Patient factors to target for eMTCT

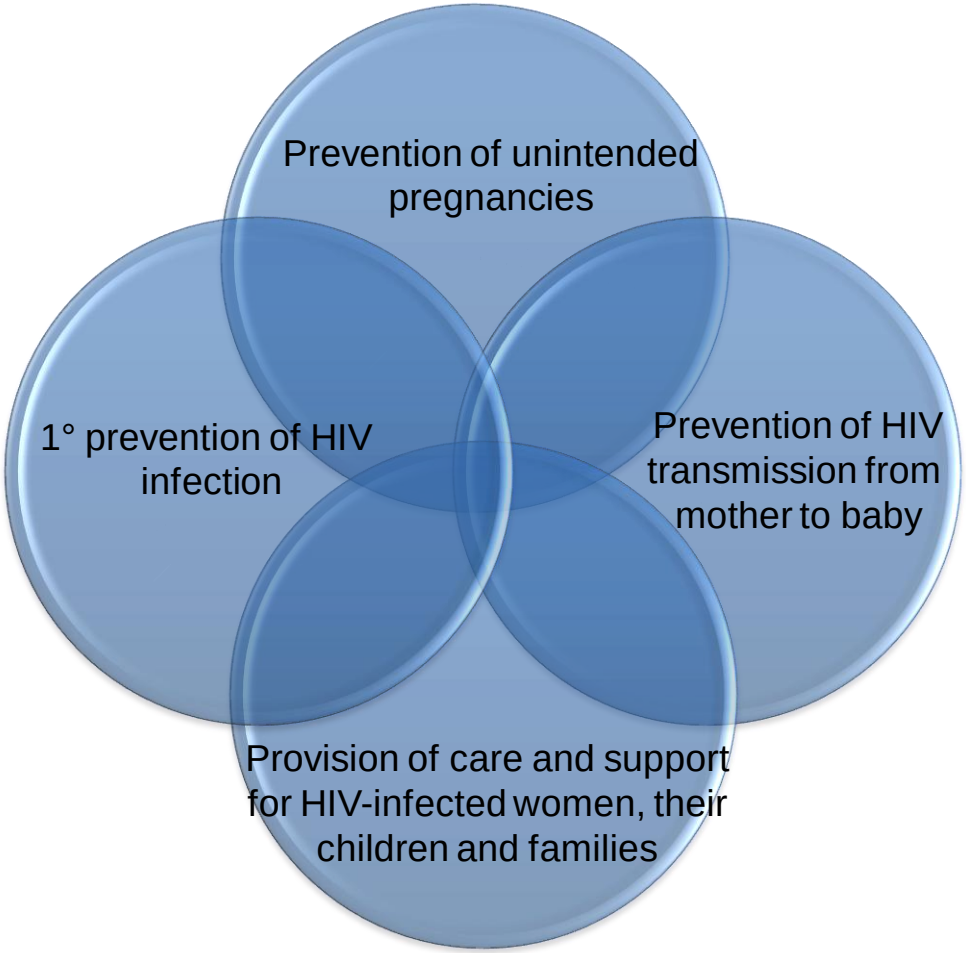
CN Mnyani

25 September 2014

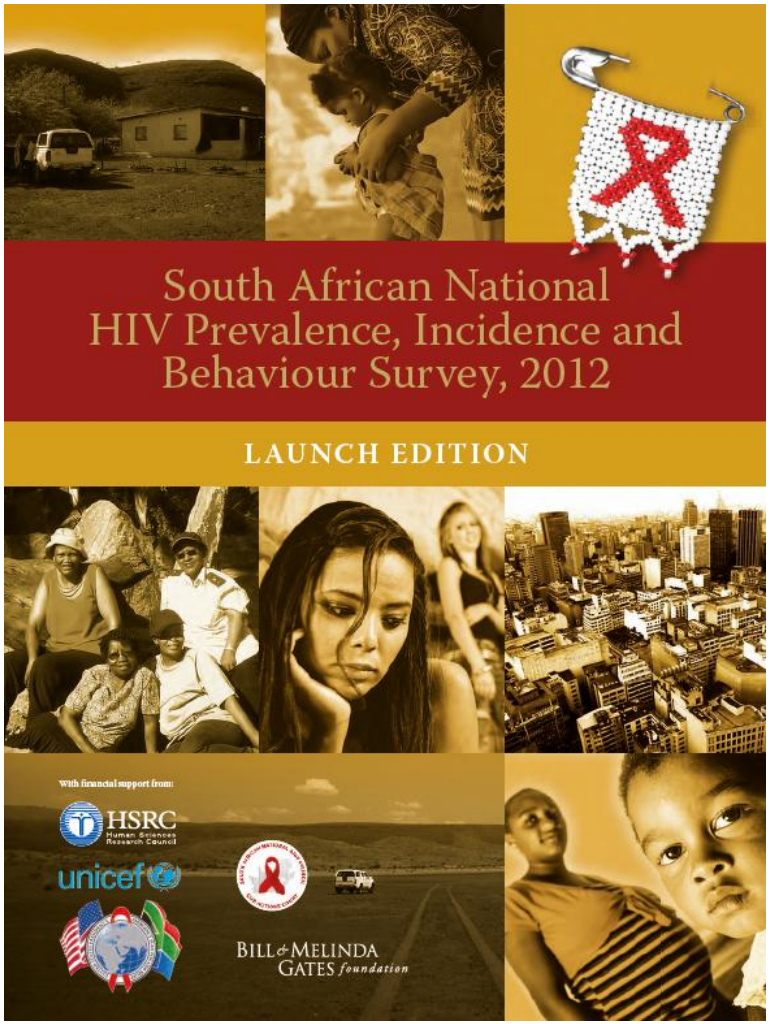
eMTCT is not just about the availability of ARVs

Patient-related (behavioural) factors are also critical

The WHO four prongs of PMTCT



Primary prevention of HIV infection



Some sobering data...

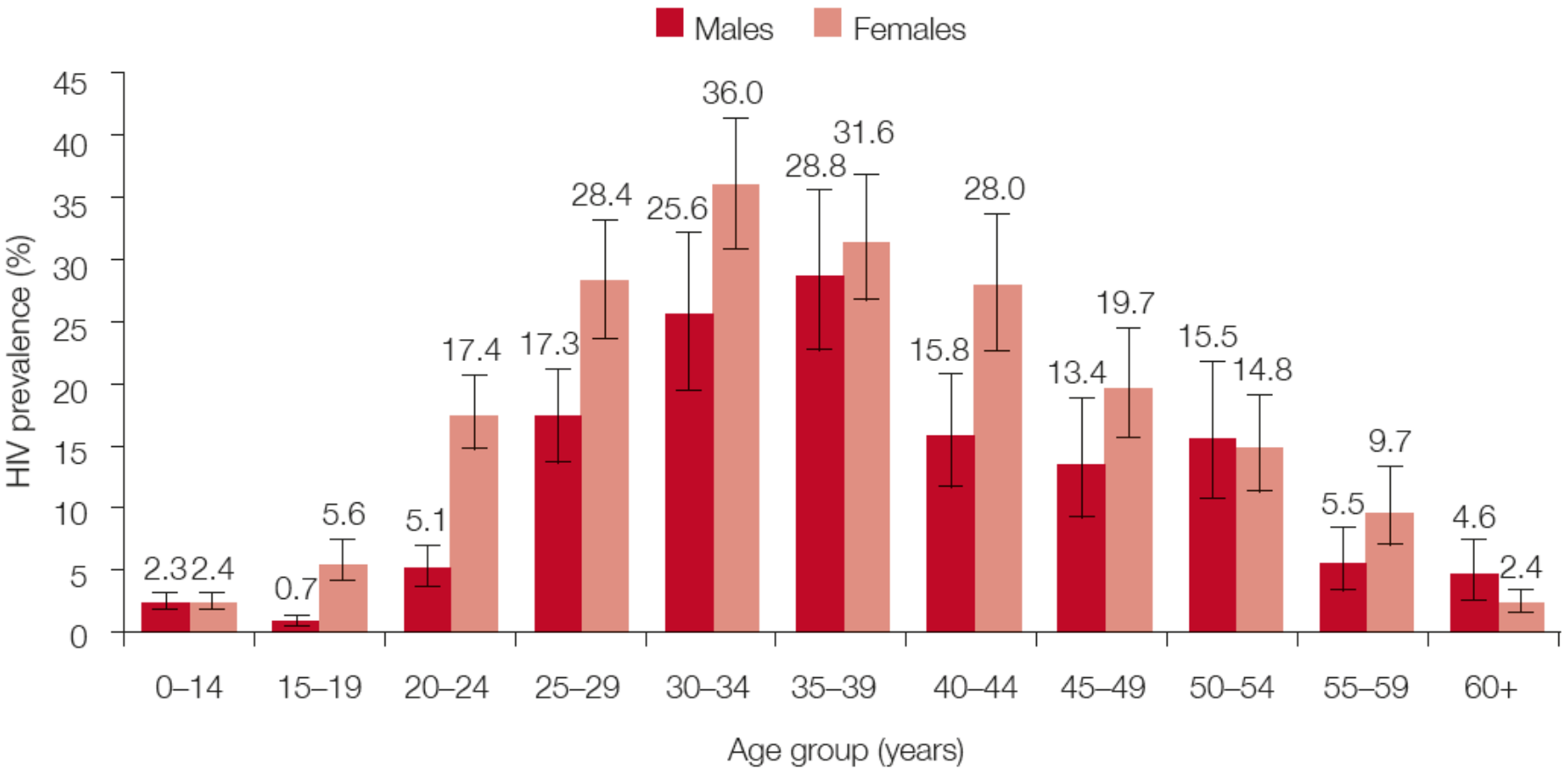
(Shisana, O, et al. (2014) South African National HIV Prevalence, Incidence and Behaviour Survey, 2012)

Survey results

- 38 431 participants interviewed
- 28 997 (67.5%) tested for HIV
- Tested for ART exposure in samples that were HIV+
- **Overall, HIV prevalence 12.2%**

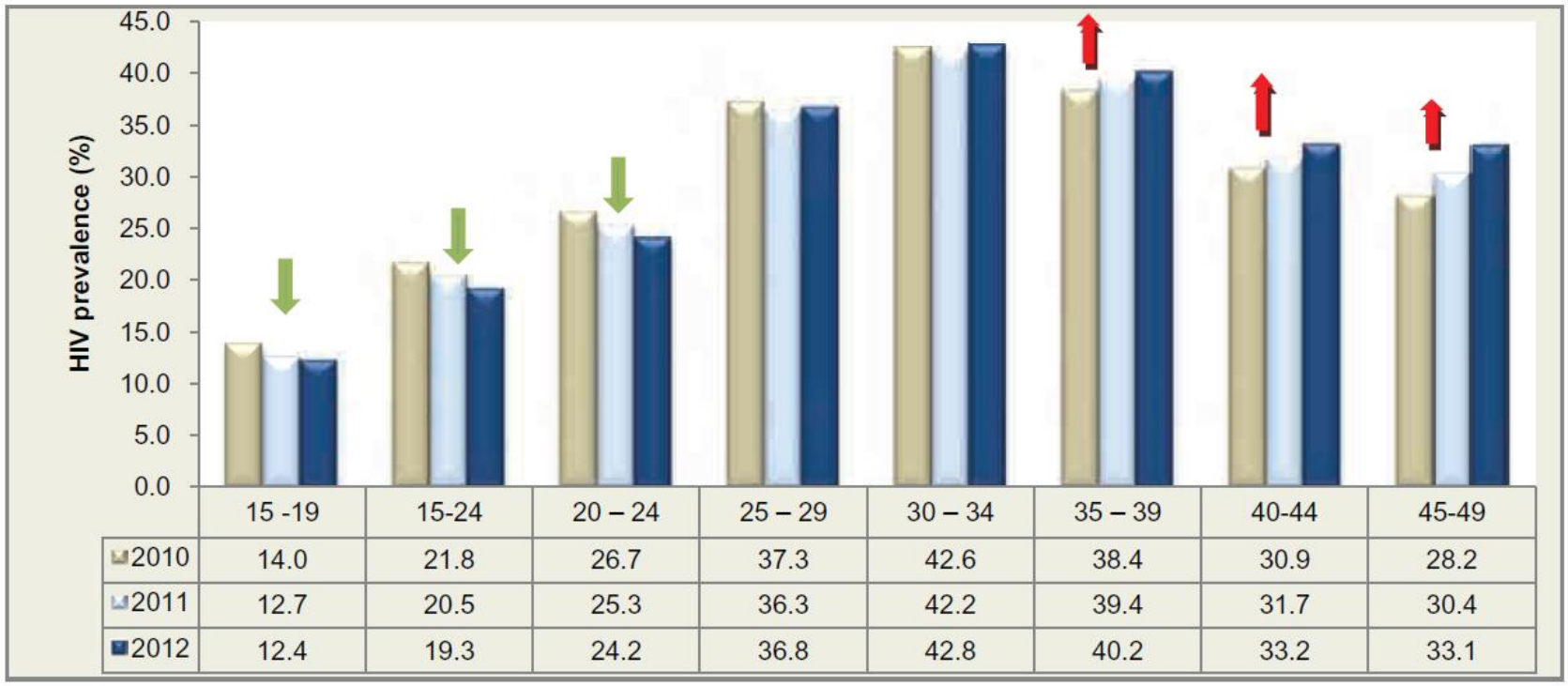
(Shisana, O, et al. (2014) South African National HIV Prevalence, Incidence and Behaviour Survey, 2012)

Figure II: HIV prevalence by sex and age, South Africa 2012



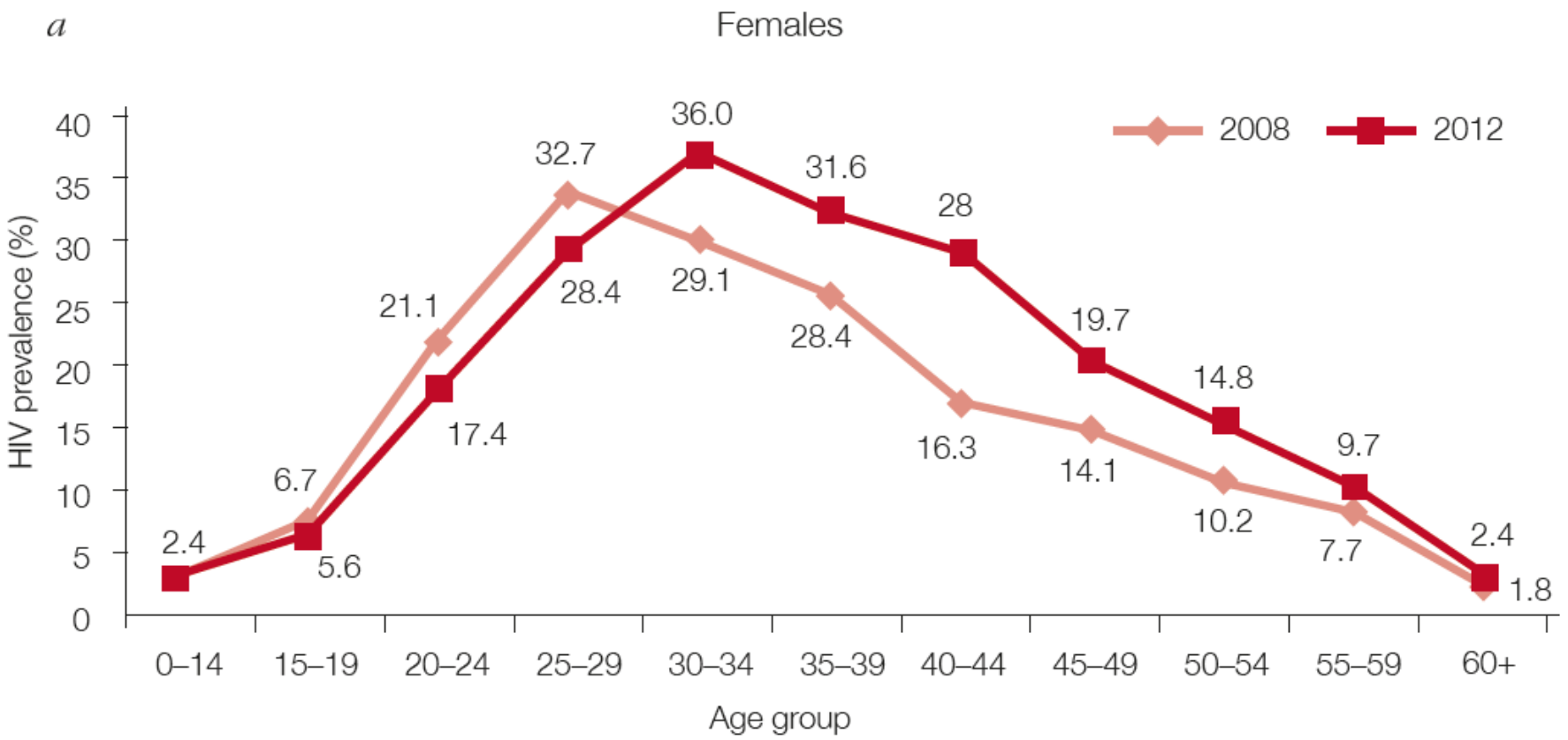
(Shisana, O, et al. (2014) South African National HIV Prevalence, Incidence and Behaviour Survey, 2012)

HIV prevalence among pregnant women



	15 -19	15-24	20 – 24	25 – 29	30 – 34	35 – 39	40-44	45-49
2010	14.0	21.8	26.7	37.3	42.6	38.4	30.9	28.2
2011	12.7	20.5	25.3	36.3	42.2	39.4	31.7	30.4
2012	12.4	19.3	24.2	36.8	42.8	40.2	33.2	33.1

Figure 11: HIV prevalence trends among antenatal women by age group, South Africa, 2010 to 2012. (*Source*: NDoH, 2013)



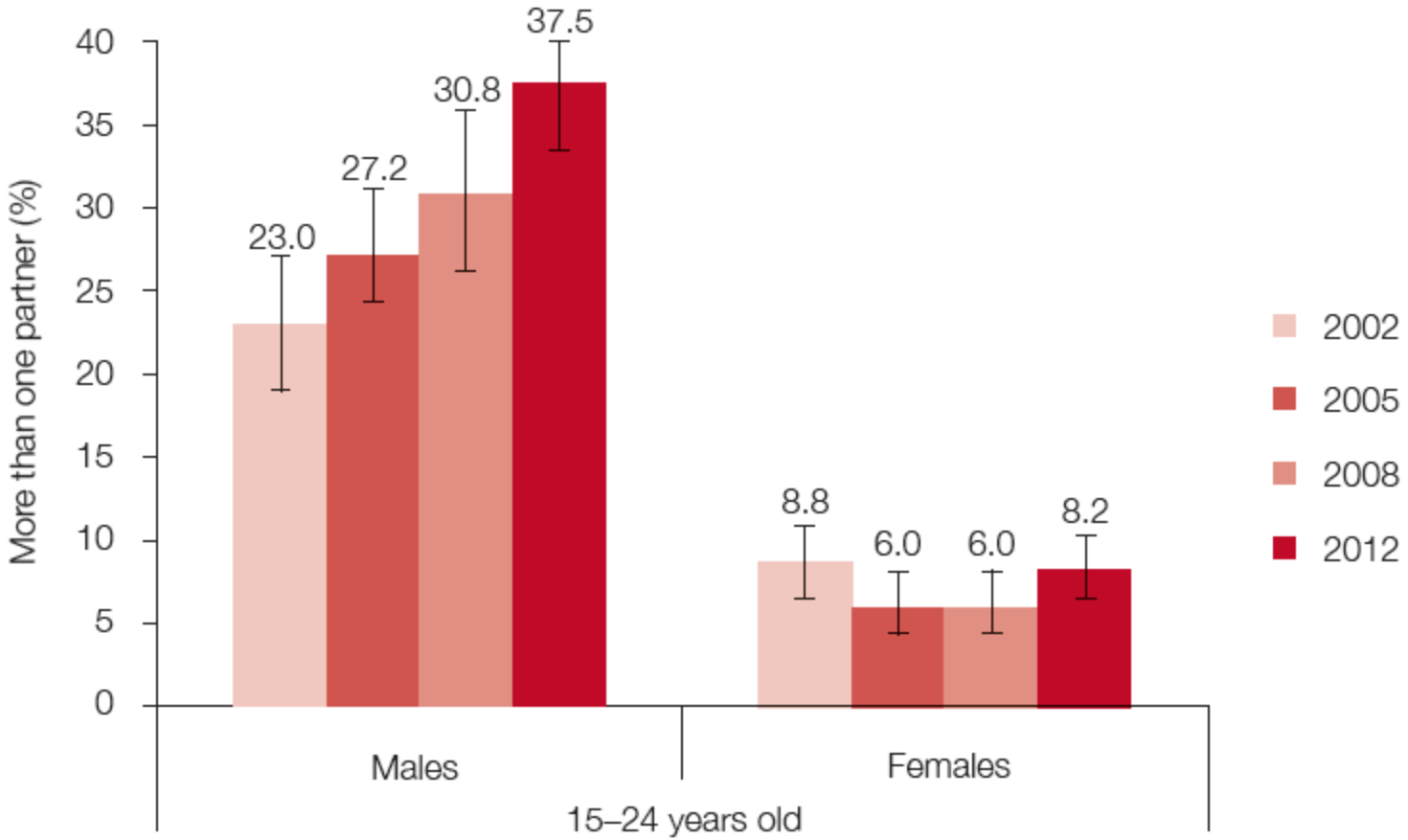
(Shisana, O, et al. (2014) South African National HIV Prevalence, Incidence and Behaviour Survey, 2012)

Survey results

- Among adults aged 15–49 years, number of new infections was 1.7 times higher in females than in males
- The HIV-incidence rate among female youth aged 15–24 was over four times higher than the incidence rate found in males in this age group (2.5% vs. 0.6%)
- 24.1% of all new HIV infections occurred in young females aged 15–24 years

(Shisana, O, et al. (2014) South African National HIV Prevalence, Incidence and Behaviour Survey, 2012)

Figure IV: Sexually active respondents aged 15 years and older who had more than one sex partner in last 12 months, South Africa 2002, 2005, 2008, 2012



(Shisana, O, et al. (2014) South African National HIV Prevalence, Incidence and Behaviour Survey, 2012)

Survey results

- 33.7% of all female adolescents aged 15-19 years reported having had a partner more than five years their senior

- **Overall, only 26.8% of participants had accurate knowledge about sexual transmission and prevention of HIV infection!**

  (TV was identified as the most influential source)

Our messages about HIV prevention are clearly failing...

(Shisana, O, et al. (2014) South African National HIV Prevalence, Incidence and Behaviour Survey, 2012)

Prevention of unplanned pregnancies

Prevention of unplanned pregnancies

- **Family planning**, and consequently prevention of unintended pregnancies, has long been the most **underutilised PMTCT intervention**, with only modest progress to date

- High unmet need for contraception among HIV-infected women

- Even in those who have access to reproductive health services, **rates of unplanned pregnancies remain high**

(Joint United Nation Programme on HIV/AIDS (UNAIDS): Report on the global AIDS epidemic 2013. Geneva: UNAIDS; 2013)

AIDS Behav (2013) 17:461–470
DOI 10.1007/s10461-011-0068-y

ORIGINAL PAPER

Reproductive Decision-Making and Periconception Practices Among HIV-Positive Men and Women Attending HIV Services in Durban, South Africa

Lynn T. Matthews · Tamaryn Crankshaw · Janet Giddy · Angela Kaida · Jennifer A. Smit · Norma C. Ware · David R. Bangsberg

Methods

Qualitative research with in-depth interviews to explore:

- Reproductive decision-making
- Horizontal transmission risk understanding and practices
- Periconception risk understanding and practices

(Matthews LT, et al. AIDS Behav (2013) 17:461–470)

Results

- Some participant characteristics

Table 1 Study population characteristics

Characteristics	Women ($n = 30$)	Men ($n = 20$)
Mean age ± SD (years)	30 ± 4	34 ± 6
Completed matric or above[†]	22 (73%)	12 (60%)
Employed	19 (63%)	15 (75%)
Mean years since HIV diagnosis ± SD	3 ± 2	3 ± 5
Currently on ART/ARVs	21 (70%)	17 (85%)

(Matthews LT, et al. AIDS Behav (2013) 17:461–470)

Results

- Personal and culturally-embedded reasons for having children

  - ❑ Remained intact even when HIV+ individuals had partners of negative or unknown HIV-status

- Independent of fertility goals, many study participants were confused by the nature of serodiscordance, leading to riskier behaviour

(Matthews LT, et al. AIDS Behav (2013) 17:461–470)

Results

- Responses revealed that pregnancy intention occurs on a spectrum with a minority of pregnancies explicitly intended

The spectrum:

- **Unplanned, but desired pregnancies** – had hoped for pregnancy at some point in the future, did not use contraception, and engaged in unprotected sex

(Matthews LT, et al. AIDS Behav (2013) 17:461–470)

Results

- **Unplanned pregnancies, but reported happiness** about them – unclear if this reflected resigned acceptance or fertility desire

- **Unintended, unwanted pregnancies** – for some, partner response to the news of pregnancy influenced the woman's response

(Matthews LT, et al. AIDS Behav (2013) 17:461–470)

Results

- Many had not disclosed HIV status
- Among planned pregnancies with a serodiscordant partner, majority did not know how to minimize sexual transmission risk while allowing for conception
  - ❑ Some described knowingly risking horizontal HIV transmission in order to conceive

(Matthews LT, et al. AIDS Behav (2013) 17:461–470)

Christofides NJ et al. *Journal of the International AIDS Society* 2014, **17**:18585
http://www.jiasociety.org/index.php/jias/article/view/18585 | http://dx.doi.org/10.7448/IAS.17.1.18585

JIAS Journal of the International AIDS Society

Research article

Early adolescent pregnancy increases risk of incident HIV infection in the Eastern Cape, South Africa: a longitudinal study

Nicola J Christofides[§,1], Rachel K Jewkes[1,2], Kristin L Dunkle[3], Mzikazi Nduna[4], Nwabisa Jama Shai[1,2] and Claire Sterk[3]

[§]**Corresponding author:** Nicola J Christofides, Wits School of Public Health, 27 St Andrews Road, Parktown, South Africa. Tel: +27117172566. (nicola.chris@gmail.com)

Methods

- In the overall study, 1416 women (15-26yrs)
- Were volunteer participants in a cluster-randomized, controlled trial through Stepping Stones – an HIV prevention intervention programme
- 1099 women included in this analysis – 88% of 1256 HIV-negative women in the trial

(Christofides NJ et al. Journal of the International AIDS Society 2014, 17:18585)

Methods

Assessments:

- Baseline, 12 and 24 months
- Tested for HIV and HSV2
- Interviewed to ascertain socio-demographic and partner characteristics and sexual risk behaviour

(Christofides NJ et al. Journal of the International AIDS Society 2014, 17:18585)

Results

- The adjusted IRR for HIV infection was 3.02 (95% CI 1.50-6.09) for a pregnancy occurring at age 15 or younger

Early adolescent pregnancies associated with high risk behaviour:

- Higher partner numbers
- Greater age difference with partners

(Christofides NJ et al. Journal of the International AIDS Society 2014, 17:18585)

Results

- Temporal aspect of this finding – **pregnancies occurring years before the incident HIV infection**

  - ❑ Ruling out the possibility that HIV infection occurred simultaneously or preceded the early pregnancies

❑ **…prevention of teenage pregnancies is also about HIV prevention**

(Christofides NJ et al. Journal of the International AIDS Society 2014, 17:18585)

Unplanned pregnancies

- In a case-control study of HIV-infected women with infected and uninfected infants, **unplanned pregnancies** were associated with an increased odds of MTCT
  - ❑ **AOR = 2.7**; 95% CI = 1.2 to 6.3; $p = 0.022$

Mnyani *et al. Globalization and Health* 2014, **10**:36
http://www.globalizationandhealth.com/content/10/1/36

GLOBALIZATION AND HEALTH

RESEARCH Open Access

Patient factors to target for elimination of mother-to-child transmission of HIV

Coceka N Mnyani[1,2*], Adonia Simango[2], Joshua Murphy[2], Matthew Chersich[3,4,5] and James A McIntyre[2,6]

HIV diagnosis during pregnancy

- **Unknown HIV status prior to conception** and risk of MTCT
  - ❑ **AOR = 6.6**; 95% CI = 2.4 – 18.4; $p < 0.001$
- **Accessing antenatal care >20 wks gestation** and risk of MTCT
  - ❑ **AOR = 4.3**; 95% CI = 2.0 – 9.3; $p < 0.001$

Mnyani *et al. Globalization and Health* 2014, **10**:36
http://www.globalizationandhealth.com/content/10/1/36

GLOBALIZATION AND HEALTH

RESEARCH Open Access

Patient factors to target for elimination of mother-to-child transmission of HIV

Coceka N Mnyani[1,2*], Adonia Simango[2], Joshua Murphy[2], Matthew Chersich[3,4,5] and James A McIntyre[2,6]

Timing of Maternal HIV Testing and Uptake of Prevention of Mother-to-Child Transmission Interventions Among Women and Their Infected Infants in Johannesburg, South Africa

Karl-Günter Technau, MBBCh, MSc, Emma Kalk, MBBCh, PhD,† Ashraf Coovadia, MBBCh, FCPaed,* Vivian Black, MBBCh, MSc,‡ Sam Pickerill, MSc,* Claude A. Mellins, PhD,§ Elaine J. Abrams, MD,‖ Renate Strehlau, MBBCh, MSc,* and Louise Kuhn, PhD¶*

(*J Acquir Immune Defic Syndr* 2014;65:e170–e178)

- Investigated the profile of newly diagnosed vertically infected children and their mothers to identify shortfalls in the PMTCT programme

Timing of maternal ART

Selected results:

- In 81 cases (29%), late maternal diagnosis precluded any PMTCT access

- With Dx during or before pregnancy, recommended PMTCT guidelines were followed in 86 (61%) pairs

One of the conclusions:

- Timely maternal Dx enables PMTCT uptake, but implementation and follow-up gaps require attention to improve infant outcomes

(*J Acquir Immune Defic Syndr* 2014;65:e170–e178)

Option B+ in practice

Tropical Medicine and International Health doi:10.1111/tmi.12369

VOLUME 00 NO 00

Understanding factors, outcomes and reasons for loss to follow-up among women in Option B+ PMTCT programme in Lilongwe, Malawi

Hannock Tweya[1,2,3], Salem Gugsa[2,4], Mina Hosseinipour[5], Colin Speight[2], Wingston Ng'ambi[2], Mphatso Bokosi[2], Janet Chikonda[6], Annie Chauma[6], Patricia Khomani[7], Malocho Phoso[8], Tiwonge Mtande[5] and Sam Phiri[2]

Methods

- **Assessed factors, outcomes and reasons for LTFU** of pregnant and breastfeeding women initiated on ART
- Clinic using a real-time, point-of-care Electronic Medical Record system
- Identified patients who had missed appointment by at least 3 weeks – **traced by phone or home visits**

(H. Tweya et al. Tropical Medicine and International Health)

Results

- **2458 (84%) were pregnant** and 472 (16%) were breastfeeding at ART initiation
- **577 (20%) missed a clinic appointment by at least 3 weeks**
- 272 (47%) only collected ARVs at the time of initiation and did not return

(H. Tweya et al. Tropical Medicine and International Health)

Results

- Successfully traced 228 (40%) – 219 alive; 9 had died

Reasons for LTFU in the 219 women found alive:

Reason for LTFU	n	%
Stopped Rx	118	**54**
Self-transferred	67	30
Drugs from other source	13	6
Rx interruptions	9	4
Not started Rx despite collection	7	3
Refused interview	5	2

(H. Tweya et al. Tropical Medicine and International Health)

Results

Table 3 Reasons for discontinuing antiretroviral therapy (ART) women starting ART for PMTCT at Bwaila Hospital in Lilongwe, Malawi

Reasons for ART discontinuation	Total	
	n	%
Total women	118	
Non-respondents	7	6
Respondents*	111	94
Forgotten to take ARVs	5	5
Suspected side effects of ARVs	11	10
Very weak/sick	11	10
Religious belief	5	5
Travelled away	42	38
Non-disclosure of HIV status to the spouse	9	8
Transport costs	17	16
Limited information about ARVs	11	10
Other reasons	49	44

*Percentages are out of those who responded to each question. Some women gave more than one reason for Discontinuing ART.

(H. Tweya et al. Tropical Medicine and International Health)

Results

- Of those successfully traced, 107 were counselled and advised to return to the ART clinic
- 95 (89%) said they would return and restart ART
- However, only 27 of these (23%) returned to care!

LTFU was associated with:

- ❑ Younger age and being pregnant at ART initiation
- ❑ Earlier year of Option B+ implementation

(H. Tweya et al. Tropical Medicine and International Health)

"What They Wanted Was to Give Birth; Nothing Else": Barriers to Retention in Option B+ HIV Care Among Postpartum Women in South Africa

Kate Clouse, PhD, MPH, Sheree Schwartz, PhD, MPH,*† Annelies Van Rie, MD, PhD,* Jean Bassett, MBBCh,‡ Nompumelelo Yende,‡ and Audrey Pettifor, PhD, MPH**

J Acquir Immune Defic Syndr • Volume 67, Number 1, September 1, 2014

(Clouse, K, et al. JAIDS 2014; 67(1))

Results

TABLE 2. Barriers to Retention in Care Identified by SSI Participants (N = 50)

	n	%
Reasons why respondent may cease care, reported during antenatal care (n = 50)		
Nothing	38	76.0
Lack of money	9	18.0
Work conflict	3	6.0
Staff treatment at clinic	3	6.0

(Clouse, K, et al. JAIDS 2014; 67(1))

Results

TABLE 2. Barriers to Retention in Care Identified by SSI Participants (N = 50)

	n	%
Reasons why other women may cease care, reported during postpartum care (n = 48)		
Mother cares about the baby's health but not her own	14	29.2
Mother is "ignorant" or "irresponsible"	8	16.7
Staff treatment at clinic	6	12.5
Mother's denial of her HIV status	5	10.4
Mother has not disclosed her HIV status to others	5	10.4
Lack of money	4	8.3
Long queues or limited hours at clinic	4	8.3
Mother relocates	3	6.3
Mother thinks she is cured	3	6.3
Do not know	4	8.3

(Clouse, K, et al. JAIDS 2014; 67(1))

Results

During the focus group discussion, 3 main themes emerged on why women may be LTFU:

- Conflict with work commitments
- Negative treatment from health-care workers
- Lack of disclosure related to stigma

(Clouse, K, et al. JAIDS 2014; 67(1))

Conclusions

- Still high HIV prevalence and incidence in SA
- Interventions to counter potential behavioural risk compensation (i.e. an increase in risky behaviour) in the era of a successful ART roll-out programme are urgently required (Shisana, O, et al., 2014)
- Need to review our prevention communication strategies

Conclusions

- Ill-informed reproductive decision-making, with high rates of unplanned pregnancies
- Need to ensure retention in care, especially with B+
- Safe infant feeding practices

...it all comes down to education and counselling

Thank you...