Contraception in HIV+ Adolescents

Dr Lee Fairlie

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Content

- HIV prevention
- Do adolescents need contraception?
- HIV infection in adolescents
- Pregnancy rates
- Legal implications
- Contraception guidelines
- Emergency contraception
- PMTCT
- Risks of unprotected sex specific to HIV+ adolescents
- STIs
- Conclusions

Effective Adolescent Friendly Services require:

- Rights-based approach
- Acceptable, accessible and appropriate services
- Knowledge and skills
- Attitude
- Privacy and confidentiality
- Community awareness
- Community engagement
- Peer education and support
- Participation of adolescent clients
- Multi-sectorial collaboration

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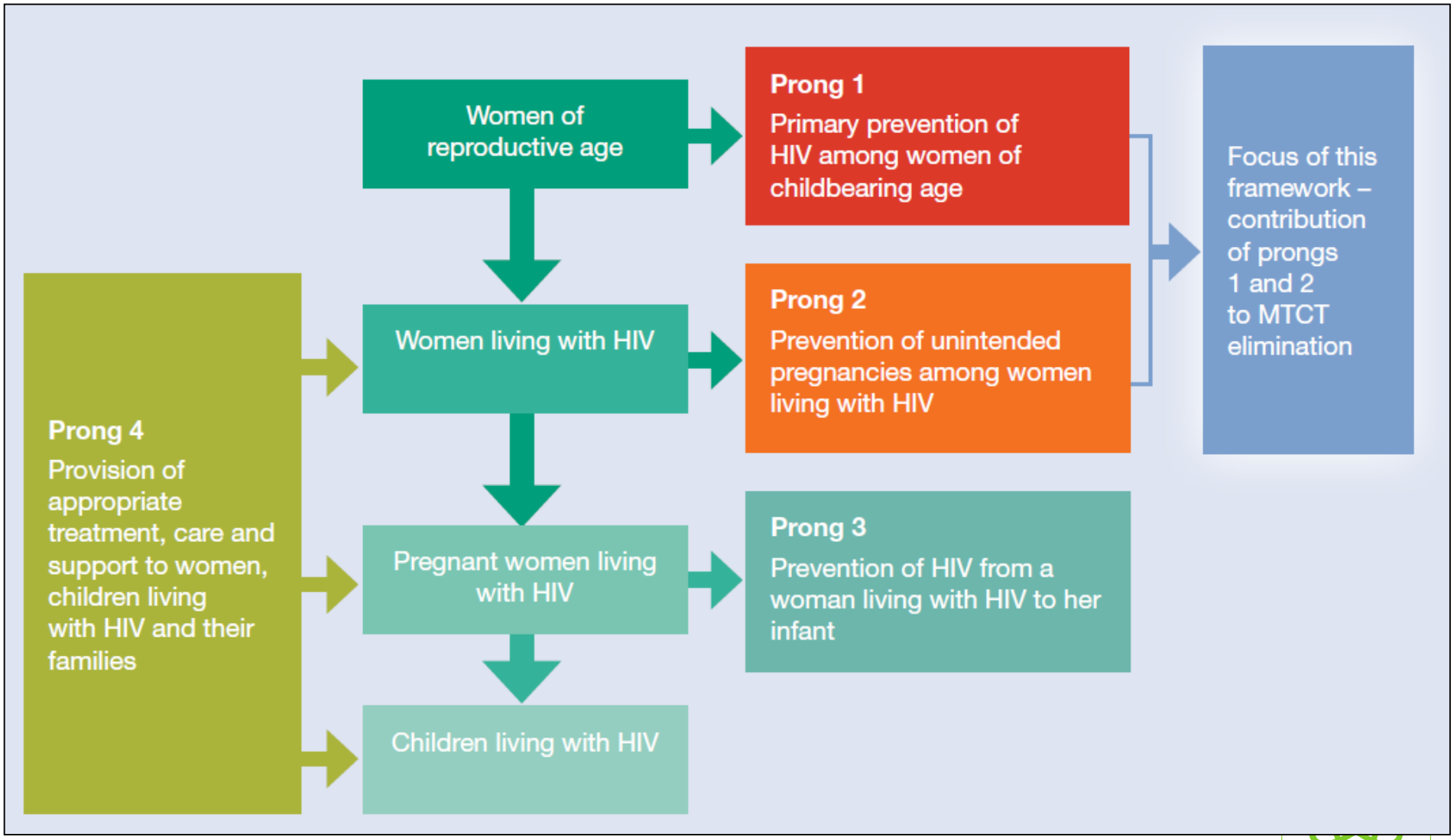
FIGURE 1: FOUR PRONGS TO ELIMINATE MOTHER-TO-CHILD TRANSMISSION OF HIV AND IMPROVE MATERNAL HEALTH



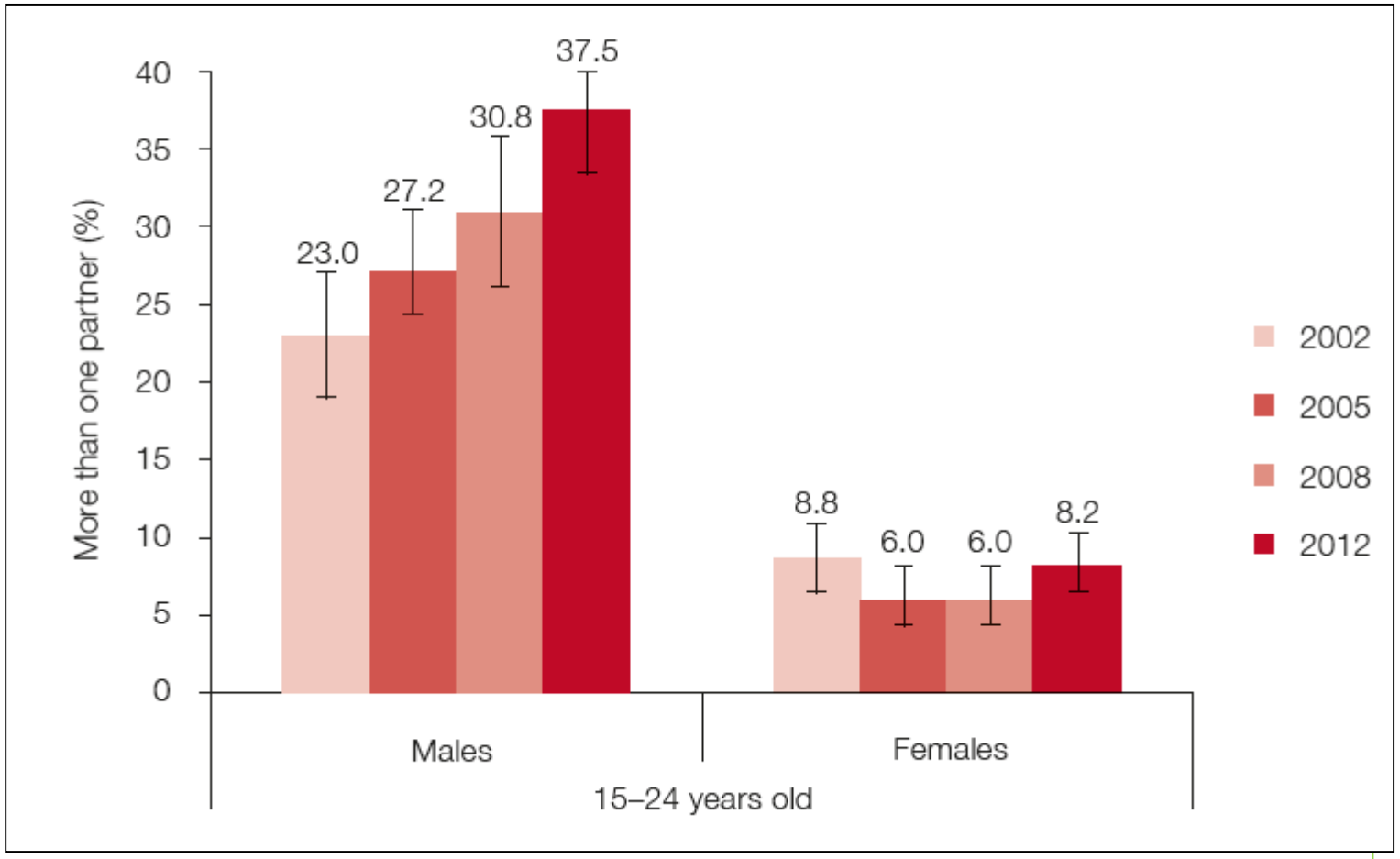
PREVENTING HIV AND UNINTENDED PREGNANCIES: STRATEGIC FRAMEWORK 2011–2015

Are adolescents sexually active??

HSRC survey:

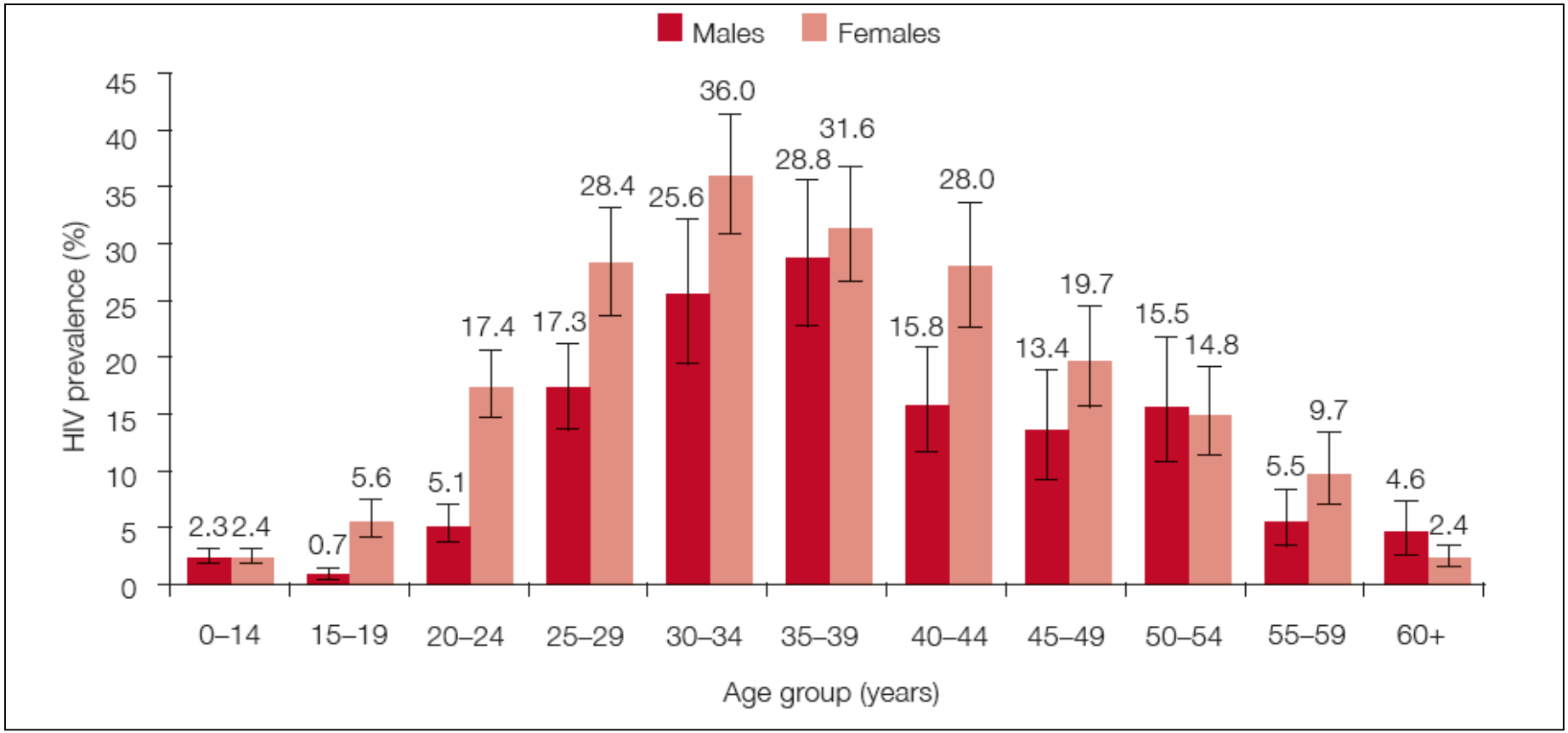
- A tenth of young people report sexual debut before 15 years
- About a fifth of young people (15-19) involved in age-disparate relationships (33.7% female; 4.7% male)
- 12.6% multiple partners past 12 months (>15 years); Males 5 times more likely

Multiple sexual partners by year, sex



HSRC Report 2012

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



HSRC report 2012

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HIV Incidence 2012 by age and sex

Age groups (years)	Sex	HIV incidence % (95% CI)	Estimated number of new infections (95% CI)
2+	**Total**	**1.07 (0.87–1.27)**	**469,000 (381,000–557,000)**
	Male	0.71 (0.57–0.85)	151,000 (121,000–181,000)
	Female	1.46 (1.18–1.84)	318,000 (257,000–401,000)
2–14	**Total**	**0.25 (0.21–0.29)**	**29,000 (24,000–34,000)**
	Male	No incident cases found	
	Female	0.49 (0.39–0.59)	29,000 (23,000–35,000)
15–24	**Total**	**1.49 (1.21–1.88)**	**139,000 (113,000–175,000)**
	Male	0.55 (0.45–0.65)	26,000 (21,000–31,000)
	Female	2.54 (2.04–3.04)	113,000 (91,000–135,000)
25+	**Total**	**1.41 (1.15–1.67)**	**300,000 (245,000–355,000)**
	Male	1.21 (0.97–1.45)	145,000 (116,000–174,000)
	Female	2.28 (1.84–2.74)	251,000 (203,000–302,000)

A quarter of all new HIV infections in this age group
Incidence 4 times higher in females than in males 15-24y

HIV infection in adolescents

- Kharsany et al: Cross sectional survey in schools 2010/2011
  - HIV prevalence learners 15-24 years
  - School A vs school B
  - Prevalence in boys consistently lower (1.3; 1.7%)
  - Girls in school A: 7.7%; Girls in school B 3.2%;
  - BUT 24%(A) and 12%(B) in girls 19-25 years
- QA Karim et al: Incidence rate of 4.7/100wy in < 18 years; 6.9 > 18 years

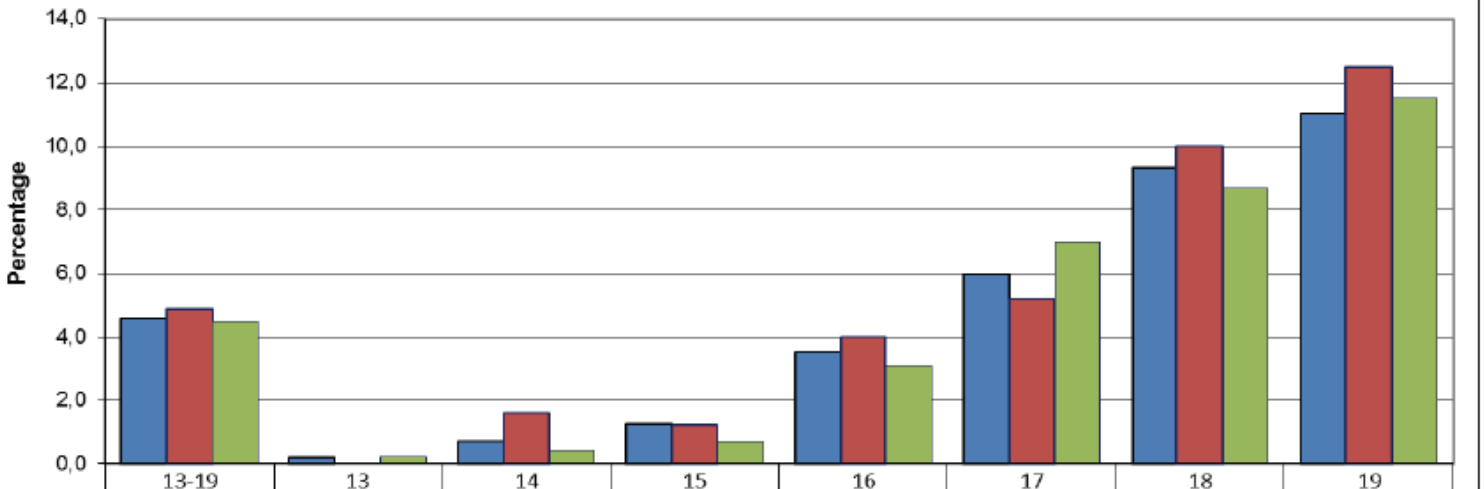
Risk-taking behaviour in HIV+ adolescents

- PHIV+ mixed findings regarding risky sexual activity and substance abuse
- May delay sexual activity because of concerns regarding HIV, may also be developmentally and neurocognitively delayed
- PHIV+ lower rates of substance abuse and risky sexual behaviour than general adolescent population
- High levels of transactional sex amongst AIDS orphans
- Both groups: those who are sexually active frequently engage in unprotected sex (up to 65%)
- Low rates of disclosure to sexual partners (about a third)
- High risk sexual behaviour and substance abuse associated

Burungi H *AIDS CARE* 2009; Mellins C *AIDS PATIENT CARE and STDs* 2011; Bauermeister J *Sex Res* 2012; Cluver *JAIDS* 2011; Elkington *J Adol Health* 2009; Youth Risk Behaviour Surveillance 2012 *MMWR*.

Pregnancy and SA adolescents

Table 1: Percentage of females aged 13–19 who were pregnant during the year preceding the survey, 2009–2011 (*source: Stats South African General Household Survey 2012:18*)



	13-19	13	14	15	16	17	18	19
2009	4,6	0,2	0,7	1,3	3,5	6,0	9,3	11,0
2010	4,9	0,0	1,6	1,2	4,0	5,2	10,0	12,5
2011	4,5	0,2	0,4	0,7	3,1	7,0	8,7	11,5

Pregnancy rates in adolescent women

- Up to 30 % of adolescents in SA report ever having been pregnant
- QA Karim et al: Open cohort recruited from FP and STI clinic for longitudinal HIV risk reduction study 2004-2007; KZN
- 27% of women under 18 years HIV+
- Of HIV-
    - Pregnancy rates 23.7 (<18) and 16.4/ 100wy (>18)

QA Karim; *AIDS Behaviour* 2012

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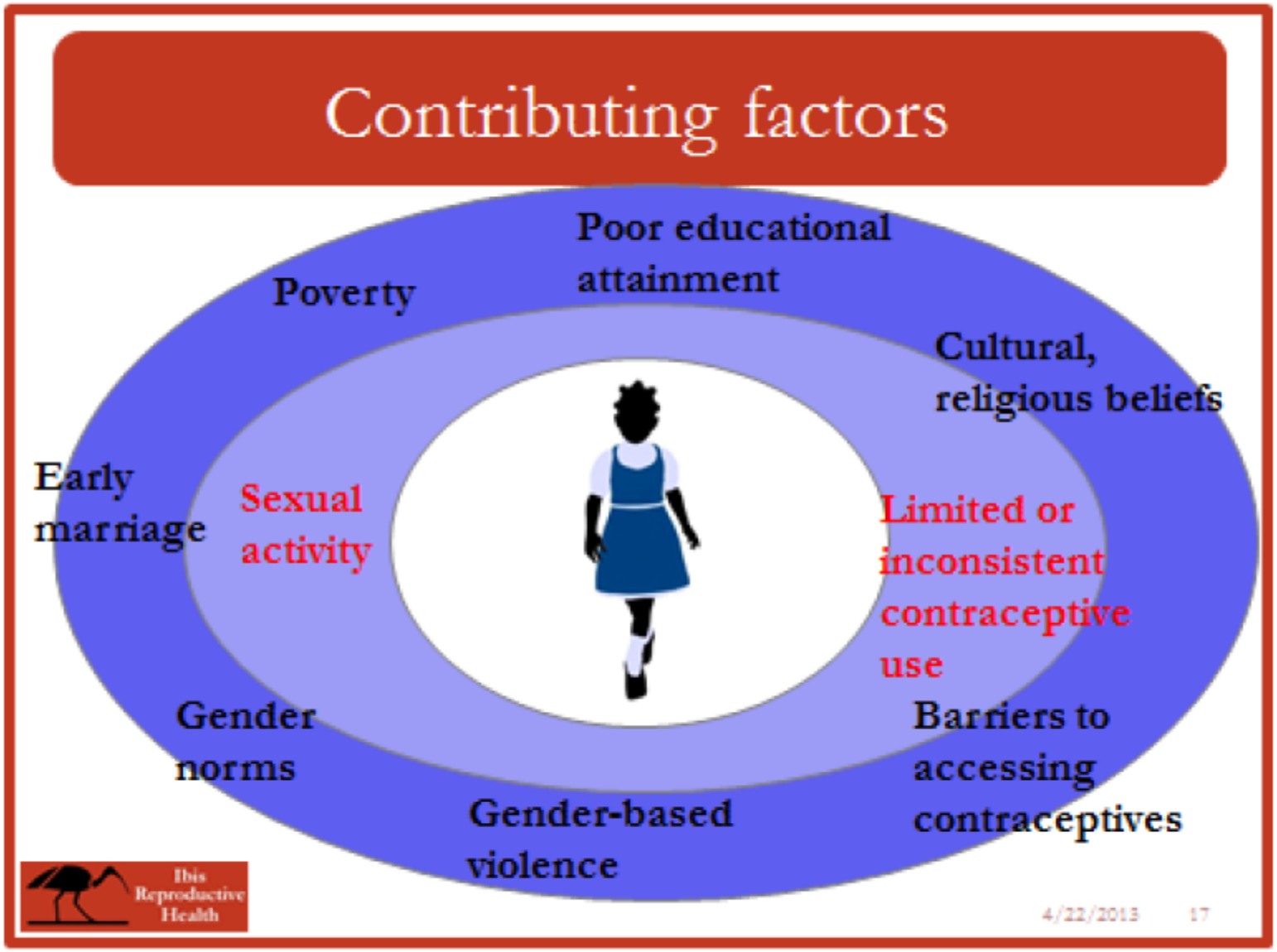
Factors Contributing to teenage pregnancy



Source: Flanagan et al, 2013, Teen pregnancy in South Africa: A literature review examining contributing factors and unique interventions

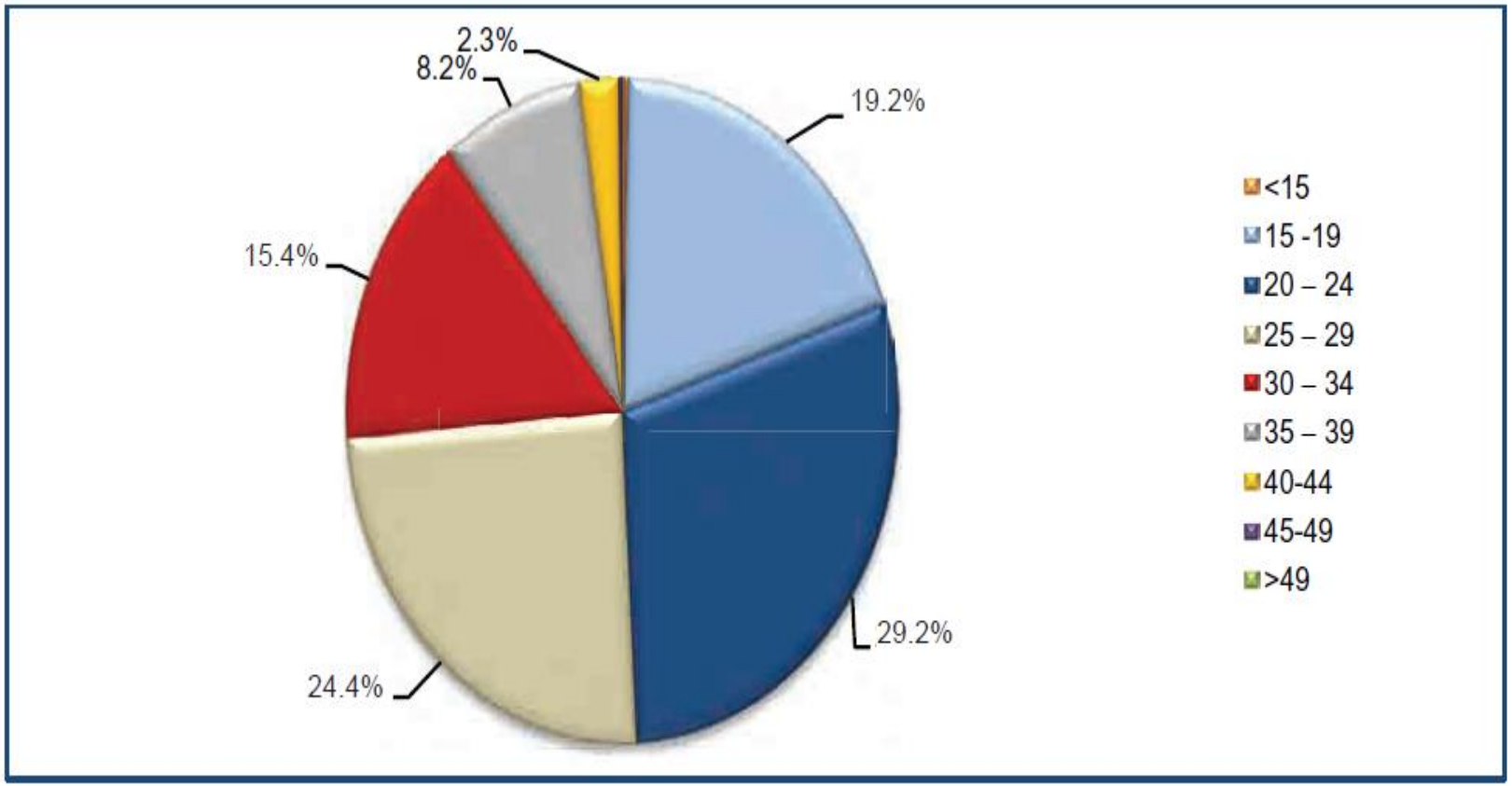


Figure 1: National age distribution of survey participants. Total recruited N = 34 260 during October month, 2012.

ANC Sentinel Survey 2012

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The law and adolescent sex

Children's act:

- Section 15: criminalises acts of sexual penetration by adults with children between the ages of 12 and 16 years, despite their consent
- Section 16 criminalises sexual penetration between consenting young people between the ages of 12–16 years
- Court case 2013: *Teddy bear clinic and partners vs Minister of Justice*: "Constitutional Court found that sections 15 and 16 of the Act are unconstitutional in that they infringe the rights of adolescents (12- to 16-year olds) to dignity and privacy, and further in that they violate the best-interests principle"

Children's Act 2010

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The law and contraception

- Adolescents 12 years by law should receive condoms at their request
- Other contraception:
  - at least 12 years of age and
  - proper medical advice is given
  - medical history is taken
  - appropriate examinations
  - ? Medical exclusions
- Right to confidentiality unless concern about physical or sexual abuse, or deliberate neglect

Children's Act 2010

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The law and HCT

- Able to consent to HIV testing if:
- > 12 years old
- < 12 years old and able to demonstrate sufficient maturity to understand benefit, risks and social implications
- Maturity assessment *(difficult!!!)*
  - Age
  - Knowledge
  - Views
  - Personal circumstances

Children's Act 2010

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Contraception use

- Gaps in the literature regarding pregnancy intentions and contraception
- US-based review article

  - 51 % PHIV+ adolescents use condoms
  - Injectables alone 21%
  - Condoms & injectables/oral 16%
  - Overall HIV+ more likely to consistently use contraception compared to HIV- (56% vs. 44%)
  - 83% pregnancies unintended

QA Karim et al:

- Contraception use 43.8% (6m); 51.6% (12m)
- Any STI symptoms 11.4% (6m); 9.7% (12m)

Carter et al. *AIDS PATIENT CARE and STDs. 2013*

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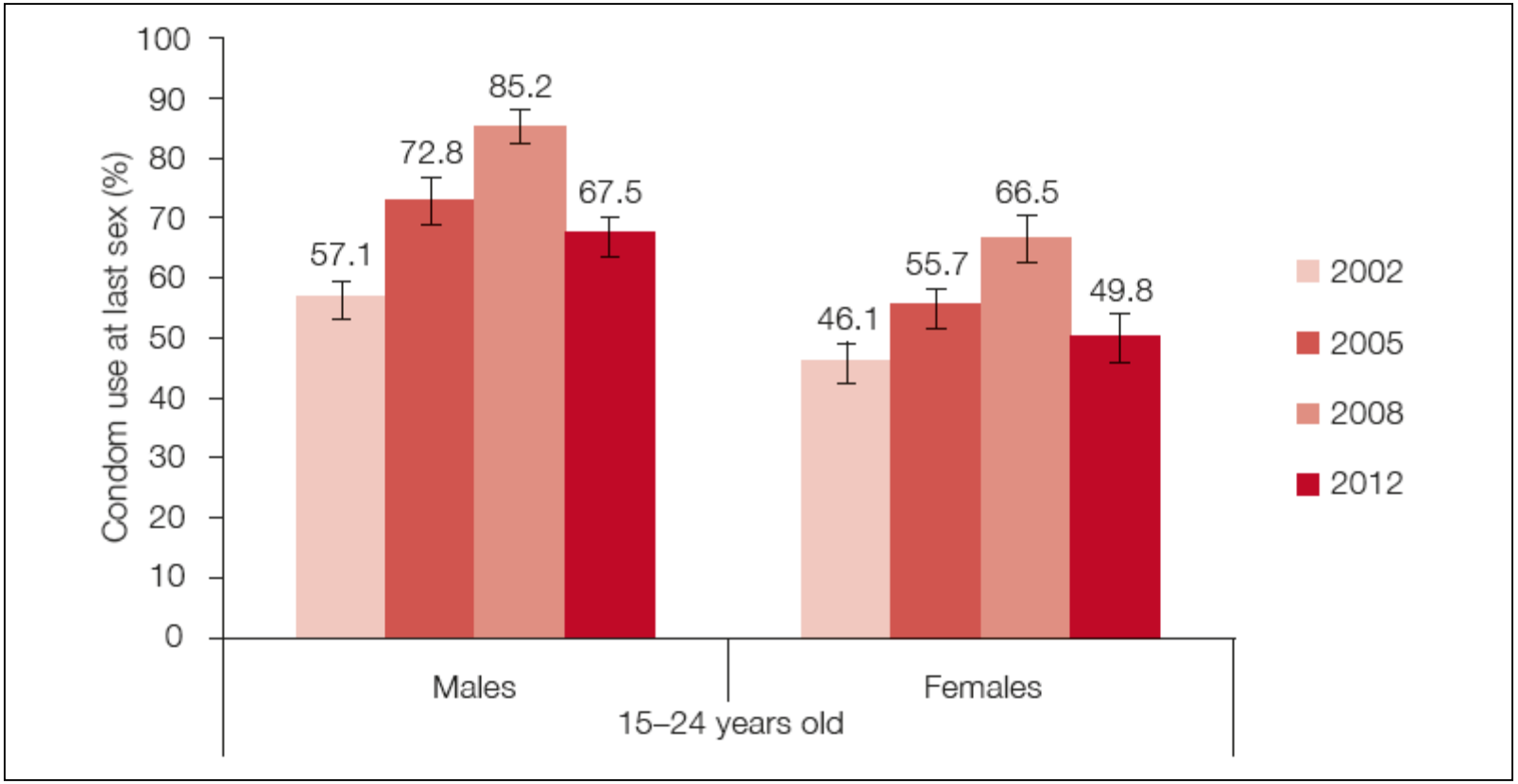
Condom use at last sex by age, sex



58.3% 15-24 year olds using condoms, highest percentage age-wise

HSRC Report 2012

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What are the barriers to accessing contraception?

- HEALTH CARE WORKER ATTITUDES
- Side effects especially weight gain and mood changes
- Fears of using IUD
- Drug-drug-interactions
- Stopping/irregular periods
- Misinformation or poor education regarding contraception
- Not integrated into HIV care (hospital-based clinics)

Contraceptive options in young women

- WHO:

MEC categories for contraceptive eligibility	
1	A condition for which there is no restriction for the use of the contraceptive method
2	A condition where the advantages of using the method generally outweigh the theoretical or proven risks
3	A condition where the theoretical or proven risks usually outweigh the advantages of using the method
4	A condition which represents an unacceptable health risk if the contraceptive method is used.

MEC= Medical Eligibility Criteria for Contraception

WHO 2014

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Summary of recommendations for adolescent contraception

Recommended contraceptive methods for young people:

- Abstinence
- Delay sexual debut
- Barrier method (strong reinforcement of condom use) with highly effective contraception:
  - combined hormonal contraception
  - progestogen-only injection
  - Cu IUD
  - LNG-IUS
  - progestogen-only implant
- Emergency contraception to be promoted and accessible in the event of unprotected intercourse, method misuse or failure

DoH Contraception Guidelines;
Adolescent Toolkit Wits RHI 2014

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20(b) Summary of options for contraception for adolescents living with HIV

Method:	Common side effects	Common contraindications *	Drug interactions – TB Rx	Drug interactions - ART	Prevention		Recommendation
					STI	HIV	
Male condom	None	None	None	None	✓	✓	Promote condom use in all ALHIV. Consistency, correct use and with confidence
Female Condom	None	None	None	None	✓	✓	Promote condom use in all ALHIV. Consistency, correct use and with confidence
COCs	Nausea, inter-menstrual bleeding, mild headaches, breast tenderness.	History of thrombosis, hypertension	**Rifampicin** - do not use together (WHO MEC 3)	**RTV-boosted PIs** - do not use together (WHO MEC 3) **NNRTIs** – generally can use, add condom (WHO MEC 2)	x	x	Client dependant - adherence essential. Can be used where adherence ensured. Combine with condom use
Injectable (DMPA/NET-EN)	Changes in menstruation (irregular, prolonged, heavy, amenorrhoea) and weight gain	Undiagnosed vaginal bleeding	**DMPA:** none. (WHO MEC 1) **NET-EN:** mild interaction with rifampicin. To add condom (WHO MEC 2)	**DMPA:** none. WHO MEC 1) **NET-EN**: mild interaction with PIs and NNRTIs. To add condom (WHO MEC 2)	x	x	Recent studies have shown that DMPA may increase HIV transmission risk (until further research, WHO recommends continued use; condom use is strongly recommended. (WHO MEC 1) Client independent contraception
CU IUD	Menstrual changes (bleeding may be heavier, longer and more cramps)	Current AIDS and unwell, current cervicitis/PID	None	None	x	x	Good, client -independent contraception. May be used as emergency contraception. Combine with condom use. Can be inserted if well (WHO MEC 2). Note: Unwell HIV positive – WHO MEC 3
LNG IUD	Irregular and infrequent bleeding initially with development of amenorrhoea later.	Current AIDS and unwell, current cervicitis/PID	None	None	x	x	Not currently available in the PHC setting. Good client -independent contraception. Cannot be used for emergency contraception. Combine with condom use Can be inserted if well (WHO MEC 2) *Note: Unwell HIV positive - WHO MEC 3*
Progestogen-only implants	Irregular bleeding and amenorrhoea, but less pronounced than with injectables	Undiagnosed vaginal bleeding	Mild interaction with rifampicin. To add condom (WHO MEC 2)	Mild interaction with PIs and NNRTIs. To add condom (WHO MEC 2)	x	x	Good client -independent contraception. Combine with condom use
Emergency contraceptive pills	Nausea, vomiting, headaches, fatigue, cycle irregularities	Incident occurred more than 120hrs ago	With Rifampicin. No dose adjustment recommended	With PIs. No dose adjustment recommended	x	x	All clients should be aware of the availability of this method. Consider emergency IUCD use where pill use is inappropriate

Adolescent toolkit Wits RHI 2014

Quick Reference Chart for the WHO Medical Eligibility Criteria for Contraceptive Use –

to initiate or continue use of combined oral contraceptives (COCs), depot-medroxyprogesterone acetate (DMPA), progestin-only implants, copper intrauterine device (Cu-IUD)

CONDITION		COC	DMPA	Implants	Cu-IUD
Pregnancy		NA	NA	NA	
Breastfeeding	Less than 6 weeks postpartum				NC
	6 weeks to < 6 months postpartum				
	6 months postpartum or more				
Postpartum (non-breastfeeding)	< 21 days				NC
	< 21 days with other risk factors for VTE*				
VTE = venous thromboembolism	≥ 21 to 42 days with other risk factors for VTE*				
	< 48 hours including immediate post-placental	NC	NC	NC	
	≥ 48 hours to less than 4 weeks				
	Puerperal sepsis				
Postabortion	Immediate post-septic				
Smoking	Age ≥ 35 years, < 15 cigarettes/day				
	Age ≥ 35 years, ≥ 15 cigarettes/day				
Multiple risk factors for cardiovascular disease					
Hypertension	History of (where BP cannot be evaluated)				
BP = blood pressure	BP is controlled and can be evaluated				
	Elevated BP (systolic 140 - 159 or diastolic 90 - 99)				
	Elevated BP (systolic ≥ 160 or diastolic ≥ 100)				
	Vascular disease				
Deep venous thrombosis (DVT) and pulmonary embolism (PE)	History of DVT/PE				
	Acute DVT/PE				
	DVT/PE, established on anticoagulant therapy				
	Major surgery with prolonged immobilization				
Known thrombogenic mutations					
Ischemic heart disease (current or history of) **or stroke** (history of)				I C	
Known hyperlipidemias					
Complicated valvular heart disease					
Systemic lupus erythematosus	Positive or unknown antiphospholipid antibodies				
	Severe thrombocytopenia		I C		I C
	Immunosuppressive treatment				I C
Headaches	Non-migrainous (mild or severe)0	I C			
	Migraine without aura (age < 35 years)	I C			
	Migraine without aura (age ≥ 35 years)	I C			
	Migraines with aura (at any age)		I C	I C	
Unexplained vaginal bleeding (prior to evaluation)					I C

CONDITION		COC	DMPA	Implants	Cu-IUD
Gestational trophoblastic disease	Regressing or undetectable β-hCG levels				
	Persistently elevated β-hCG levels or malignant disease				
Cancers	Cervical (awaiting treatment)				I C
	Endometrial				I C
	Ovarian				I C
Breast disease	Undiagnosed mass	**	**	**	
	Current cancer				
	Past w/ no evidence of current disease for 5 yrs				
Uterine distortion due to fibroids or anatomical abnormalities					
STIs/PID	Current purulent cervicitis, chlamydia, gonorrhea				I C
	Vaginitis				
	Current pelvic inflammatory disease (PID)				I C
	Other STIs (excluding HIV/hepatitis)				
	Increased risk of STIs				
	Very high individual risk of exposure to STIs				I C
Pelvic tuberculosis					I C
Diabetes	Nephropathy/retinopathy/neuropathy				
	Diabetes for > 20 years				
Symptomatic gall bladder disease (current or medically treated)					
Cholestasis (history of)	Related to pregnancy				
	Related to oral contraceptives				
Hepatitis	Acute or flare	I C			
	Chronic or client is a carrier				
Cirrhosis	Mild				
	Severe				
Liver tumors (hepatocellular adenoma and malignant hepatoma)					
HIV	High risk of HIV or HIV-infected				
AIDS	No antiretroviral therapy (ARV)				I C
	Clinically well on ARV therapy	see drug interactions			
	Not clinically well on ARV therapy	see drug interactions			I C
Drug interactions, including use of:	Nucleoside reverse transcriptase inhibitors				
	Non-nucleoside reverse transcriptase inhibitors				
	Ritonavir, ritonavir-boosted protease inhibitors				
	Rifampicin or rifabutin				
	Anticonvulsant therapy***				

Source: Adapted from Medical Eligibility Criteria for Contraceptive Use, 4th Edition. Geneva: World Health Organization, 2010.
Available: http://www.who.int/reproductivehealth/publications/family_planning/en/index.html

Category 1 There are no restrictions for use.

Category 2 Generally use; some follow-up may be needed.

Category 3 Usually not recommended; clinical judgment and continuing access to clinical services are required for use.

Category 4 The method should not be used.

Unlike previous versions of the MEC Quick Reference Chart, this version includes a complete list of all conditions classified as Category 3 and 4 by WHO.

I/C Initiation/Continuation: A woman may fall into either one category or another, depending on whether she is initiating or continuing to use a method. Where I/C is not marked, the category is the same for initiation and continuation.

NA Not Applicable: Women who are pregnant do not require contraception.

NC Not Classified: The condition is not part of the WHO classification for this method.

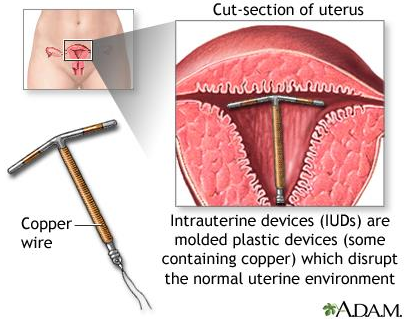
* Other risk factors for VTE include: previous VTE, thrombophilia, immobility, transfusion at delivery, BMI > 30 kg/m2, postpartum hemorrhage, immediately post-caesarean delivery, pre-eclampsia, and smoking.

** Evaluation of an undiagnosed mass should be pursued as soon as possible.

*** Anticonvulsants include: phenytoin, carbamazepine, barbiturates, primidone, topiramate, oxcarbazepine, and lamotrigine. Lamotrigine is a category 1 for implants.

Emergency contraception

- Need to inform adolescents that this is an option for them
- CU IUD: Inserted within five days of unprotected intercourse, most effective form of emergency contraception available
- Emergency contraceptive pill: one dose of levonorgestrel 1.5 mg, taken within five days (120 hours) of unprotected intercourse
- Opportunity for intervention: unprotected intercourse/misuse or failure contraception or sexual assault



Specific points…..

- Concern regarding EFV and Implanon-> may be up to 12 % reduction in efficacy
- PI and COC
- With CU IUD, increased bleeding, may be increased risk factor for transmission of HIV
- DMPA may increase risk of HIV acquisition
- WHO:

"Given the importance of this issue, women at high risk of HIV infection should be informed that progesterone-only injectables may or may not increase their risk of acquisition."

WHO 2014 updates

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Adolescents and PMTCT

- Horwood et al:
  - HIV prevalence, health care usage (ANC&PNC) women age 12-39 attending 6 EPI clinics in KZN
  - Adolescent women compared to over 20 years
  - Higher numbers adult women reported being HIV+; having a CD4 count done; receiving the result and access to PMTCT
  - Higher transmission rate in adolescent mothers: 10.8% vs 6.1%
  - Worrying: this despite adolescent mothers being as likely as adults to attend 4 clinic visits

  = SYSTEM FAILING YOUNG HIV+ MOTHERS AND THEIR CHILDREN

Potential impact of risky sexual behaviour

- Recent study PHIV+
  - 28% reported sexual intercourse; median age of coitarche of 14 years; 62% reported unprotected sexual intercourse, and only 33% of youth disclosed their HIV status to their partners
  - For those not sexually active at baseline ART non-adherence was associated with sexual debut
  - Genotypic resistance in the 42% of sexually active youth with viral loads ≥5,000 copies/mL, identifying 62%, 57%, 38%, and 22% to NRTIs, NNRTIs, PIs, and all 3 ARV classes, respectively
  - Concern for secondary transmission (horizontal and vertical) → multi-resistant HIV

Tassiopoulos *CID* 2013

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STI management

- Syndromic approach: WHO/local guidelines
- Opportunity for education regarding STI and prevention (including HIV)
- Opportunity for HIV testing
- Opportunity to offer contraception and re-enforce condom use
- Offer treatment of current sexual partner
- Need to handle sensitively

STI: Syndromic Approach

Males

- Male urethritis syndrome
- Genital ulcer syndrome
- Scrotal swelling/pain
- Balanitis/balanoposthitis (BAL)
- Bubo
- Genital warts
- Pubic lice

Females

- Vaginal discharge syndrome
- Candidiasis/bacterial vaginosis
- Lower abdominal pain
- Genital Ulcer Syndrome
- Bubo
- Genital warts
- Pubic lice

There is a significantly high prevalence of HSV-2 in the HIV positive, compared to HIV negative women, 89.1% vs. 42.5%;

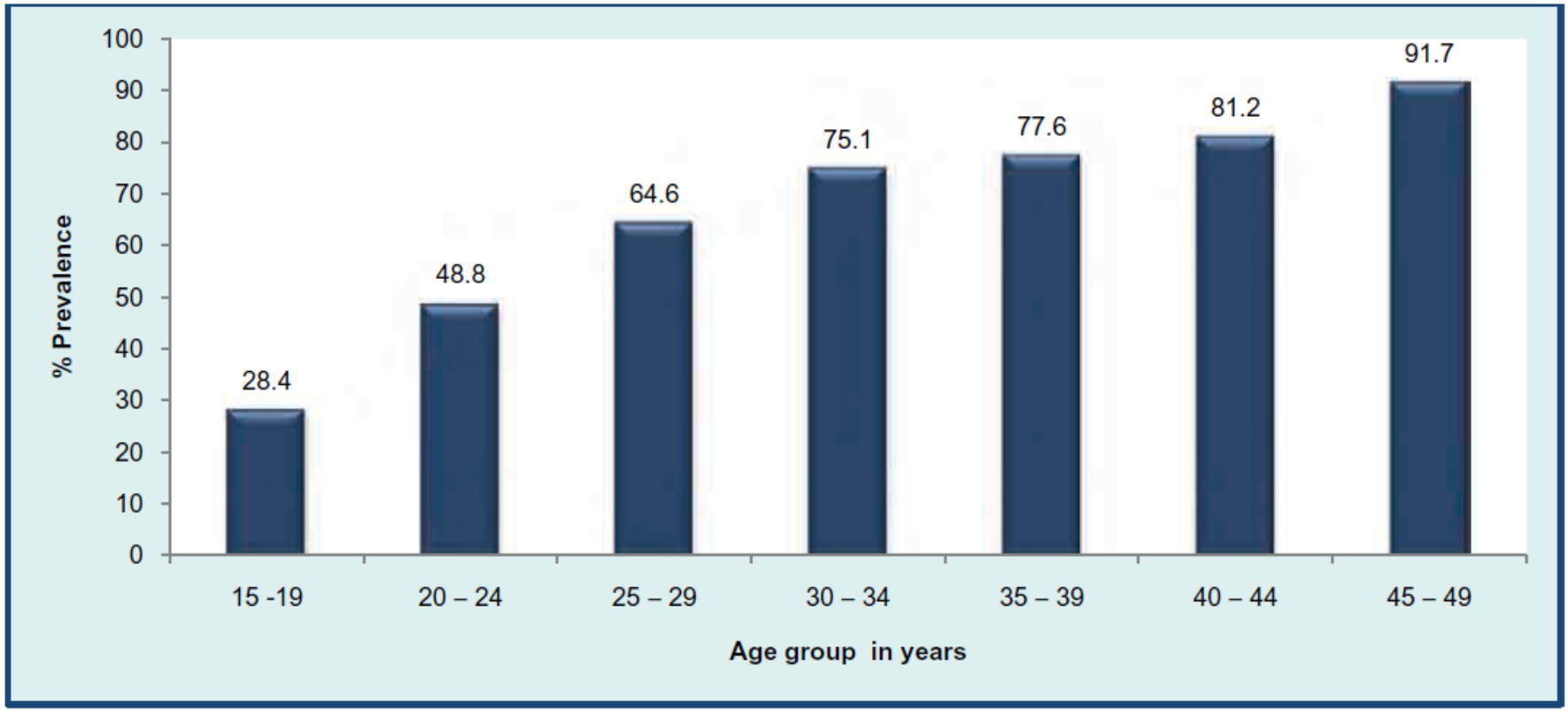

Figure 50: HSV-2 prevalence among antenatal women by age group, Gauteng, KwaZulu-Natal, Northern Cape and Western Cape, 2012. (*Source*: NDoH, 2013)

Pre-and post exposure prophylaxis

- PrEP studies have not included adolescents because of issues around consent

PEP:

- Offer post a sexual assault
- Offer to the partner of a discordant couple if burst condom or unprotected sex
- Follow PEP guidelines

Conclusions

- Adolescents are sexually active and need full access to SRH services
- This requires youth friendly services and the correct attitude from HCW
- Many contraceptive options available
- Recognise and treat STIs
- Beware the contradictions in the law!

Acknowledgements

- Dr Howard Manyonga
- Dr Candice Fick

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