

# Sexual Health



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Lecturer UNSW, October 2007

# Sexual Health- definitions and indicators

- WHO definition

*“Sexual health requires a positive and respectful approach to sexuality and sexual relationships, as well as the possibility of having pleasurable and safe sexual experiences, free of coercion, discrimination and violence. For sexual health to be maintained, the sexual health of all persons must be respected, protected and fulfilled”*

# Influences in Adolescence

- **Parents**
- **Religion/Philosophy**
- **Peers**
  - Important source of information about sex
  - Girls more likely to engage in sex if peer group sanctioned
  - More likely to practice safer sex if discussed with peers
- **Media**
  - Poorly studied- content analysis shows depiction of sex abundant and usually depicted as pleasurable and risk free
  - Some US surveys have shown that sexual health topics are the most frequently searched topics for adolescents on the internet
- **School**
  - Main source of sexual health information for Australian students
  - US and Australian studies have indicated that school “connectedness” and a whole school approach to sexual education reduced risk behavior including early sexual debut
- **Health Workers**

# National Survey of Secondary Students and Sexual Health

- Survey of 2400 young people in Yrs 10 and 12 all States and Territories from government, independent and Catholic schools (55% F)
- Some findings
  - Good knowledge about HIV but poor knowledge of other STIs
  - Most were sexually active in some way
  - One third of year 10 and just over half of year 12 students had experienced penetrative sex
  - 2% of encounters were same sex
  - Nearly 40% Y10 and 60% Y12 had given or received oral sex
  - A quarter reported unwanted sex
  - Most reported consistent condom use-65% Y10, 51% Y12

# Factors associated with inconsistent Condom Use

- Low levels of perceived risk-eg long term relationship, other contraception
- Negative expectations of condom use
- Low levels of confidence /assertiveness /negotiation skills
- Alcohol and drug use associated with sexual activity
- Availability of condoms

Donald M et al. J Adolesc Health 1994;15(6):503-10

# Factors leading to STI risk in Young People

- **Biological factors-** genital tract anatomy, trauma
- **Psychological factors**
  - Maturity and self esteem
  - Depression
  - Difficult family and peer circumstances
  - Impulsiveness
- **Social and Cultural Practices**
  - Acceptance of sexual activity in peer group
  - Disadvantaged groups
  - Access to services and information
- **Sexual abuse and sexual assault**
- **Those at particular risk include young women, same sex attracted youth, disadvantaged youth and Aboriginal and TSI young people**

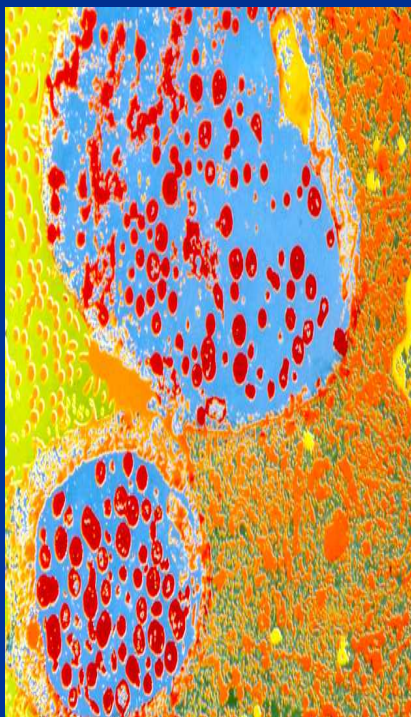
# Same-sex attracted Youth



- 2004 National survey of same sex attracted youth in Australia <sup>1</sup>
  - Higher levels of psychosocial distress reported by same-sex attracted youth
    - 44% reported verbal abuse and 16% physical assault on the basis of their sexuality
    - Higher use of legal and illegal drugs ( injected drug use 3-4 times higher)
    - Higher rates of self-harm and suicide
    - More likely to have had an STI- (boys 10 x more likely and girls 4 x more likely)
- 1.Hillier et al-Writing themselves in*

# STIs- Chlamydia

- Fastest growing STI among young Australians-notifications increasing - 20,026 in 2001 to 30,222 by end of 2003 (no break up by age)
- 90% males and 70% females are asymptomatic
- Women at particular risk of later problems- Second infection has even greater consequences because antibody response to chlamydial proteins leads to further tubal damage
- Antibodies to Chlamydia among Australian women attending infertility clinics are 65-85% compared with 3-37% in general population <sup>1, 2</sup>

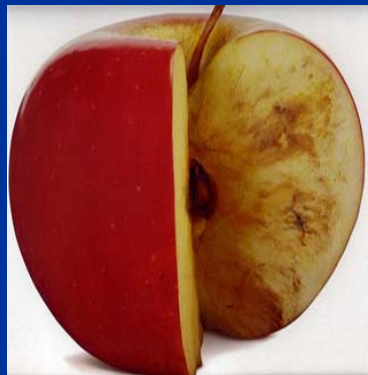


1. Garland S et al *Aust NZJ O&G*, 1990; 30: 83-6

2. Hawes LA et al, *MJA* 1986; 145: 497-9

# Testing for Chlamydia- Provisional recommendations

- In one USA trial, targeted chlamydial screening reduced the incidence of PID by 66%<sup>1</sup> but still no cohesive Australian Sexual Health strategy.....



- 85% of those infected will be detected by :
  - Testing of all women under 25 years of age whenever they attend medical service - particularly if multiple partners or recent change of partner
  - Testing those with symptoms -discharge, dysuria, pelvic pain, irregular bleeding, secondary dysmenorrhoea
  - Testing those with another STI
  - Testing those whose sexual partner/s has symptoms

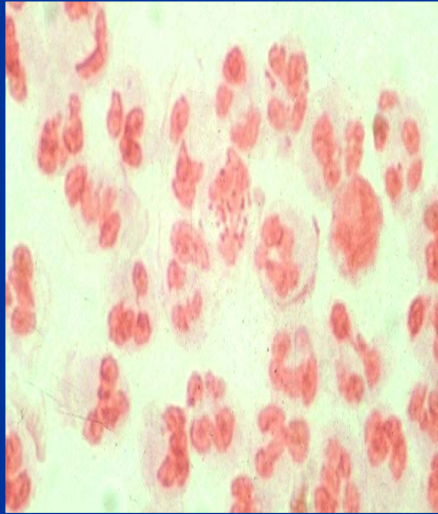
1. Scholes D et al NEJM 1996,334: 1362-6

# Testing for Chlamydia

- **Women**
  - Cervical swab ( collected by health worker)
  - Vaginal swab ( collected by health worker or self-collected)
  - Urine test
- **Male**
  - Urine test
- Mailed-in testing trialled in several countries
- Treatment – single dose antibiotic in uncomplicated cases

# STIs- Gonorrhoea

- Much less common than chlamydia but increasing-males more than females
- In non-indigenous populations most notifications are in homosexually active men
- More common in indigenous communities - the most recent notification rates in NT, SA and WA- 70 times higher than for non-indigenous Australians
- Treatment-single dose antibiotic by injection

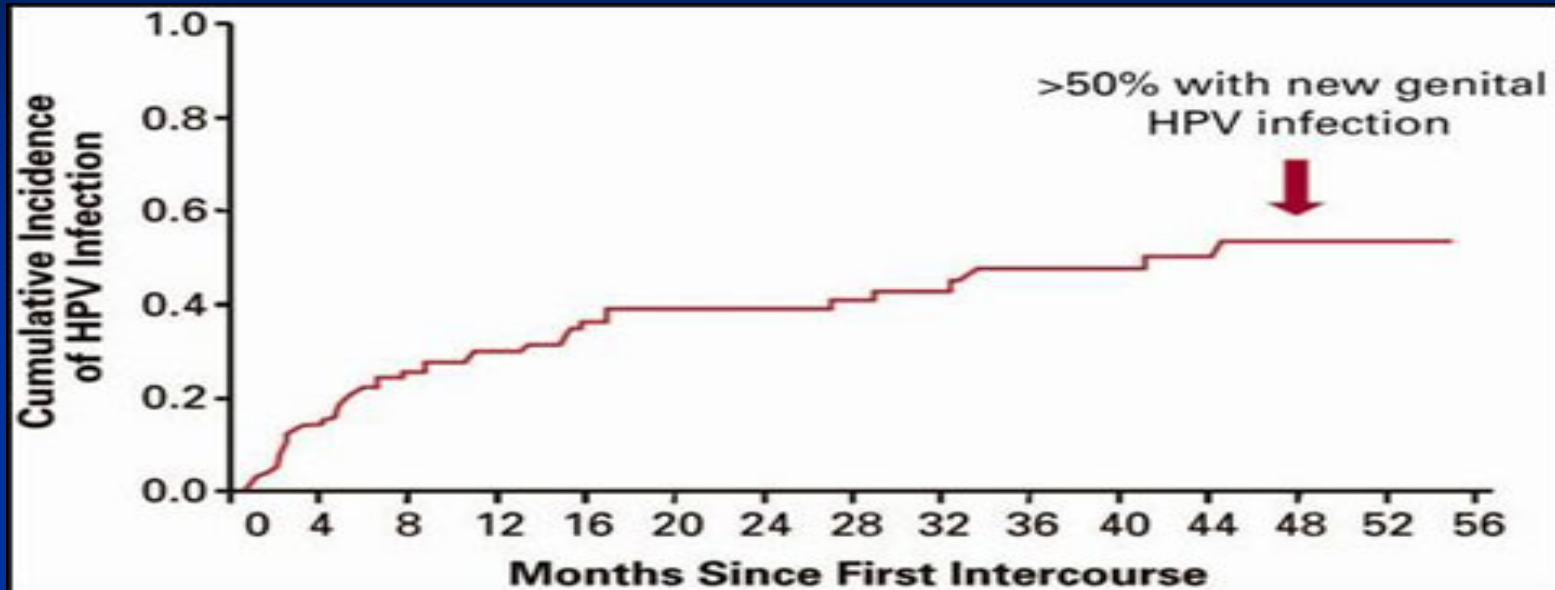


# STIs-Human Papilloma Virus



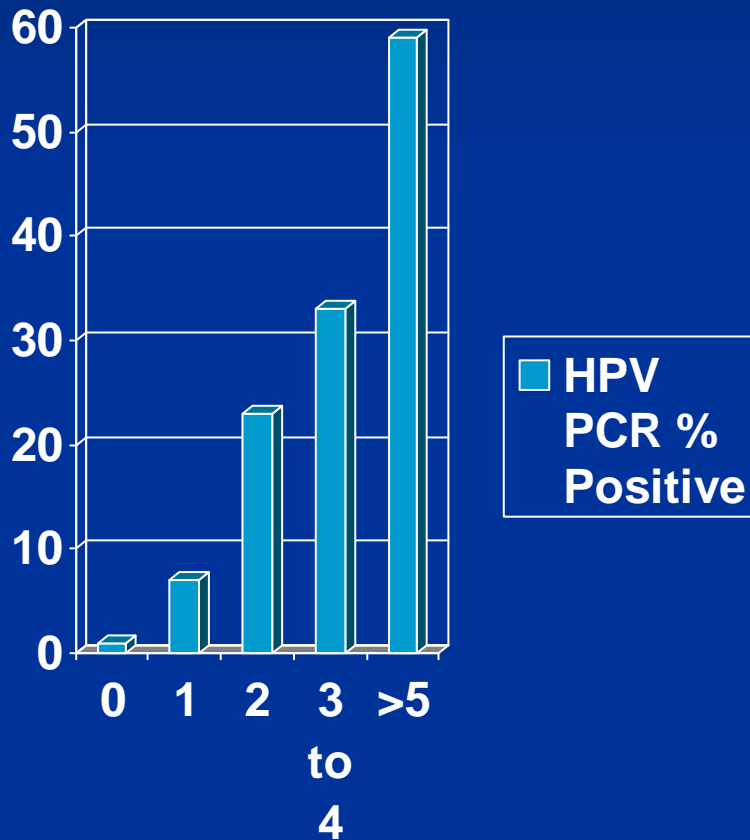
- **Commonest STI- 80% of those 15-49 show evidence of past or present infection**
- **More than 100 different types- 40 of which infect the genital area**
- **High risk types associated with risk of cervical and anal cancer**
- **Australian guidelines recommend Pap testing for all women 2 years after first sexual intercourse**
- **Average age at first sex in Australia -16 years**

# HPV Transmission



- Incidence of HPV is highest in men and women who have recently become sexually active
- 79% of sexually active men and women will acquire HPV over their lifetime

# HPV Transmission

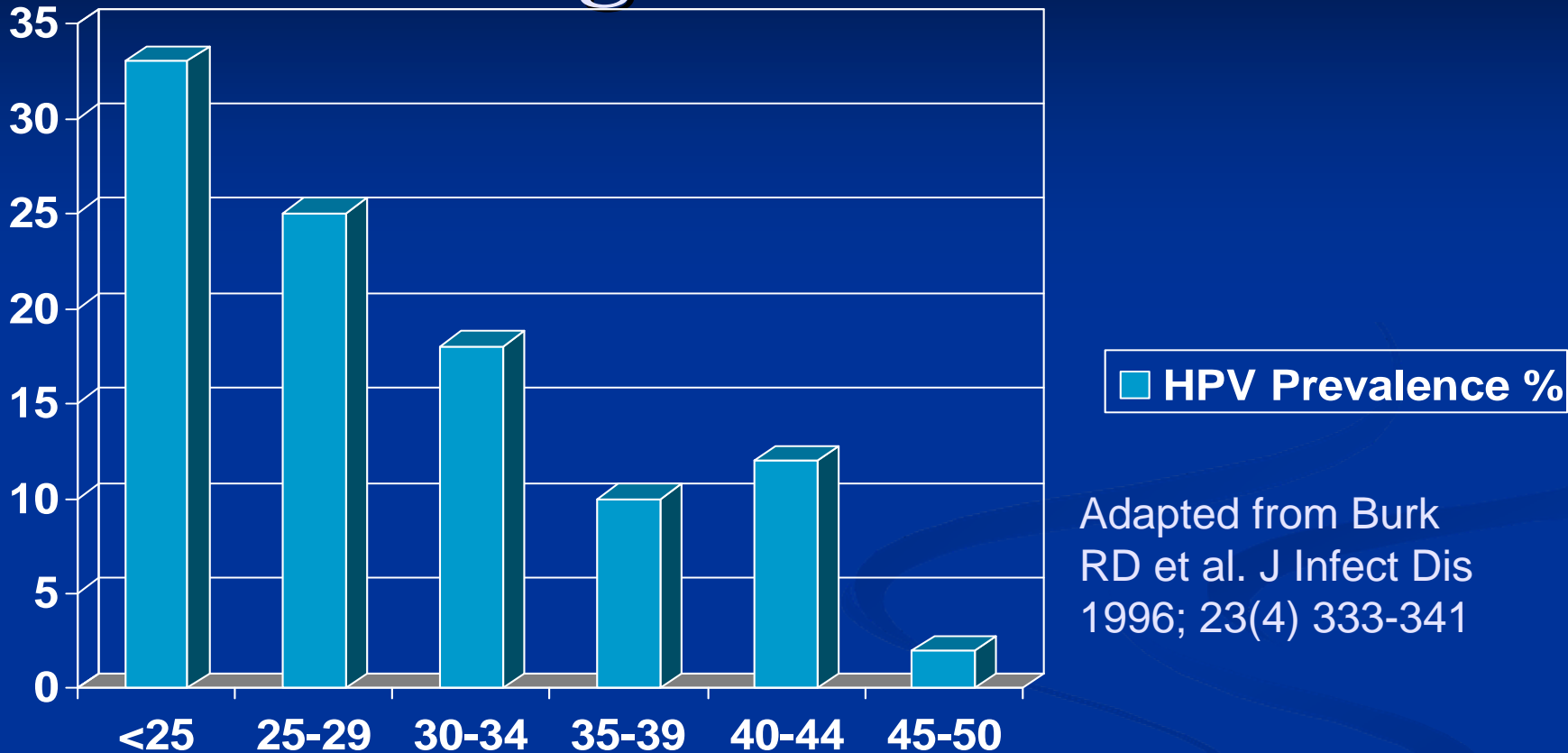


Lifetime no of male sexual partners

- Very infectious
- The predominant risk is the number of sexual partners
- > 5 partners = 60% risk <sup>1,2</sup>
- Condoms not totally protective

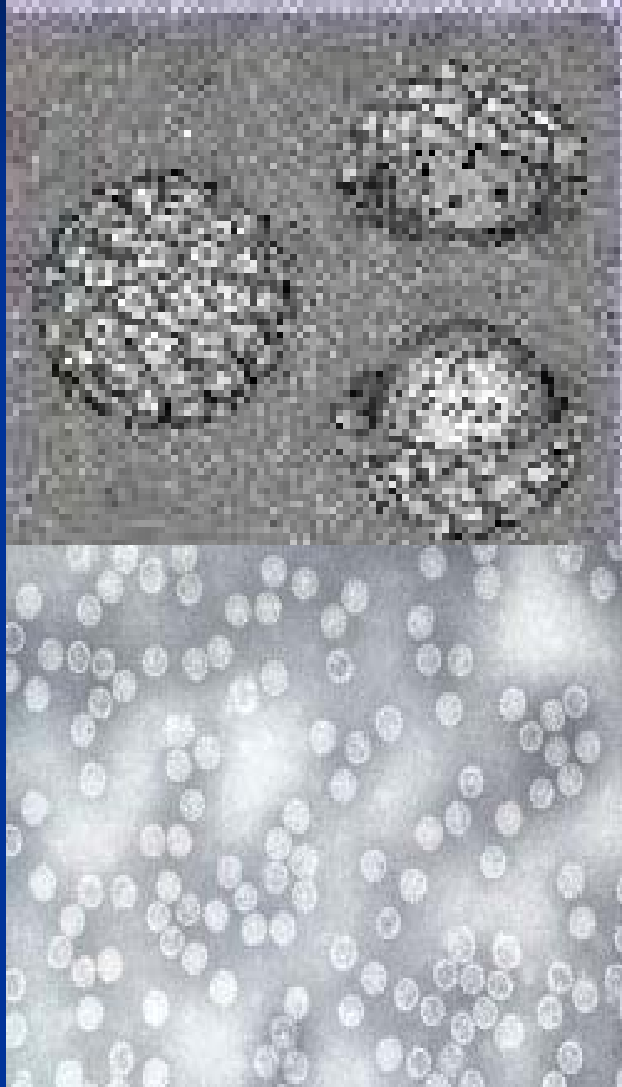
1. Karlsson R et al. Sex Transm Dis 1995; 22: 119-127
2. Burk RD et al. J Infect Dis 1996; 174: 679-689

# HPV-Age Prevalence



- Most of those infected will clear the virus within 2 years
- Average time to clearance:
  - 6 months non-cancer producing types
  - 8 months cancer producing types
- In a small number the virus persists- 3-10%

# HPV Vaccines



- Particles within these vaccines physically resemble the virus but have no infectious material within
- They generate antibodies to natural infection through exposure to the non-infective vaccine

# Two HPV Vaccines



- **Gardasil**
  - Provides protection against 4 types of virus
  - 16/18- 70% of cervical cancers
  - 6/11- 90 % of genital warts
- **Cervarix**
  - Provides protection against types 16 and 18

# Immune Response

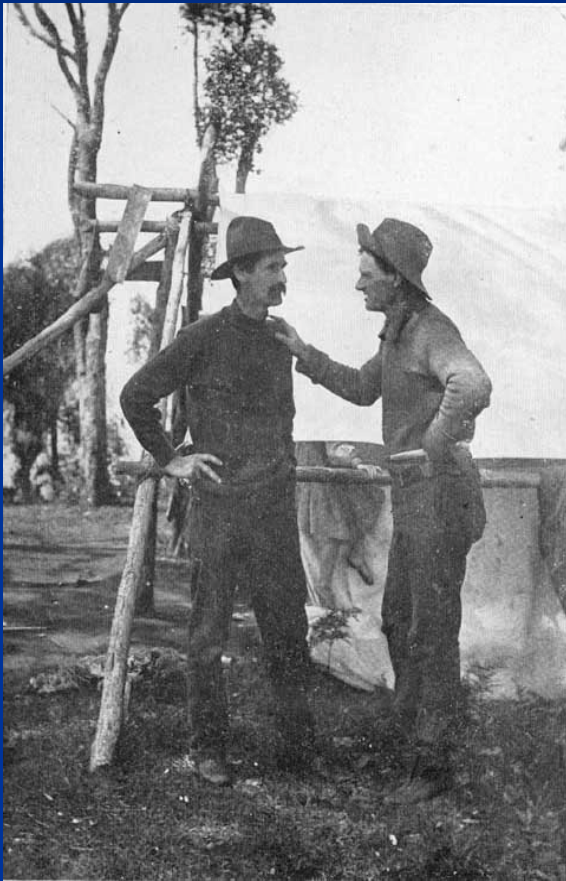
- Both vaccines induce a very strong immune response- many times higher than natural immunity
- Immune response is greater the younger the patient ( 2-3 times higher if given between 9-12 years than if given at 23 years)
- Maximal benefit when given prior to first intercourse
- May provide some protection to those already exposed as will protect against other types
- **Neither** provides complete protection against cervical cancer

# Vaccination Program



- Ongoing from 2007-12-13 year old girls to be vaccinated in first year of high school
- Catch up group of 13-18 year olds in school vaccination program till end of 2008 school year
- Up to and including women to 26 years of age in community delivered programs- all three doses must be completed by June 2009 (< 27 years)
- **No** subsidy for those over 26 years of age

# What about the Blokes?



- Men who have sex with men have a higher risk of anal cancer due to HPV- rate increasing
- Males provide an important reservoir for HPV infection of their female partners
- Young males mount a more aggressive response to HPV post vaccination than females
- BUT- trial results for benefit in males are still in progress
- **Not** covered by free immunisation Program

# STIs- Herpes Simplex



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- Both HSV 1 and HSV 2 can cause genital infection and a 2004 Melbourne study indicated that 77% of genital herpes in those under 20 was in fact HSV1. Reasons?
  - Oral sex perceived as safer
  - Less childhood infection with HSV1
- 80% of the population has antibodies to HSV 1, 20% to HSV 2
- Only a small proportion of these have symptoms

# Herpes Simplex

- Transmission possible when no symptoms present
- Condoms not 100% protective
- Treatment antiviral medication (Zovirax, Famvir, Valtrex)- initial, episodic, suppressive
- Most dangerous when first attack occurs during pregnancy

# Hepatitis B

- Hep B transmitted by infected blood, semen or saliva or by transmission from mother to baby at delivery
- Most people recover completely from Hep B but some go on to develop chronic infection, cirrhosis, liver Ca
- Between 1993 and 2001 notifications for Hep B in young people aged 12-24 years increased from 3.1 per 100,000 to 4.6 per 100,000
- Highest rate in 18-24 year group
- Universal vaccination program of young adolescents commenced in 2000, now part of infant immunisation schedule
- Should still be promoted to those at risk- ie no vaccination, partial vaccination etc

# Hepatitis C

- Predominantly blood to blood transmission
- Can cause chronic infection and liver cancer
- Between 1991 and 2001 there were 2,148 notifications of Hep C of which 44% were in the 12-24 age group
- No vaccine available- prevention involves safer injecting drug use and minimisation of spread to household contacts- eg no sharing of razors, toothbrushes etc

# One Approach to Adolescent Pregnancy



- In April 2004 the Australian Federal Health Minister, Tony Abbott spoke at Adelaide University in which he stated “Even those who think abortion is a woman’s right should be troubled by the fact that 100,000 Australian women choose to destroy their unborn babies every year”
- He continued “If half the effort were put into discouraging teenage promiscuity as preventing teenage speeding, there might be fewer abortions, fewer traumatised young women and fewer dysfunctional families.”

# Adolescent Pregnancy Rates

- Accurate data not available for the whole of Australia
- Estimates of births and abortions based on OECD data (1996) for women aged 15-19 years gives a rate of 20.1 live births and 23.9 abortions per 1000
- The Netherlands has a rate of 7.7 and 3.9
- Young aboriginal women are over-represented with 21.3% of indigenous births to teenagers compared with 4.2 of non indigenous

# Termination of Pregnancy

- Using South Australian Data
  - Total number of TOPs falling since 1995
  - Highest rate of TOP in women 20-29 years ( more than half occur in this group)
  - Next common group women over 30 ( Note TOP rate in Sydney is 30% higher than in other Australian capital city)
  - Though proportion of teenage abortion small, (less than 20% of all TOPs and falling) percentage of teenage abortions resulting in TOP is high- 56%
  - The higher the socioeconomic group the more likely a young person will terminate an unintended pregnancy

# Sexual behaviour and Contraception

- Contraceptive use is associated with a higher level of maturity in young women
- Contraceptive use influenced by
  - Perceived and actual effects on health, physical appearance and the menstrual cycle
  - Ease of use
  - Beliefs around guilt and responsibility
- Pill use was not associated with intention to use condoms or beliefs about abortion

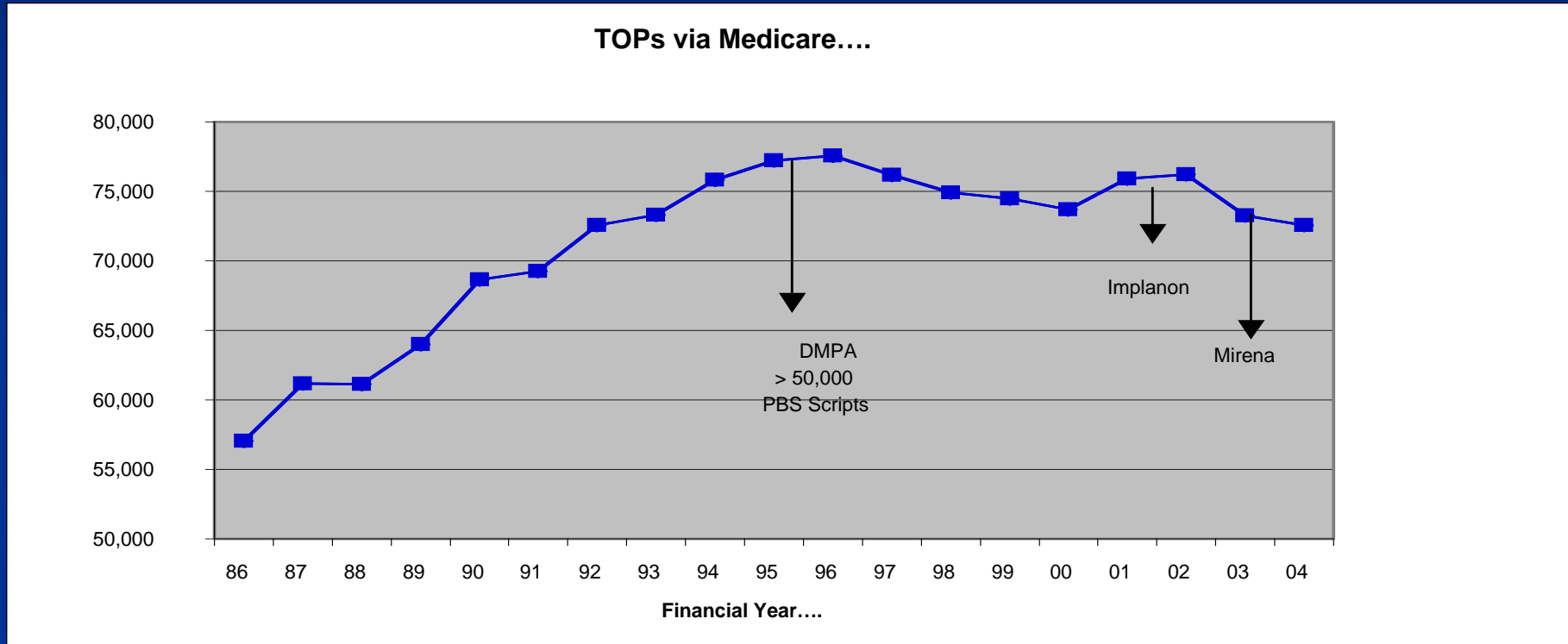
*Moore PJ et al, Obstet & Gyn 1996; 88(3) Suppl : 48S-56S*

- Higher rates of pregnancy and STIs in adolescents subject to abstinence sex ed programs in the US than conventional programs

# Contraceptive Options

- Despite wider range of options available in last 15 years, methods used by adolescents in their last sexual encounter remain fairly limited- Condom (70%), Pill (40%). 10% reported none and 4% emergency contraception (AIHW survey 2003)
- May reflect adolescent preference- but may also represent provider bias
- Adolescents are notoriously poor pill takers with US study indicating that 15-19 year olds miss an average of 3 pills a cycle

# Impact of contraceptive technologies



- Two thirds of women are using contraception at the time of an unintended pregnancy—most commonly Pills (21%) and condoms (12%).

Bajos N, Leridon H, Goulard H, Oustry P, Job-Spira N and The COCON Group\* Contraception: from accessibility to efficiency. 2003 Human Reproduction, Vol. 18, No. 5, 994-999

# Contraceptive Counselling

- Any discussion around contraceptive use should cover
  - Effectiveness
  - Mode of action
  - Suitability to that person's needs
  - Risks and benefits
  - How the method is used

# Access Issues for Young People

- Cost- not all methods are PBS subsidised
- Access to Medicare
  - Adolescents can have own card at 15 yrs but many are not aware of this or may be wary of applying
  - Availability of bulk billing
- Concerns re confidentiality
- Proximity to (and availability of !) public transport
- Opening hours and availability of services without prior appointment

# Combined Pill



- Safe for most adolescents
- Effective if taken correctly- failure rate- 1-6%
- Positive non contraceptive benefits- such as cycle control, lighter less painful periods and less acne
- If pill not taken regularly, irregular bleeding more likely and younger women more likely to discontinue use if side-effects occur
- Very low dose preparations may not be suitable for younger women due to more irregular bleeding

# DMPA- Depo Provera

- Long acting injectable method of contraception- given by injection every 12 weeks
- By 12 months use most users find they have no periods
- Has been widely used for contraception and menstrual management in adolescents with a disability
- Not a great choice for adolescents, particularly long term, because of effects on bone density

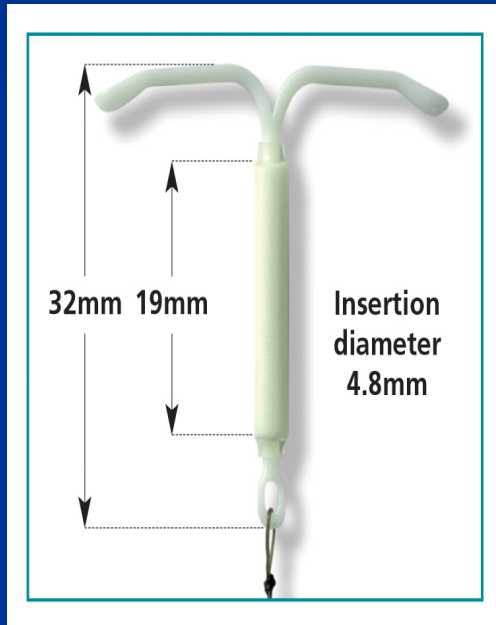


# Contraceptive Implant-Implanon



- Lasts for 3 years-rapidly reversible
- Failure rate less than 1%
- No concerns re bone loss with long term use
- Main problem irregular bleeding- poorly tolerated in adolescents
- PBS subsidised-\$28

# Mirena –Hormone Releasing IUD



- Lasts 5 years
- Failure rates low- 0.2%
- Requires minor surgery to insert- not first choice for young women
- No oestrogen and low levels of circulating progestogen
- Rapidly reversible on removal
- Erratic bleeding common in the first 3-5 mths of use
- No or light bleeding in most women by 12 months of use
- PBS listed -\$28

# Contraceptive Rings



- The plastic ring releases hormones into the bloodstream through the vaginal skin over 3 weeks- comfort with vaginal administration
- No need for daily pill taking but must remember to insert new device after ring-free week- SMS messaging
- About half the daily dose of most contraceptive pills
- Good cycle control
- Comparable cost to non-subsidised pills- \$21-24 month

# Emergency Contraception



- Postinor 2- Available from pharmacy without script as of 2004 (\$30)
- 2 pills taken 12 hours apart commenced within 72 hours of USI- the more effective the earlier it is taken
  - <24 hours – 95%
  - 24-48 hours – 85%
  - 48-72 hours – 58%
- Single dose Emergency Contraception soon available

# Condoms



- Mainstay of safer sex message
- Cheap, readily available and don't require intervention of medical personnel (though instruction in correct use critical)
- Failure rate (pregnancy) 5-7%
- Not as effective at preventing skin-to-skin transmitted STIs- Wart virus, Herpes
- “Double dutching” recommended
- Plastic condoms-Avanti

Any Questions?

