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## Meeting the HIV Prevention Needs of Adolescent Girls and Young Women

South Africa Stakeholders Meeting  
on REACH, an open-label safety  
and adherence study of the  
dapivirine vaginal ring and oral PrEP

Tuesday 28 February 2017

Venue: Wits RHI Johannesburg



University of the Witwatersrand

**WITS RHI**



# Meeting the HIV Prevention Needs of Adolescent Girls and Young Women

## South Africa Stakeholders Meeting on REACH, an open-label safety and adherence study of the dapivirine vaginal ring and oral PrEP

Tuesday 28 February 2017

Wits Reproductive Health and HIV Institute • Johannesburg



- A friend asks you advice about wanting onto contraception
- What advice will you give?
- What would you recommend?
- What would you not recommend?
- Where will you refer them to?
- What is your all time favourite contraceptive method?

# SA contraception policy Policy and Guidelines

Two complementary documents:

- Expanded method mix
- Contraception and conception
- Contraception in the context of HIV
- Rights based, improved access



- National Contraception and Fertility Planning Policy and Service Delivery Guidelines Department of Health DOH 2012
- National Contraception Clinical Guidelines, Department of Health DOH 2012

What methods are available  
on the public sector (at  
government clinics)?

# Methods available in the pubic sector

- Short term methods:
  - Oral contraceptive pills
  - Injectable
    - Net En -2 months
    - DMPA – 3 months
- Long acting reversible contraceptives-
  - IUD
  - implants (implanon NXT)
- Permanent methods
  - tubal ligation
  - vasectomy
- Emergency contraception
  - Pill
  - IUD
- Male and female condoms



# Contraception prevalence

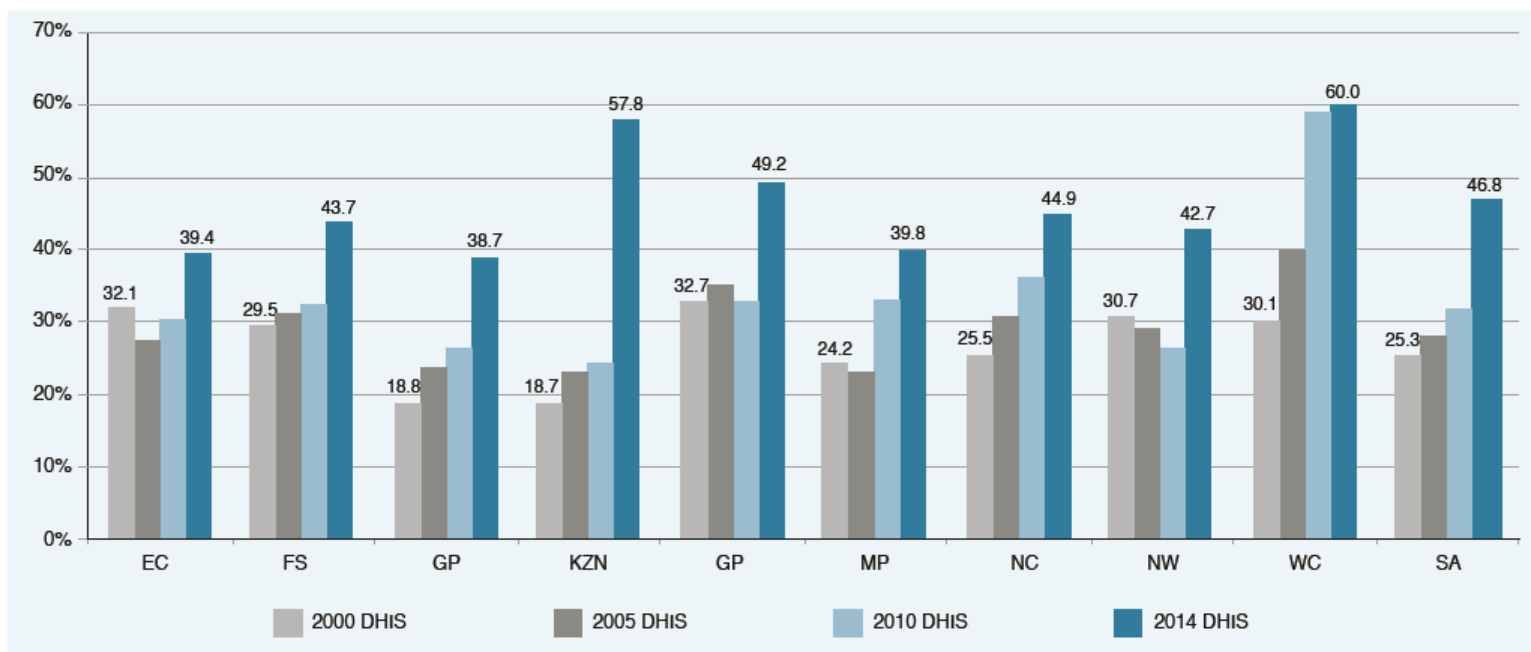
- The Contraceptive Prevalence Rate (CPR) is used to represent current use of contraception. It is defined as the proportion of women aged 15 to 49 who are 'currently' using a contraceptive method.
  - In South Africa: 63.7% in 2010
  - Similar CPR for Southern Africa in 2010 (62.2%)
  - Much higher than the estimated CPR for Africa as a whole (30.9%).
  - South Africa's CPR is lower than that of other upper-middle-income countries (Mexico 72.1%, Russia 78.6%, Brazil 79.5%)

Alkema 2013

# Couple year protection rate

The estimated **protection** provided by contraceptive services during a one-**year** period, based upon the volume of all contraceptives provided to clients during that period.

Couple-Years of Protection Rate for South Africa for financial years 2000, 2005, 2010 and 2014, by province



# Contraceptive data

## Contraception data elements comparing 2013/14 and 2014/15

Data element	2013/14	2014/15	% change
Contraceptive years equivalent	5 550 663	6 980 735	25.8
Female condoms distributed	13 254 328	21 099 517	59.2
IUCD inserted	41 817	39 168	-6.3
Male condoms distributed	506 431 299	712 387 234	40.7
Medroxyprogesterone	5 762 721	5 510 430	-4.4
Norethisterone enanthate	4 277 194	3 834 005	-10.4
Oral pill cycle	3 815 539	3 560 421	-6.7
Sterilisation female	31 551	32 074	1.7
Sterilisation male	1 120	877	-21.7
Sub-dermal implant inserted	0	175 948	100

Progestogen injectable contraceptives account for 49% - 90% of current contraceptive use nationally.

Injectable progestogens, depot medroxyprogesterone acetate (DMPA) is more commonly used than norethisterone enanthate (NET-EN).

# What about adolescents?

- Data in South Africa DHIS not disaggregated (separated by age)
- So what do we know?

# Do youth engage in risky sexual behaviours?

## Girls younger than 15 years old



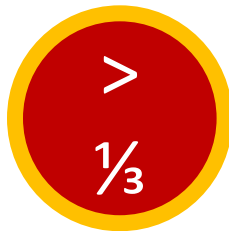
**In South Africa, the estimated number of new HIV infections per week among young women and girls (aged 15-24), is estimated at 2363.**

Data Source: UNAIDS 2013

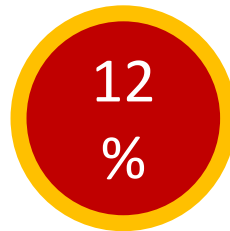
Source: National Youth Risk Behaviour Survey, 2012

# Youth are sexually active

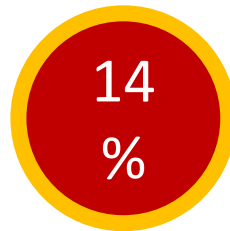
## Girls aged 10 – 19 years old



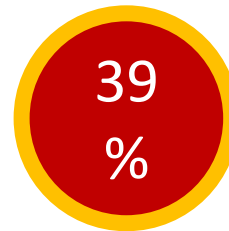
More than  
one third  
ever had sex



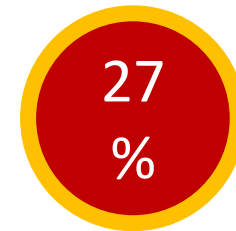
Had sex  
before age 14  
(1 in 10 girls)



Had their  
own child



Had an  
abortion at a  
hospital



Had an  
abortion at a  
traditional  
healer

**“We can not continue to pretend our adolescents are not sexually active”** - Dr. Aaron Motsoaledi, Minister of Health

Source: National Youth Risk Behaviour Survey, 2012

# At what age can youth seek SRH health services?

Circumstance	Lower age of consent (years)	Law
HIV test	12	Section 130 of the Children's Act 2005
TOP	None	Section 5 of the Choice on Termination of Pregnancy Act 92 of 1996
Contraception	12	Section 13 of the Children's Act 2005
Male circumcision	16	Section 12 of the Children's Act 2005
Sterilisation	18	The Sterilisation Act 44 of 1998 and the Sterilisation Amendment Act 3 of 2005

Source: <http://www.medicalprotection.org/southafrica/advice-booklets/consent-to-medical-treatment-in-south-africa-an-mps-guide/children-and-young-people>

# Teenage pregnancy

- Challenges to determine statistics:
  - According to Statistics SA, teenage pregnancies in South Africa are stabilising. In 2013, 6.6% of females between the ages of 15 and 19 years had been pregnant in the previous year. (Stats SA, 1 June 2016).
  - Approximately 30% of teenagers in South Africa report 'ever having been pregnant', the majority, unplanned (Jewkes, Morrell and Christofides, 2009; Lince, 2011; Flanagan et al, 2013;

# Teenage pregnancy

## Proportion of pregnant teens stable

Statistics South Africa's latest data on teenage pregnancies, shows a "fairly stable" trend, according to Dr Isabelle Schmidt, the agency's chief director of social statistics.

The agency asks: "Has any female household member been pregnant during the past 12 months?" in its annual general household survey. The percentages indicate the proportion of 15-19-year-olds who had been pregnant in the preceding year:

<b>2009</b>	<b>6.4%</b>
<b>2010</b>	<b>6.9%</b>
<b>2011</b>	<b>6.4%</b>
<b>2012</b>	<b>6.7%</b>
<b>2013</b>	<b>7.2%</b>
<b>2014</b>	<b>6.6%</b>

# Teenage pregnancy –alarming statistics

## Over 3 000 pupils pregnant in Mpumalanga

2015-04-12 16:16

Nkosinathi Sengwayo

Mbombela - Mpumalanga education authorities have confirmed that more than 3 000 pupils fell pregnant last year.

The department recorded a total of 3 196 pregnant schoolgirls in 2014.



## 21,000 pupils including 717 primary school girls, pregnant in 2013/14

Sapa | 2015-03-30 09:22:18.0



[Home](#) > [Daily News](#) > [News](#)

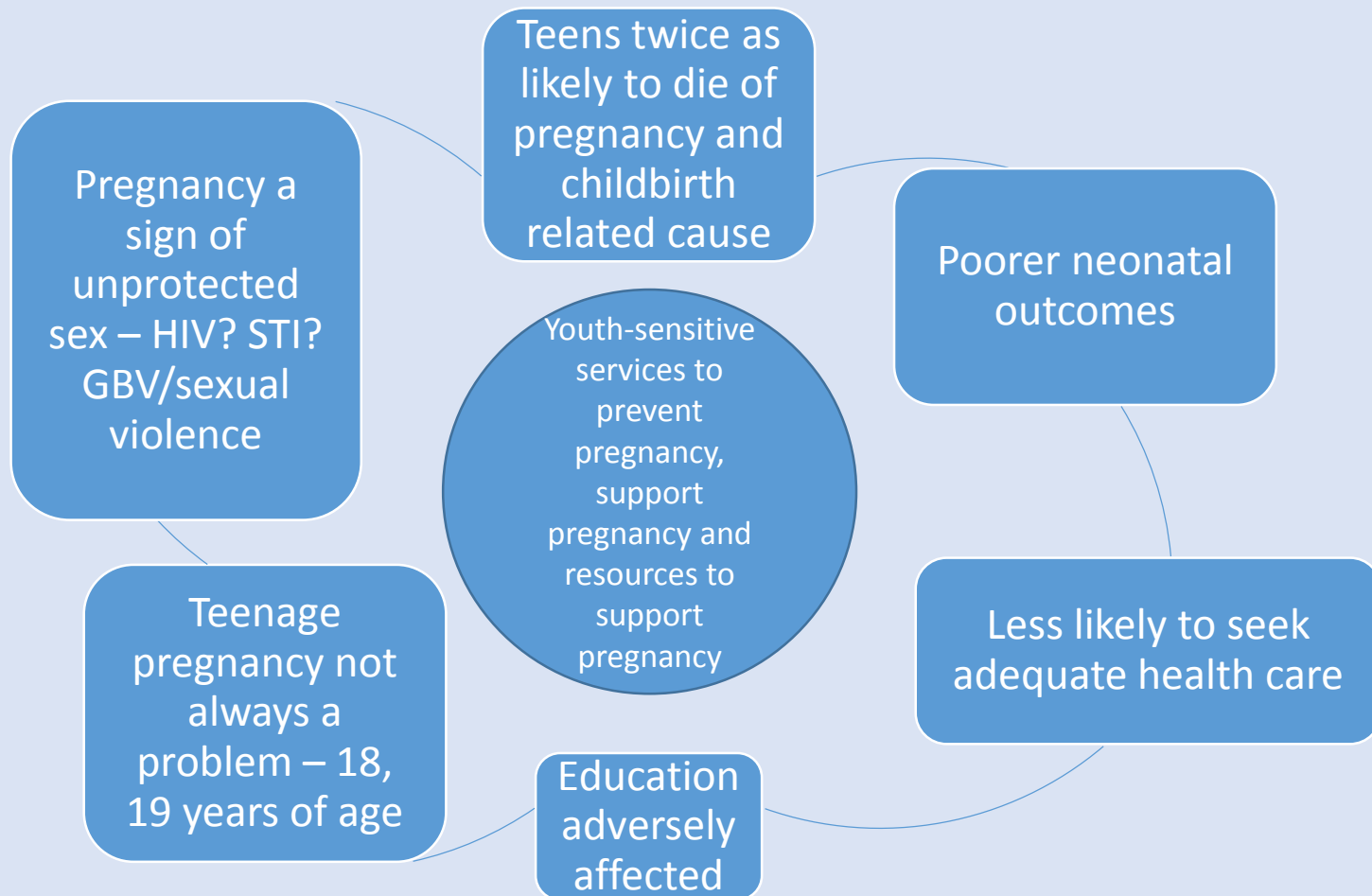
### 3000 KZN schoolgirls pregnant

**NEWS** / 26 March 2015, 10:02am

 SIHLE MLAMBO



# Whatever the data...



Of all teenage girls who fall pregnant only around a third stay in school during their pregnancy and return following childbirth (Willan 2013)

# Understanding the contraceptive methods offered in REACH

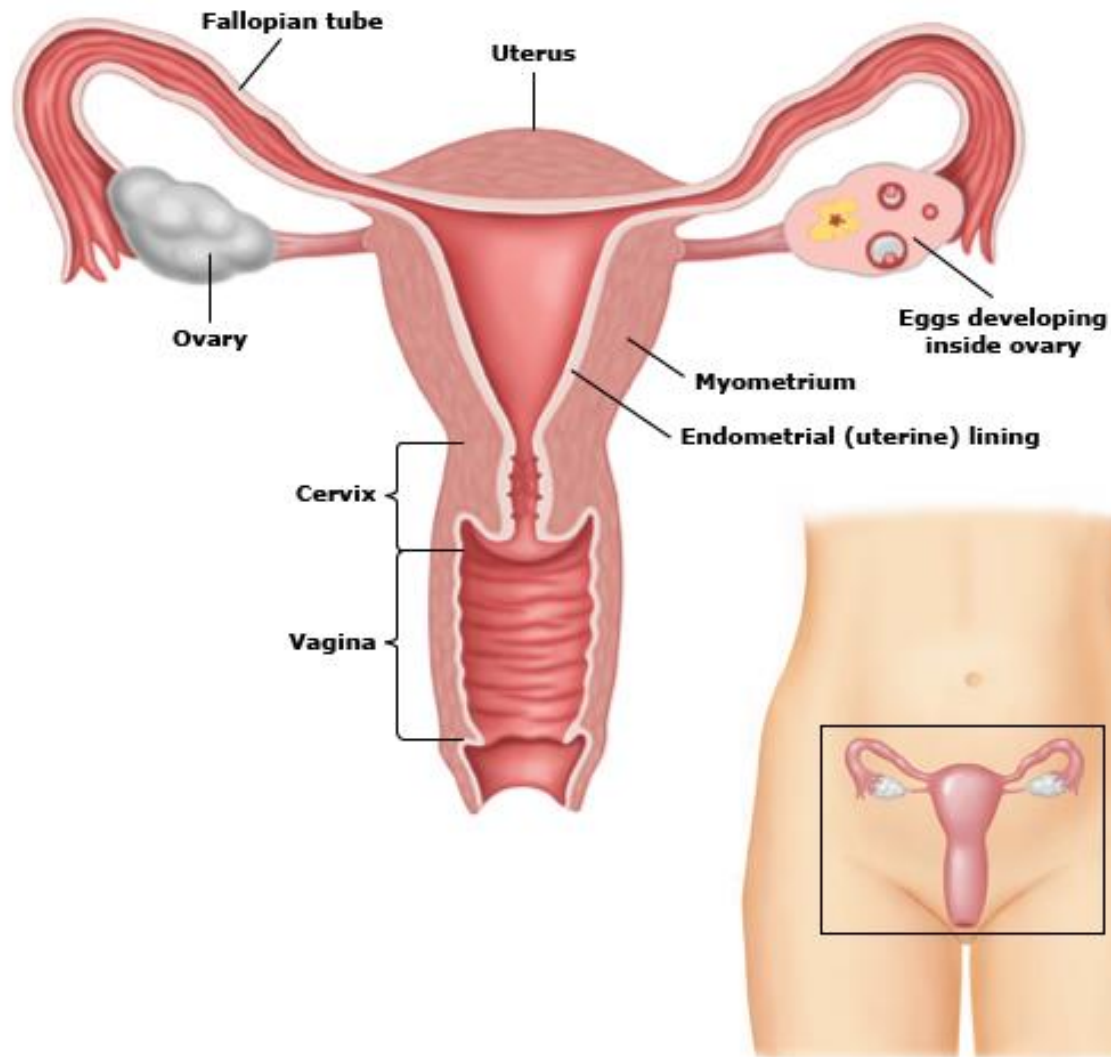
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# Understanding conception

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A quick review

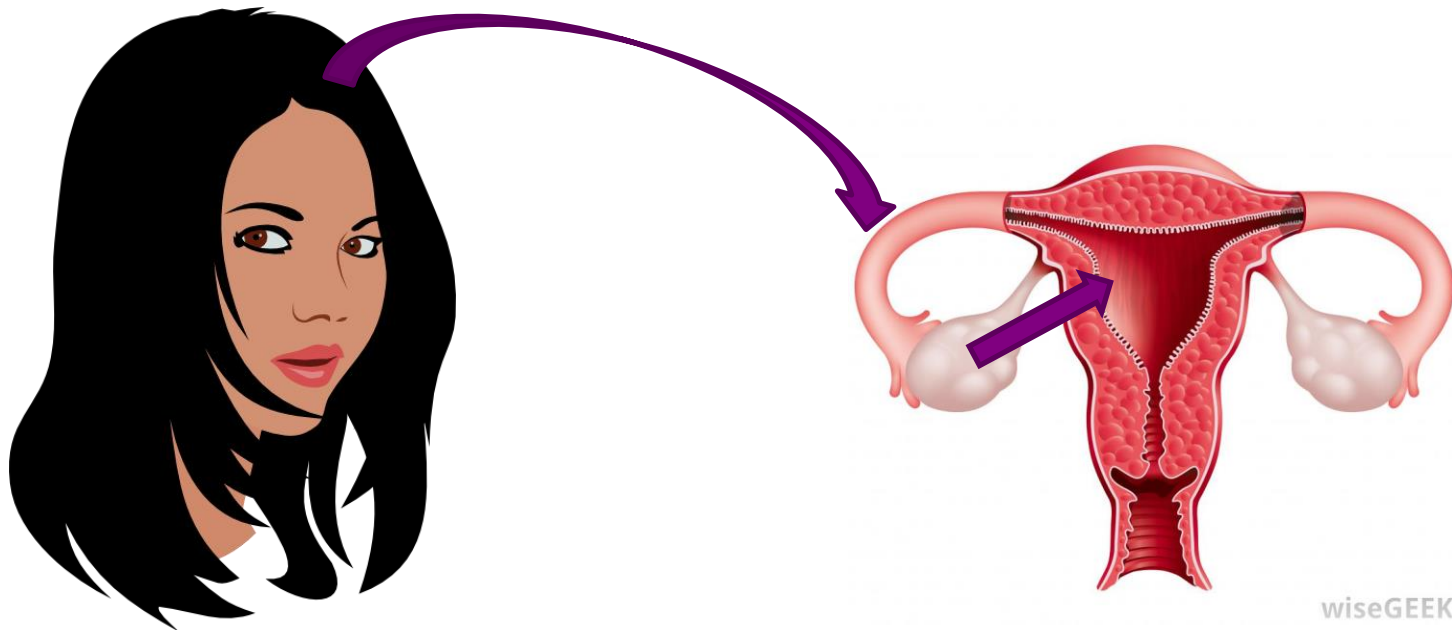
# Anatomy Overview



# Hormones!

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- Hormones regulate the menstrual cycle
  - Hormones in the brain, develop an egg in the ovary and signal hormones in the ovaries
  - Ovarian hormones affect the uterine lining



# Two most important hormones

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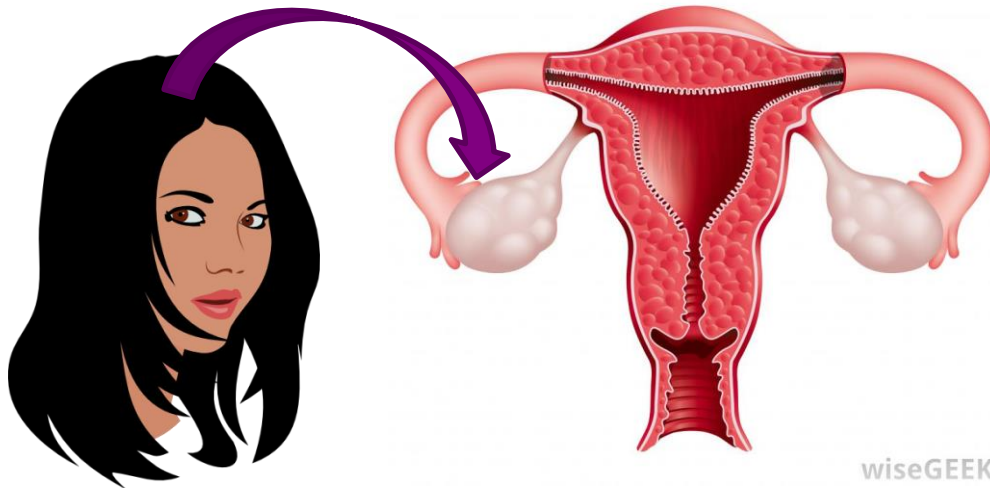
- Estrogen
- Like fertilizer
- Makes the lining of the uterus thick
- Progesterone
- Like a lawn mower
- Thins the lining of the uterus



# How conception occurs

## Step One

- Brain stimulates “follicle” (early egg) in the ovary
- Egg is released from the ovary (ovulation) and it is swept into the tube

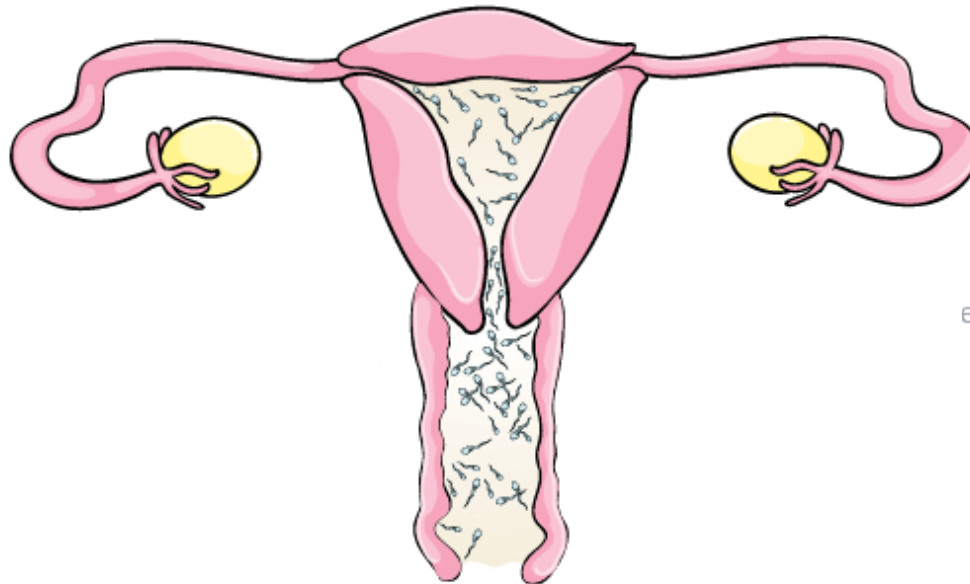


# How conception occurs

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## Step Two

- MEANWHILE...
- Sperm travel through the vagina and up into the uterus



# How conception occurs

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## Step Three

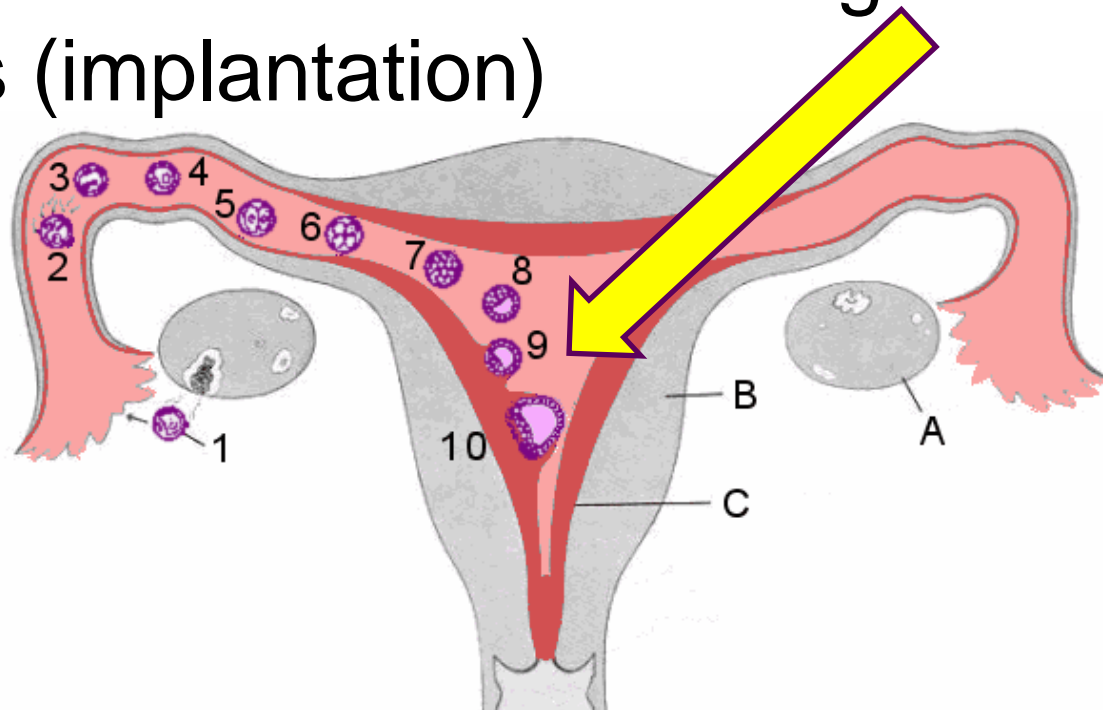
- Sperm and egg unite (fertilization)



# How conception occurs

## Step Four

- The united egg and sperm travel through the tube and land in the lining of the uterus (implantation)



# Nine Months Later

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# Contraception

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- Different ways to prevent pregnancy
  - Block the tubes (male /female sterilization)
  - Block the sperm (barrier methods)
  - Immobilise the sperm; make the sperm unviable (e.g IUD)
  - Thicken mucus so that sperm can't swim to the egg
  - Prevent ovulation
  - Make the uterine lining hostile to a developing pregnancy

# Overview of Methods

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# Comparing effectiveness and continuation rates

Table 2. Contraceptive effectiveness and continuation rates

Effectiveness group	Method	Pregnancies per 100 women in first year		Percentage of women continuing at one year
		As commonly used	Used correctly and consistently	
Highly effective, do not rely on client's ability to use them correctly	Vasectomy	0.15	0.1	100
	Female sterilisation	0.5	0.5	100
	CuT 380 IUD	0.8	0.6	78
	LNG-IUS	0.2	0.2	80
	Implants	0.05	0.05	82
	Progestogen-only pills (during breastfeeding)	1	0.5	
Effective as commonly used. Very effective when used correctly and consistently	Progestogen-only injectables	3	0.3	56
	Combined injectables	3	0.05	56
	LAM	2	0.5	
	Combined oral contraceptive (plus Evra® Patch, Nuva Ring)	8	0.3	68
	Progestogen-only pills (not breastfeeding)	> 8	> 0.3	68
Only somewhat effective as commonly used. Effective when used correctly and consistently	Male condoms	15	2	53
	Coitus interruptus	27	4	51
	Diaphragm with spermicide	16	6	57
	Fertility awareness-based methods	25	5	
	Female condoms	21	5	49
	No method	85	85	




Source: Adapted from Trussell J, 2007<sup>12</sup>

**NOTE:** Emergency contraceptive pills initiated within 120 hours reduces risk of pregnancy by at least 75%.

- More effective
- Higher continuity rates
- Do not rely on client's ability to use correctly
- Do not require many trips to clinic, long waits in queues, transport expenses

# Comparing effectiveness and continuation rates

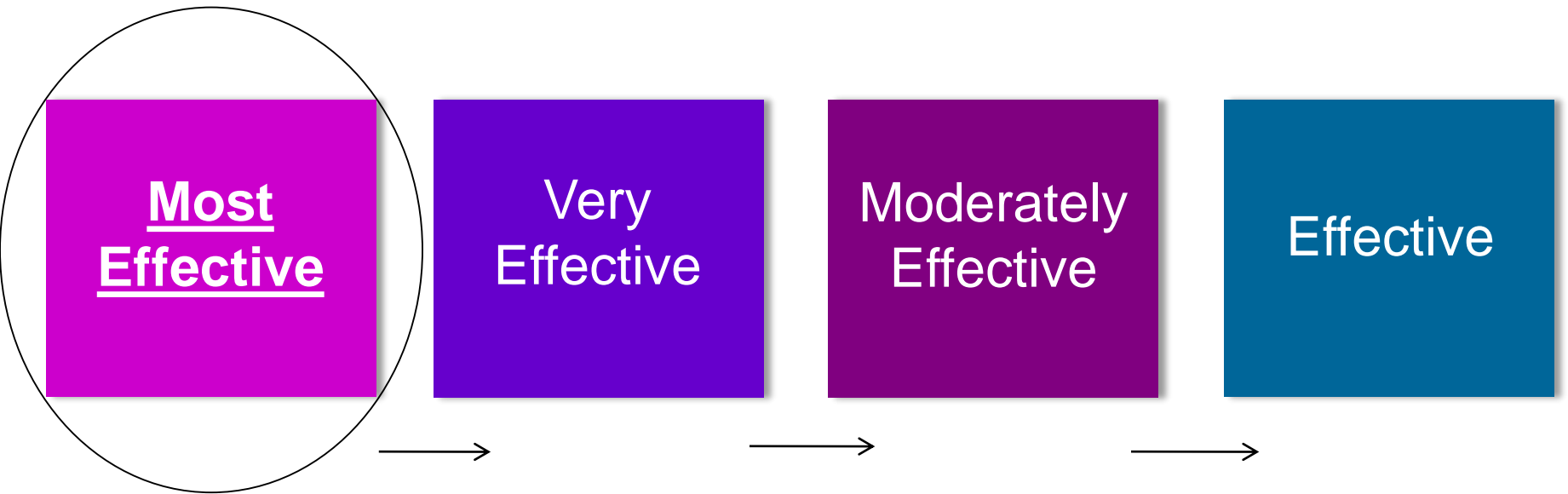
## Contraceptive effectiveness with perfect and typical use

Method	If method is used consistently and correctly ( <i>perfect use</i> ):	If method is occasionally used incorrectly or not used ( <i>typical use</i> ):
Implants	less than 	less than 
IUD	less than 	less than 
Male and Female Sterilization	less than 	less than 
Injectables	less than 	
Pills	less than 	
Male condoms		
Standard Days Method		
Female condoms		
Withdrawal		

If 100 women use a method for one year, how many will become pregnant?

# Current Contraceptive Options in REACH

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# Long-Acting Reversible Contraception

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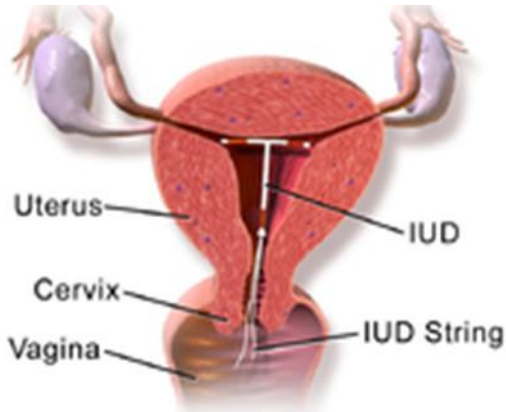
Most  
Effective

## Long Acting Reversible Contraception (LARC)

- The MOST effective contraception that is NOT permanent
- LARC methods include
  - IUCD
  - Implant
- The World Health Organization (WHO) supports promoting LARC use amongst adolescents because LARCs are SAFE and EFFECTIVE

# IUCD- Copper

**Most  
Effective**



Intrauterine Device (IUD)

## Intrauterine Contraceptive Device

- ❑ Made of flexible plastic
- ❑ Releases copper ions that are toxic to sperm
- ❑ No hormones
- ❑ Inserted in the clinic in 5 minutes
- ❑ May have spotting or cramping the first few months
- ❑ Periods may be longer (+1-2 days) and may have more cramps
- ❑ Effective for 10 years
- ❑ Once the IUCD is removed, return to fertility is immediate

Failure rate <1%

# Subdermal Implant Implanon NXT

Most  
Effective

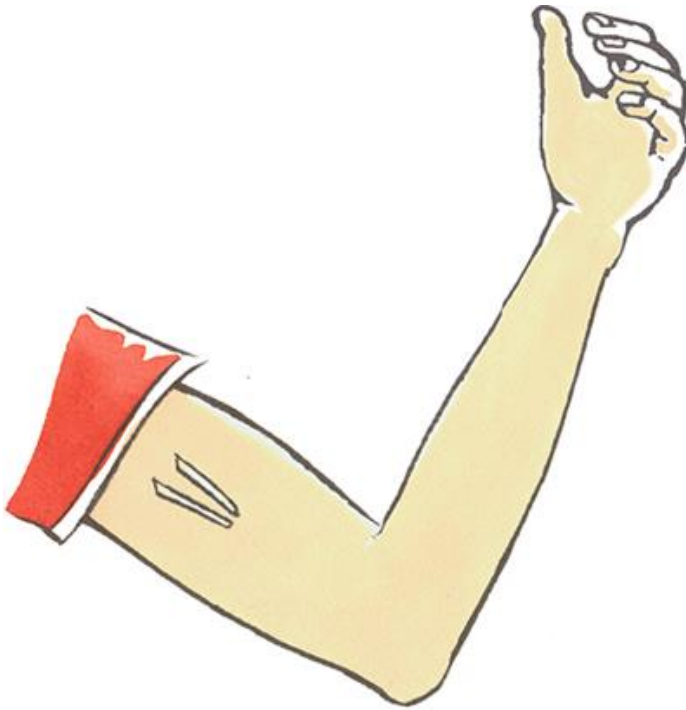


- ❑ Progestin medication
- ❑ Single plastic rod placed under the skin
- ❑ Releases a hormone
- ❑ Works for 3 years
- ❑ Thickens mucus, prevents ovulation, and alters the lining of the uterus
- ❑ Takes 5 minutes to insert in the clinic
- ❑ May have less bleeding compared to regular periods
- ❑ May have unpredictable bleeding
- ❑ Weight gain (less than 3 kg on average)
- ❑ Return to fertility is immediate

Failure rate <1%

# Jadelle Implant

Most  
Effective

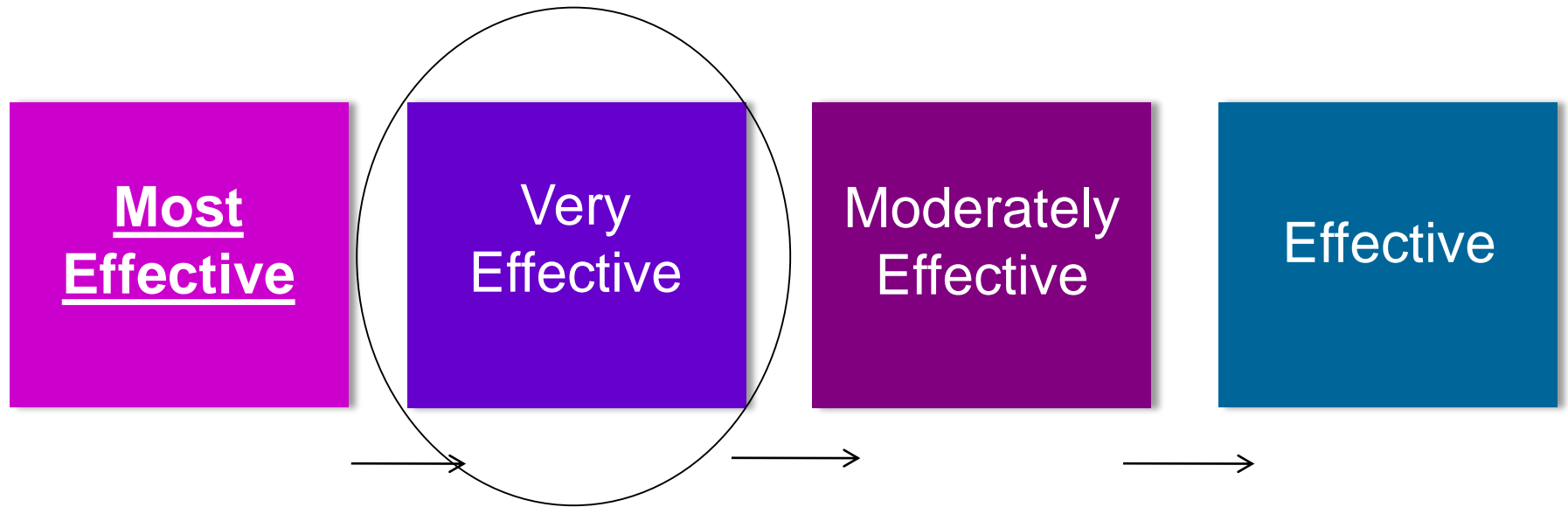


- Progestin medication
- 2 plastic rods inserted under the skin
- Releases a different hormone than Implanon
- Works for 5 years
- Thickens mucus, prevents ovulation, alters the lining of the uterus
- 5 minutes to insert
- Similar side effects as Implanon NXT (the 3 year method available at public health clinics in SA), but can be less
- Return to fertility is immediate

Failure rate <1%

# Current Contraceptive Options in REACH

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# Injectable- Depo (DMPA)

Very  
Effective



Failure rate= 3%

- Progestin medication
- Injection every 12 weeks
- Prevents ovulation
- May have less amount of bleeding compared to regular periods
- Unpredictable bleeding or skipped periods or no periods
- Some women gain weight (average of 1-2 kg a year, but other factors influence this)
- Once discontinued, return to fertility is typically several months but can be as long as a year



# DMPA and HIV

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- Some studies suggest that DMPA may increase a woman's risk of getting HIV through sex
- WHO reviewed the studies and concluded that there was not enough data to advise against using the method; however, WHO advise women using DMPA be counseled about condom use
- The ECHO study is designed to answer the question of whether DMPA increases a woman's risk of getting HIV

# Injectable- Net-En

Very  
Effective



- Progestin medication
- Injection every 8 weeks
- A different hormone from DMPA
- Also prevents ovulation
- Some women gain weight (average of 1-2 kg a year, but other factors influence this)
- Once discontinued, return to fertility is typically several months, less than DMPA

Failure rate= 3%

# (combined) Oral Contraceptive Pills

Very  
Effective

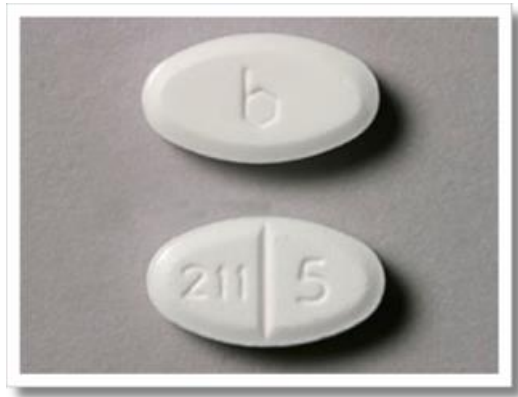


- ❑ Contain estrogen & progestin
- ❑ Must take a pill DAILY
- ❑ Inhibits ovulation
- ❑ Periods may be lighter (but still be regular)
- ❑ Nausea or headache
- ❑ Breast tenderness
- ❑ Decreased sexual desire
- ❑ After discontinuation, return to fertility takes about 1 month

Failure rate= 8%

Very  
Effective

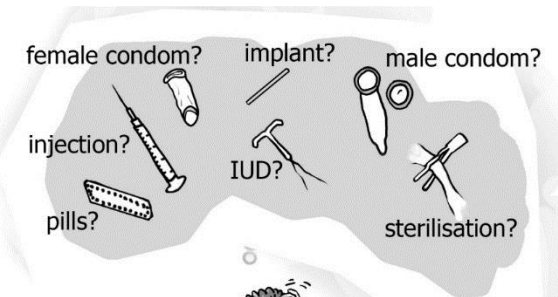
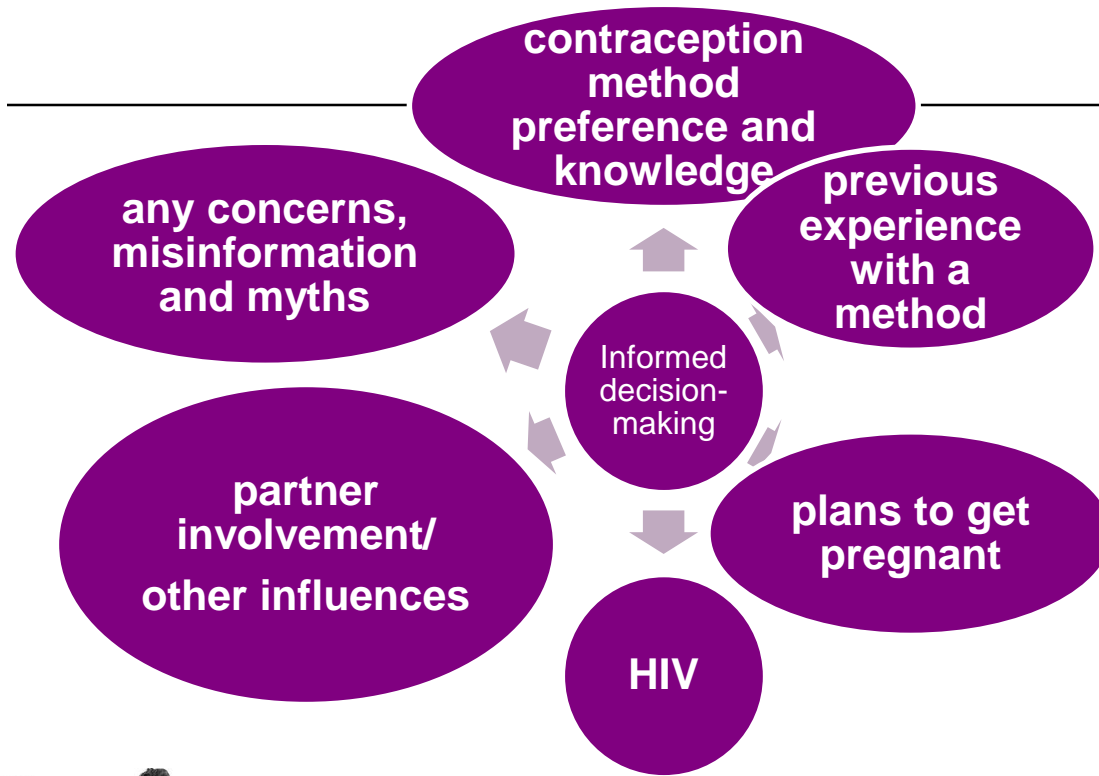
# Progestin Only Contraceptive Pills



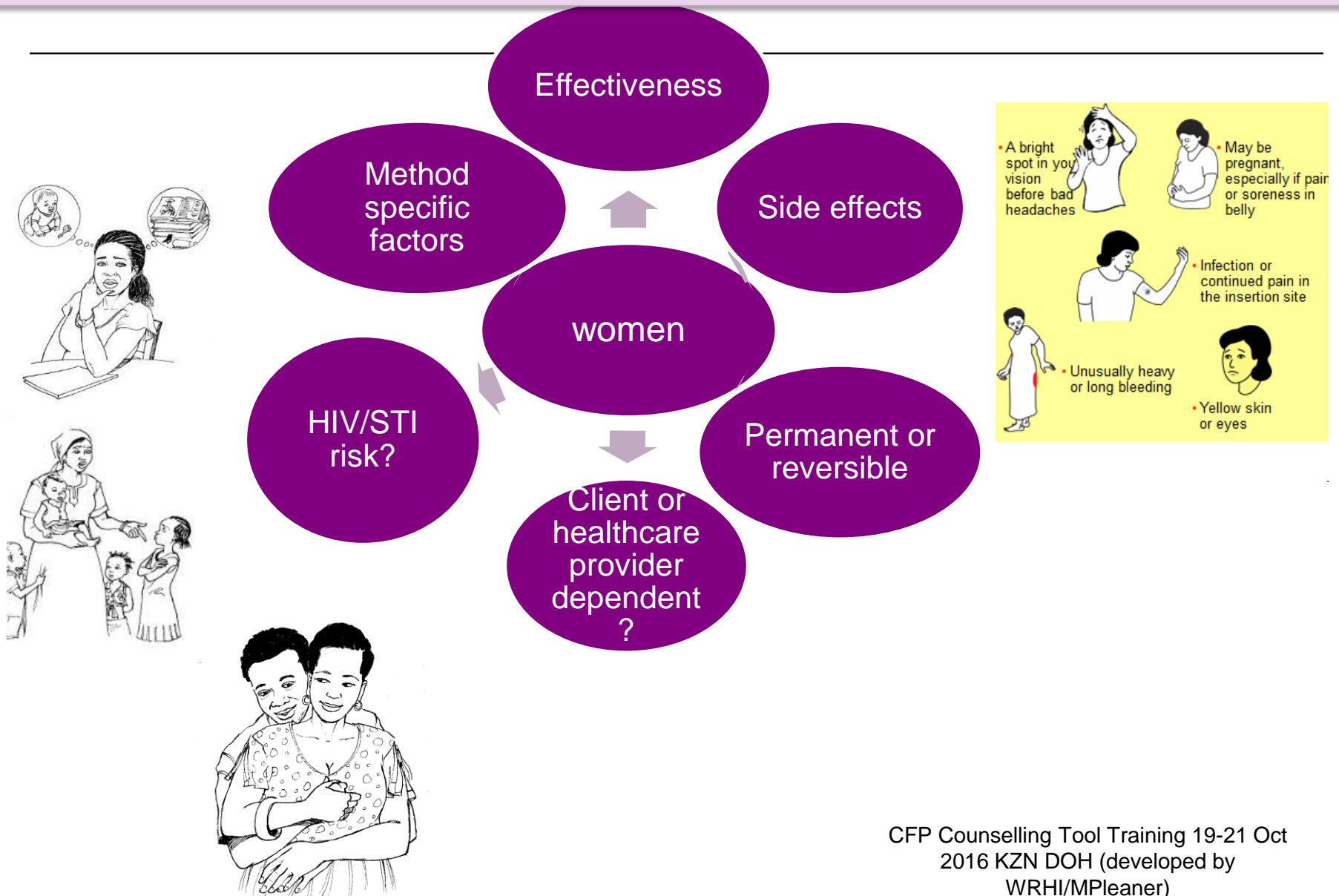
- Progestin hormone
- Must take at the same time every day
- Thickens mucus, prevents ovulation and alters the lining of the uterus
- After discontinuation, return to fertility takes about 1 month

Failure rate= 3%

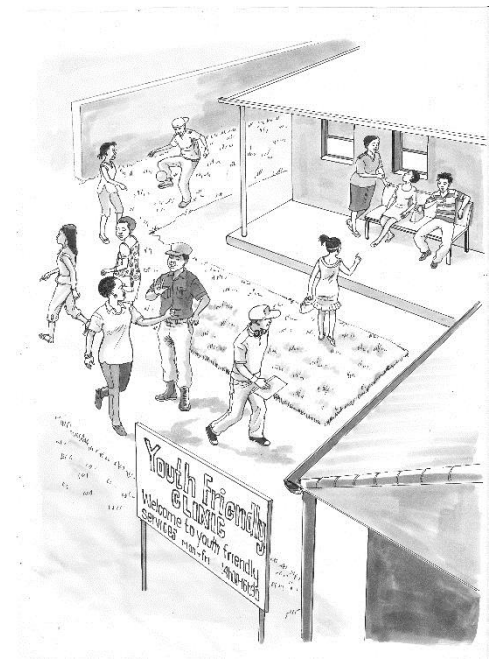
# Whatever the method: informed decision-making and counselling important



# Whatever the method: informed decision-making and counselling important



# Whatever the method: youth friendly services need to frame provision



Thank you



# Questions and Discussion

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# References

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## GBV

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- <http://www.sajog.org.za/index.php/SAJOG/article/view/504/280>>. Date accessed: 27 Feb. 2017. doi:10.7196/sajog.504.

# A word about ECHO

# Why do we need the ECHO Study?

- For over 25 years, the world has lived with the uncertainty about whether or not use of hormonal contraceptives increases HIV risk.
- ECHO aims to answer this critical public health question of the possible risks (HIV acquisition) and benefits (pregnancy prevention) of the three commonly-used, effective contraceptive methods among women who desire contraception.

# ECHO Study Goal:

- To answer the public health question of the relative **risks** (HIV acquisition) and **benefits** (pregnancy prevention) of 3 commonly-used, highly effective contraceptive methods among women who desire contraception.

# ECHO Contraceptive Methods

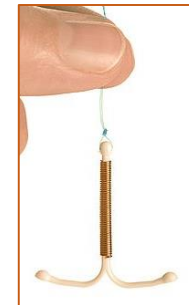
## DMPA

- Most commonly used reversible contraception in Africa
- Highly effective when used consistently (0.2% failure rate)
- Easy to administer, can be used covertly



## Jadelle implant

- Highly effective and user-independent
- Failure rates of <1% for both perfect and typical use



## Copper IUD

- Extremely safe, non-hormonal, highly effective, and reversible
- Approved for 10 years of use
- Failure rate of <1% in both perfect and typical use if inserted properly



# Study Setting – All 12 sites activated

## Kenya

- KEMRI/Lumumba

## Swaziland

- FLAS ICAP

## Zambia

- UNC Kamwala

## South Africa (9 sites)

- Aurum
- ECCRU
- Emavundleni
- Madibeng
- Match Commercial City
- Match Edendale
- Qhakaza Mboodo
- Setchaba
- WRHI



# Who can participate in the ECHO study

Enrol 7800 women who are:

- Sexually active women 16-35 years old
- HIV negative and willing to be tested
- Seeking effective contraception
- Willing to be randomised to any of the three contraceptives being studied
- Willing to give consent to participate

