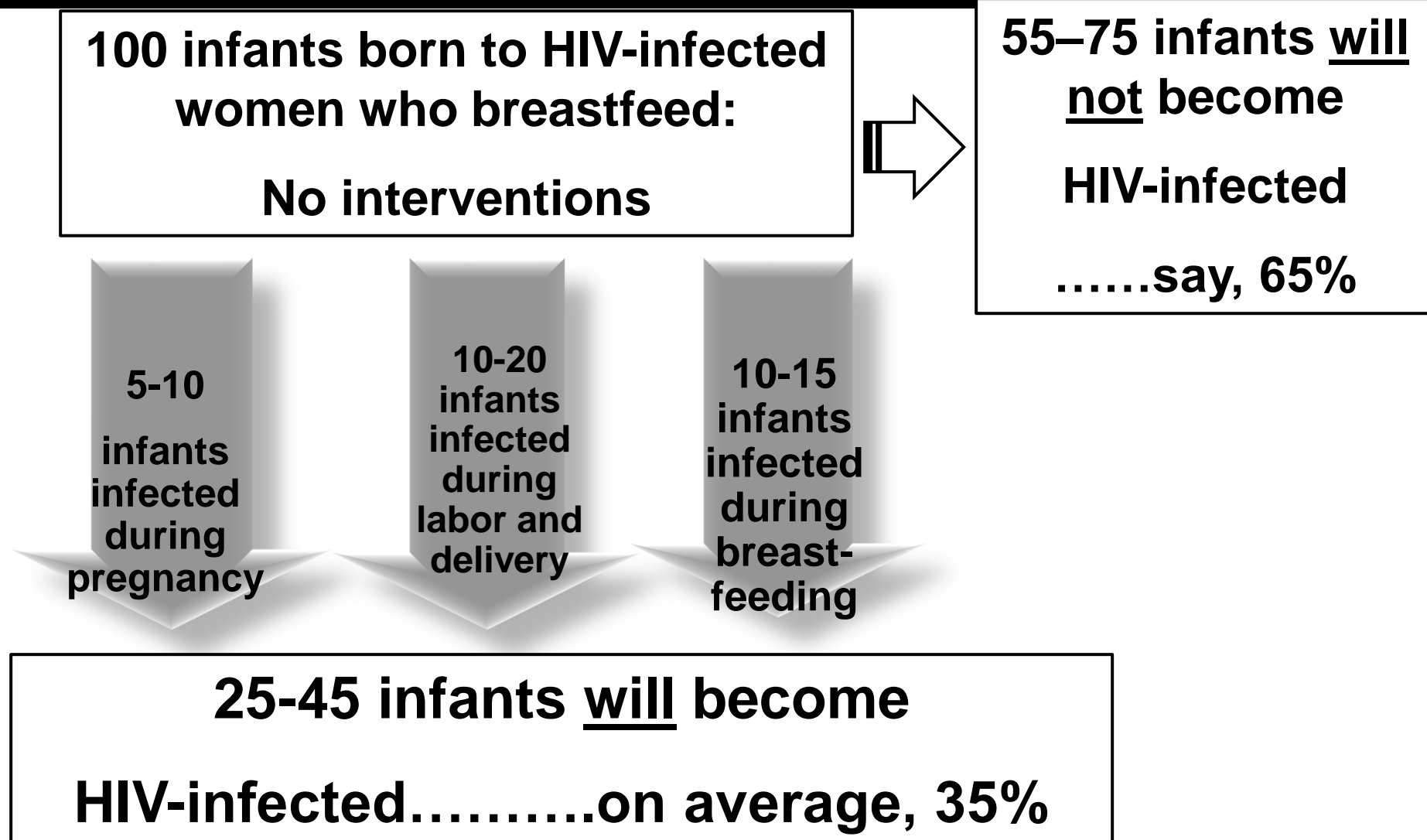
PARENT TO CHILD TRANSMISSION (PTCT)

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- PTCT stands for Parent To Child Transmission of HIV
- It is the transmission of HIV from an infected parent to the baby during pregnancy, labour and delivery and breastfeeding
- Also known as 'vertical transmission' or 'perinatal transmission' or Mother to Child Transmission of HIV
- 95% of children with HIV acquired the virus through PTCT

HIV-Exposed Infant Outcomes when NO Interventions are Used

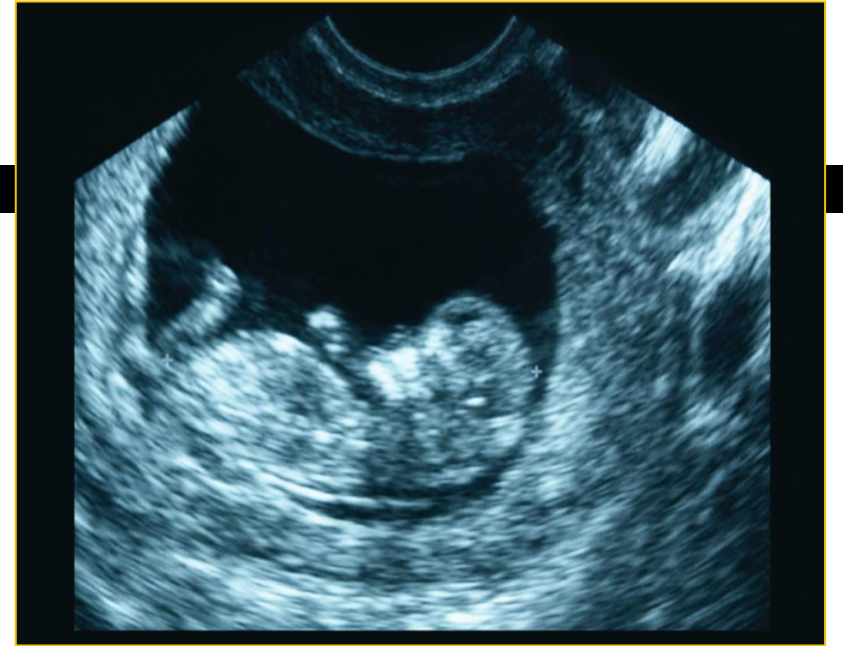
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Reducing Parent to Child Transmission of HIV

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- Perinatal transmission Can be reduced to as low as $<2\%$ with a fully functional PPTCT program



Transmission Risk Factors:

↑ Exposure and/or ↑ Susceptibility

The most important risk factor for PTCT is the amount of HIV in the mother's blood.

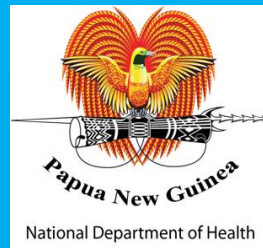
This is known as the *viral load*

Risk of transmission to infant is highest when woman's viral load is high, e.g. in:

- Recent HIV *infection*
- Mothers not on ART
- Advanced AIDS

Maternal Factors that May Increase the Risk of Exposure or Susceptibility to HIV Transmission

Pregnancy	Labour	Breast feeding
High maternal viral load (new infection or advanced AIDS)	High maternal viral load (new infection or advanced AIDS)	High maternal viral load (new infection or advanced AIDS)
Normal changes to maternal immune system related to pregnancy	Rupture of membranes more than 4 hours before labour begins	Early mixed feeding (e.g., food or fluids in addition to breast milk)
Viral, bacterial, or parasitic placental infection (e.g., malaria)	Multiple V/Es in labour	Breast abscesses, nipple fissures, mastitis
Untreated sexually transmitted infections (STIs)	Invasive delivery (e.g., ARM, episiotomy or tear)	Oral disease in the baby (e.g., thrush or sores)
Obstetric complications e.g., APH, ECV, PPROM, premature labour,	First infant in multiple birth is at higher risk	Duration of breastfeeding
Rape and primary infection	Chorioamnionitis (from untreated STI or other infection)	Rape and primary infection
Maternal malnutrition (indirect cause)	Unsafe blood transfusion if very anaemic or has major APH/PPH	Poor maternal nutritional status



PNG - Matching towards Triple Elimination of HIV,
Hep B and Syphilis



Rationale for Triple Elimination of EMTCT of HIV, Syphilis & HBV



Are transmitted **sexually and vertically** (from mother to infant)

Can cause significant maternal and child morbidity and mortality



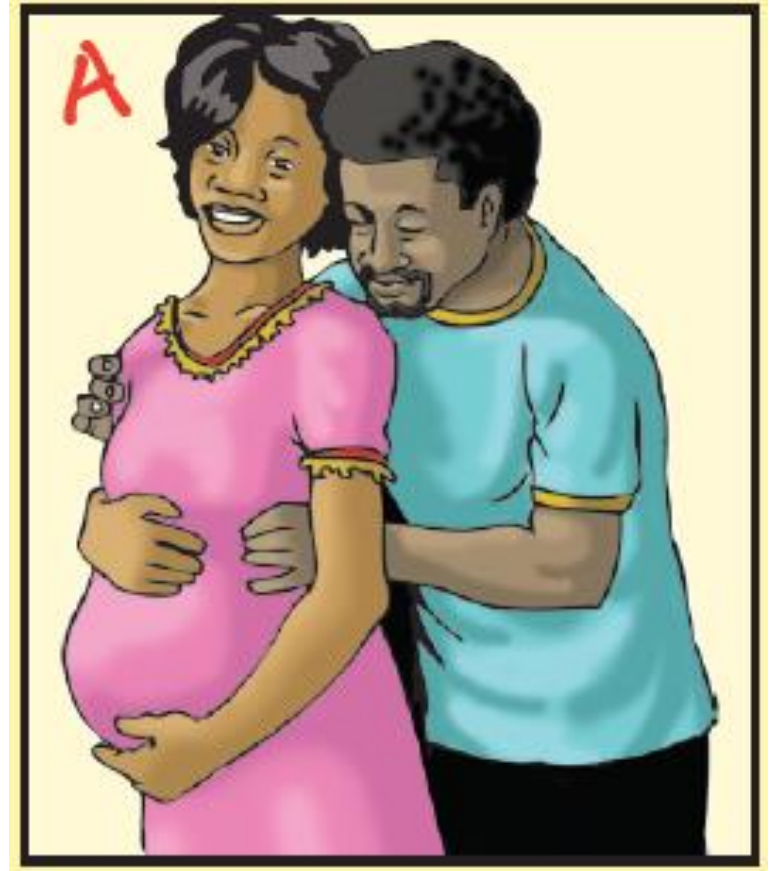
Are often silent with long latency period and **infected mothers may be unaware and have no symptoms**

Can be **identified during ANC** and treated to **prevent vertical transmission**

PPTCT: What is it?

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- PPTCT stands for Prevention of *Parent-to-Child* Transmission
- PPTCT is a neutral term as it
 - ▣ Removes the stigma or blame from the mother who might be wrongfully blamed for giving birth to an HIV positive infant
 - ▣ Increases the father's – or male sexual partner's – accountability for the infant's health and role in the spread of HIV and PPTCT (make them part of the solution rather than part of the problem)
- Recognises that HIV may be introduced in the family by either the mother or the male partner
- This is the preferred term for the PNG program as opposed to the term “Prevention of Mother to Child Transmission of HIV(PMTCT)

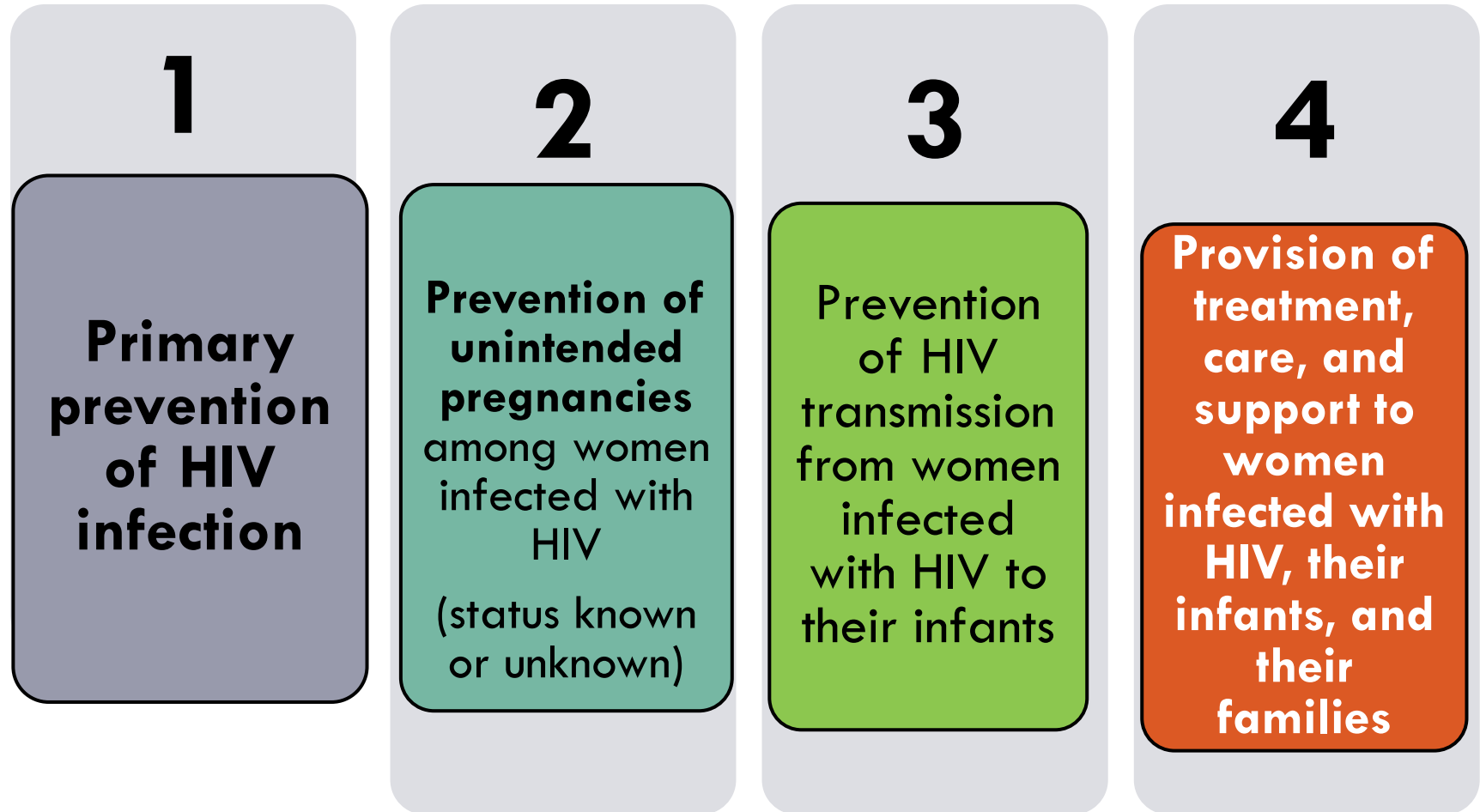


Actions - Progress towards Triple Elimination Targets +

	IMPACT TARGET	PROGRESS TARGET	PNG PROGRESS
Reproductive, maternal, newborn and child health (RMNCH)		ANC coverage (at least one visit) $\geq 95\%$	ANC Coverage 1st Visit - 76%. 4th Visit - 49%
		Proportion of births attended by skilled health personnel $\geq 95\%$	SBA - 56%
HIV	$\leq 50\%$ new paediatric infections PER 100,000 live birth	HIV testing coverage of pregnant women (pregnant women with known HIV status) $\geq 95\%$	16% HIV testing of Pregnant Women (program data)
	Mother-to-child transmission rate of $< 5\%$ (breastfeeding populations) or $< 2\%$ (non-breastfeeding populations)	Antiretroviral therapy (ART) coverage of HIV-positive pregnant women $\geq 95\%$	Coverage of adults and children receiving ART - 65% Vertical transmission rate including during breastfeeding - 35.92% [32.86 - 38.94]
HEPATITIS B	$\leq 0.1\%$ prevalence of the hepatitis B surface antigen (HBsAg) among children (≤ 100 cases/100 000 live births)	Hepatitis B birth-dose vaccine coverage $\geq 95\%$	22% (2021 national survey)
		Hepatitis B third-dose vaccine coverage $\geq 95\%$	No data available
		HBsAg testing coverage of pregnant women $\geq 95\%$	HBsAg NOT tested routinely amongst pregnant women during ANC. In 2019, model = 6.6% HBsAg + in pregnant women. While HCV (RNACAg+) was 1.01%
SYPHILIS	≤ 50 congenital syphilis cases per 100 000 live births	Syphilis testing coverage of pregnant women $\geq 95\%$	34.5% syphilis testing amongst pregnant women attending 1st ANC (2020 program data)
		Treatment of syphilis seropositive pregnant women $\geq 95\%$	No data on syphilis treatment

4 Elements of PPTCT Programs

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PPTCT Services

PPTCT services should include:

- ❑ Education about safer sex options, access to condoms, timely post-rape services
- ❑ Accessible, quality Family Planning (FP) services
- ❑ HIV testing and counselling during Antenatal Care (ANC), labour and delivery, and postpartum
- ❑ Provision of ARV drugs to mother and infant
- ❑ Safer delivery practices
- ❑ Safest breastfeeding information, counselling, and support
- ❑ Referrals to comprehensive treatment, care and social support for mothers, and families with HIV infection

New global alliance launched to end AIDS in children by 2030

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1. closing the treatment gap for pregnant and breastfeeding adolescent girls and women living with HIV and optimizing continuity of treatment;
2. preventing and detecting new HIV infections among pregnant and breastfeeding adolescent girls and women;
3. accessible testing, optimized treatment, and comprehensive care for infants, children, and adolescents exposed to and living with HIV; and
4. addressing rights, gender equality, and the social and structural barriers that hinder access to services.

Universal Access

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- The idea that **everyone** has a right to prevention, diagnosis, treatment, care, and support related to HIV and AIDS

Challenges affecting the effective implementation of a PPTCT program in PNG

- Leadership - weak coordination
- Access and demand for PPTCT services – ANC attendance low
- Poor referral system – difficult terrain
- Low Capacity for EID – trained HR, diagnostic kits, etc
- Availability of test kits for HIV, Hepatitis and Syphilis
- Weak PHC system with many HFJs not functioning 24/7 – HR, equipment, HMIS etc are weak and suboptimal



Actions to improve PPTCT outcomes

A. Strengthened Policy environment for PPTCT implementation

- i. coordination for PPTCT interventions – functionality of the PPCTC subcommittee
- ii. support to the implementation of the PPTCT policy and framework

B. Service Delivery - Improving Access to Primary Health Care

Services

- i. Improving ANC testing of pregnant women – expanding the use of Village Health Assistants (VHAs)
- i. Support to the procurement and distribution of test kits and ARVs
- ii. Improving logistics management system
- iii. Capacity building of health care workers
- iv. Improving capacity for the delivery of integrated ART and the decentralized EID services especially in high burden provinces

C. Improving the availability and use of **quality Data**

D. Strengthening **referral systems**

E. Raising funds to support PPTCT interventions



What actions do we need to take to contribute to the reduction of parent to child transmission of HIV, Syphilis and Hepatitis?

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- Get correct information about the 3 diseases and the strategies for their elimination
- Disseminate correct and accurate information using the most appropriate language and channel
- Refer the public to the appropriate office, individual and organizations that can difficult and technical questions related to the 3 diseases
- Encourage women to attend ANC, deliver in a health facility and attend postnatal checkups
- Be advocates for women's health and rights
- **CONTRIBUTE TO FUNDING FOR HEALTH & HIV PREVENTION AS PART OF YOUR CSR**

The greatness of a country is not judged by its wealth, but rather by the way it takes care of its citizens with no one left behind.

Thank you



Background PPTCT- PNG - 2

- PNG has recently developed and is implementing the National Health Plan 2021-2030
- The main thrust of the plan is to achieve UHC through strengthened Primary Health Care
- HIV and PPTCT services will be integrated with PHC services delivered through over 700 HFs, in communities (in 96 districts, 300 LLGs, over 6,000 wards) and through outreaches to remote and hard to reach settlements

Effect of Pregnancy on HIV

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Effect of *pregnancy on HIV* infection:

- Pregnancy suppresses immune function in both HIV-infected and non-infected women
- Studies have shown that, in early stage of HIV infection pregnancy does not seem to have an effect on progression of HIV disease

