

Contraception for Adolescents: What's New?

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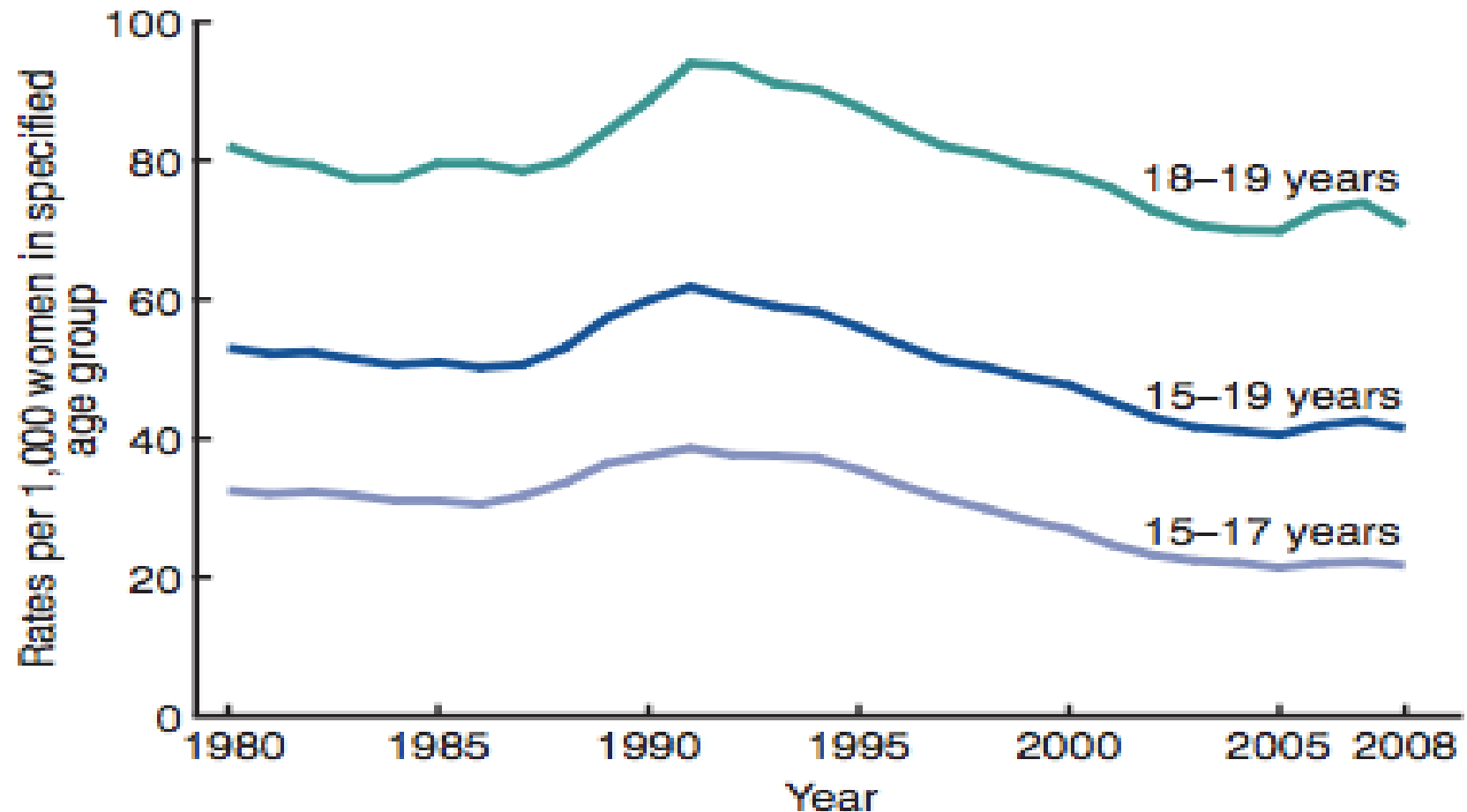
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Objectives

- **Understand the trends in teen pregnancy, sexual behavior and contraceptive use**
- **Describe current contraceptive methods available to teens**
- **Describe the current evidence-based recommendations about the safety and effectiveness of contraceptive methods for teens**

The Problem



SOURCE: CDC/NCHS, National Vital Statistics System.

Figure 1. Birth rates for teenagers by age: United States, final 1980–2006 and preliminary 2007 and 2008

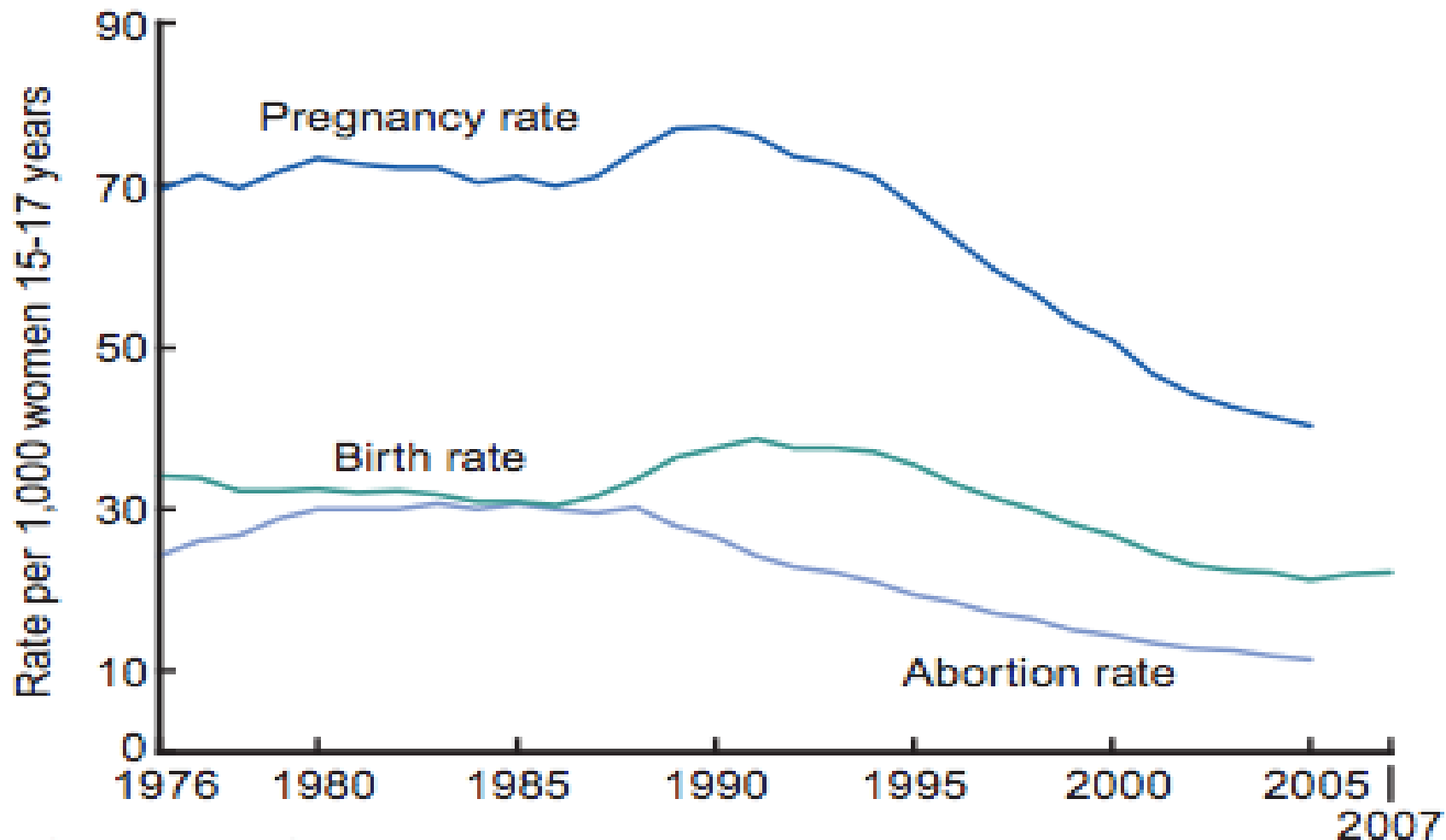
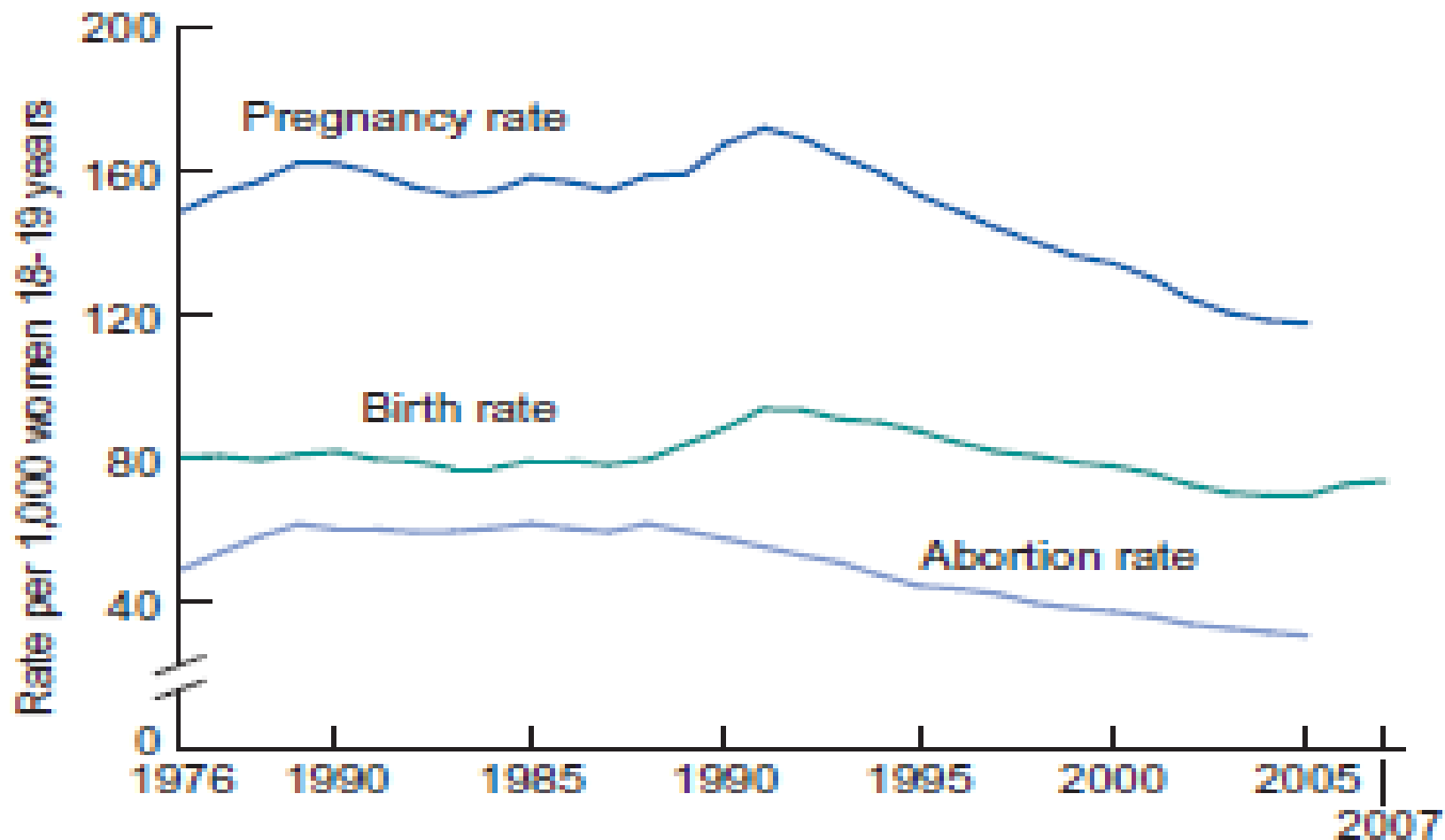


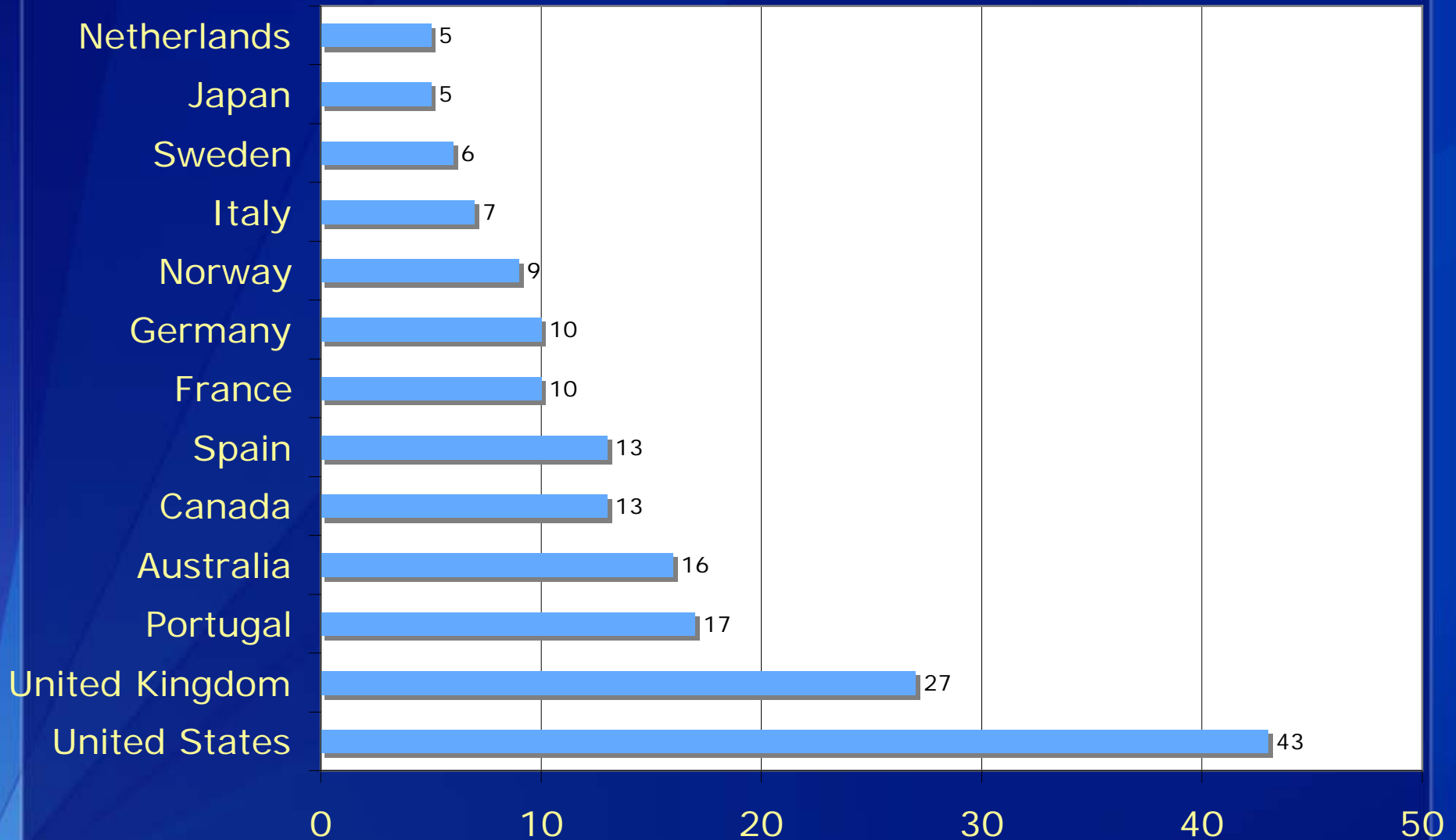
Figure 1. Pregnancy, birth, and abortion rates for teenagers 15–17 years: United States



NOTE: Birth rate for 2007 is preliminary.
 SOURCES: Table 2 and References 1 and 7.

Figure 2. Pregnancy, birth, and abortion rates for teenagers 18–19 years: United States

Births per 1000 women, 15-19 years



Consequences

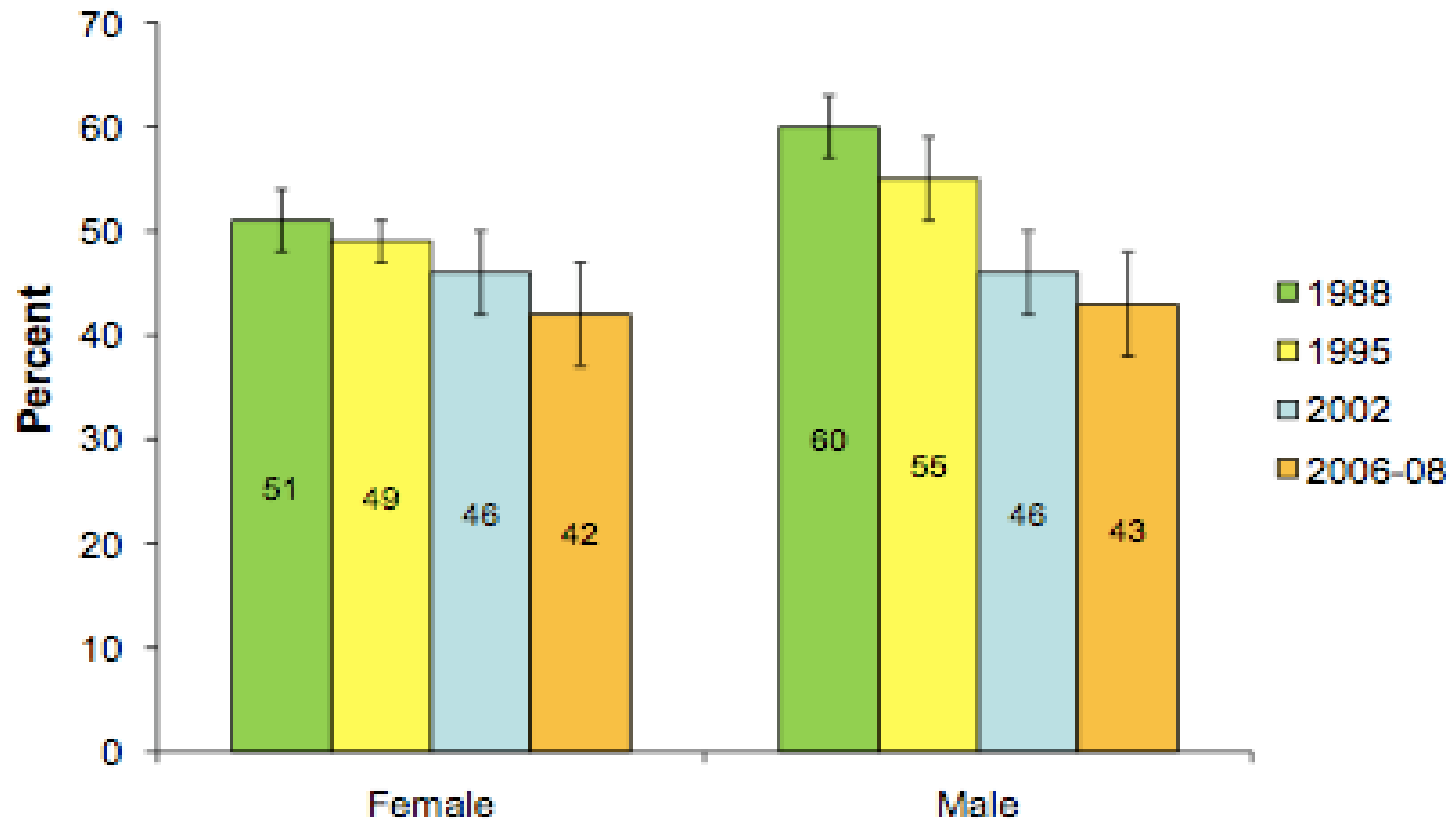
- **Health**
 - Prematurity
 - Infant mortality
 - Rapid repeat pregnancy
- **Social**
 - Low educational attainment
 - Unemployment
 - Poverty
- **Society**
 - \$9.1 billion in 2004

CDC Winnable Battles

- Teen pregnancy identified as one of 6 CDC winnable battles
 - CDC works to prevent teen pregnancies that contribute to poor health and negative social outcomes through evidence-based strategies, policies, and systems change
- CDC Winnable Battles
 - public health priorities with large-scale impact on health and with known, effective strategies to intervene.
 - to identify optimal strategies and to rally resources and partnerships to accelerate a measurable impact on health.

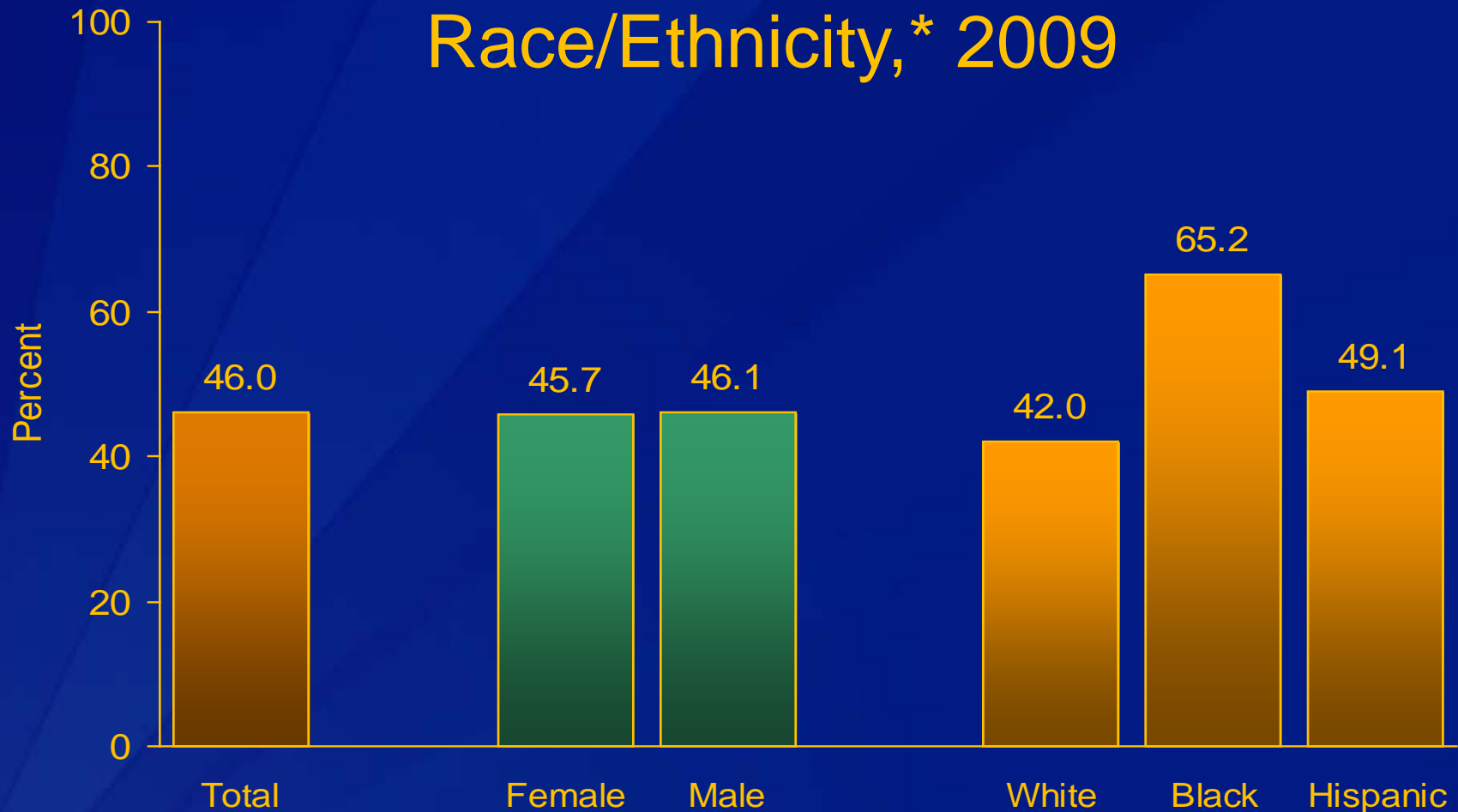
Teens and Sex

Figure 1. Never married females and males aged 15-19 who have ever had sexual intercourse: United States, 1988-2008.



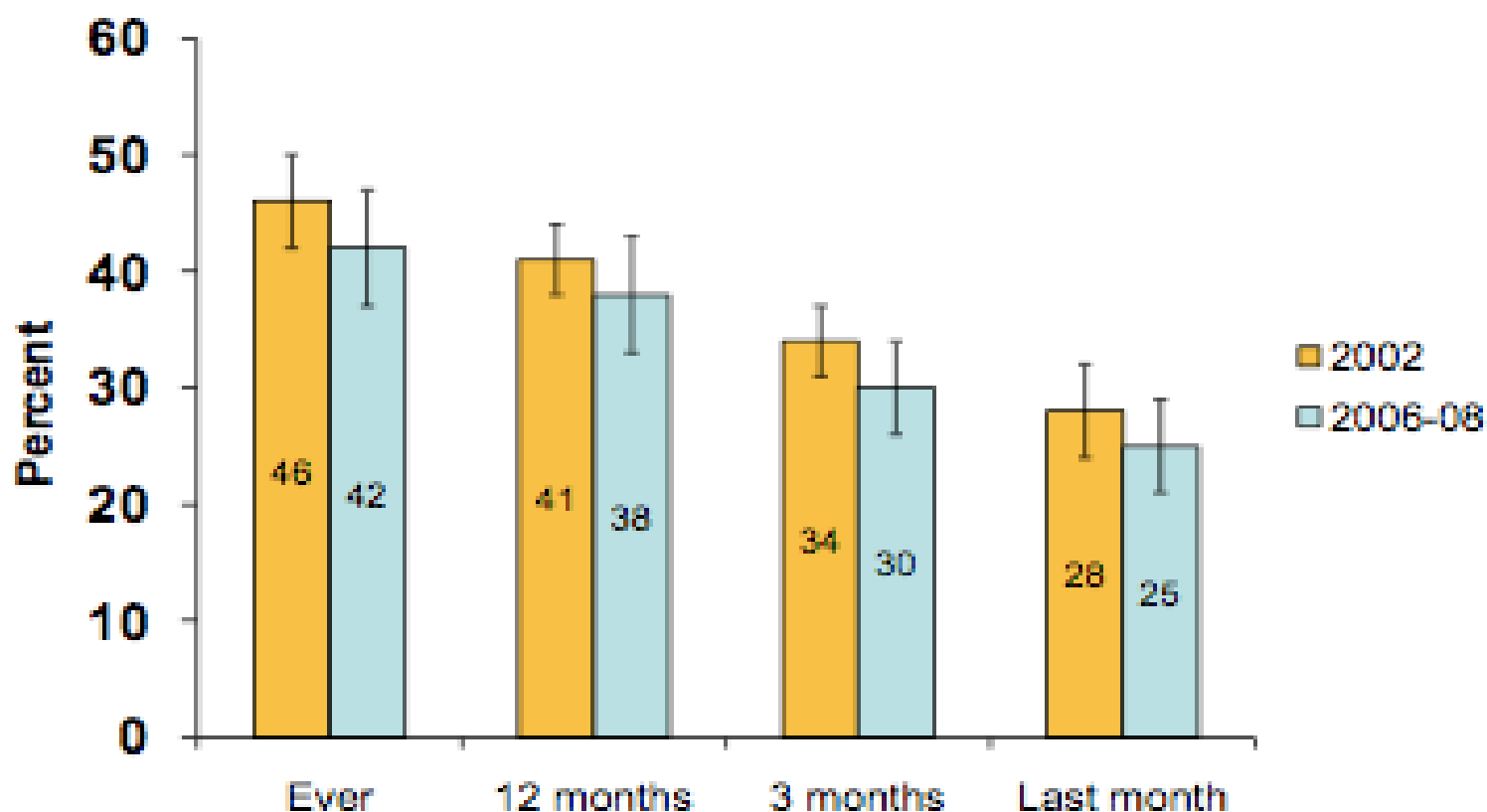
Source: CDC/NCHS, National Survey of Family Growth, 2006-2008. Tables 1 and 2 in this report.

Percentage of High School Students Who Ever Had Sexual Intercourse, by Sex and Race/Ethnicity,* 2009



* B > H > W

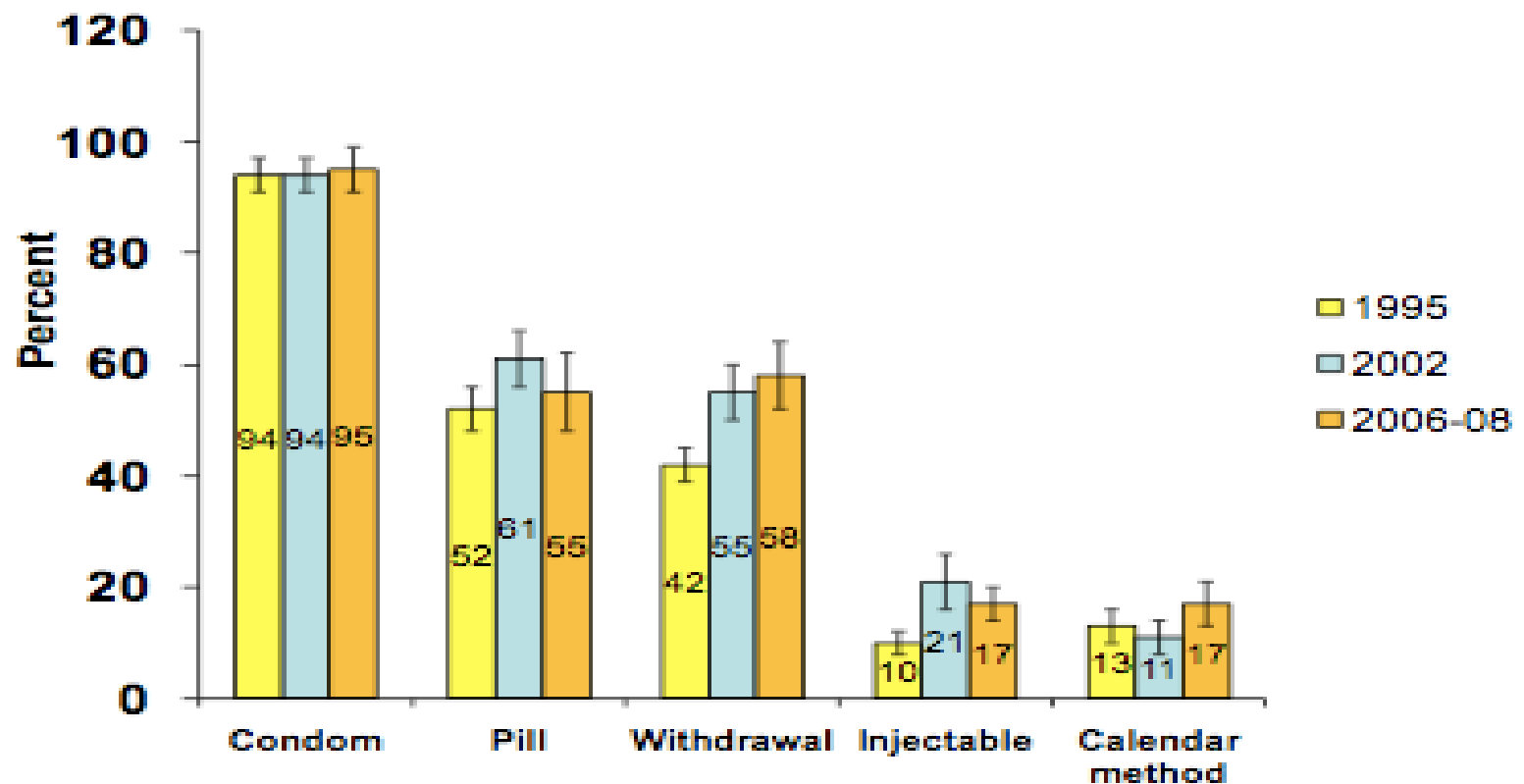
Figure 2. Never married females aged 15-19 who have had intercourse in the last 12 months, in the last 3 months, and in the last month: United States, 2002 and 2006-2008.



Source: CDC/NCHS, National Survey of Family Growth, 2006-2008. Tables 3, 4, and 5 in this report.

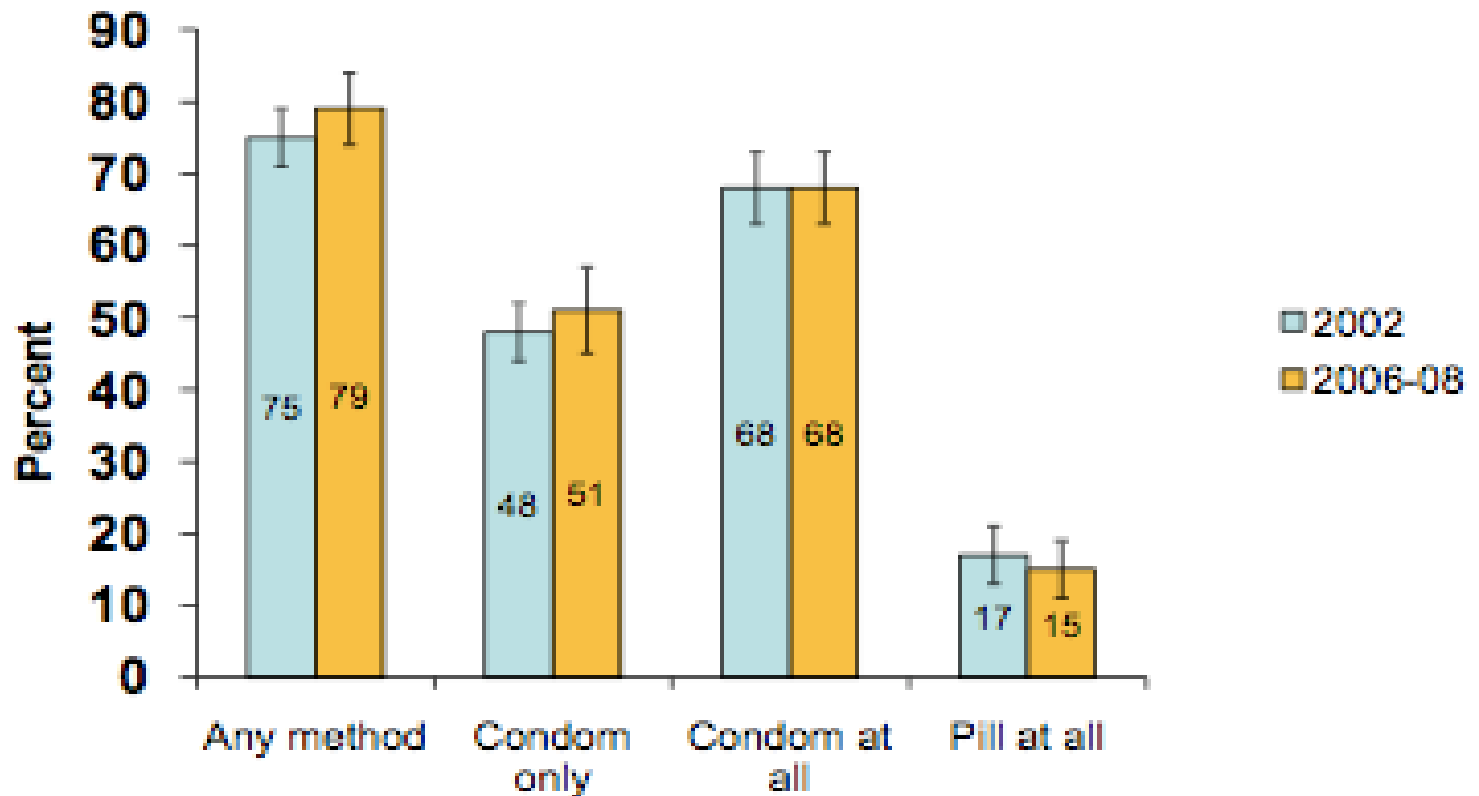
Most teens use contraception

Figure 8. Ever-use of contraception among sexually experienced females aged 15-19, by method of contraception: United States, 1995, 2002, and 2006-2008.



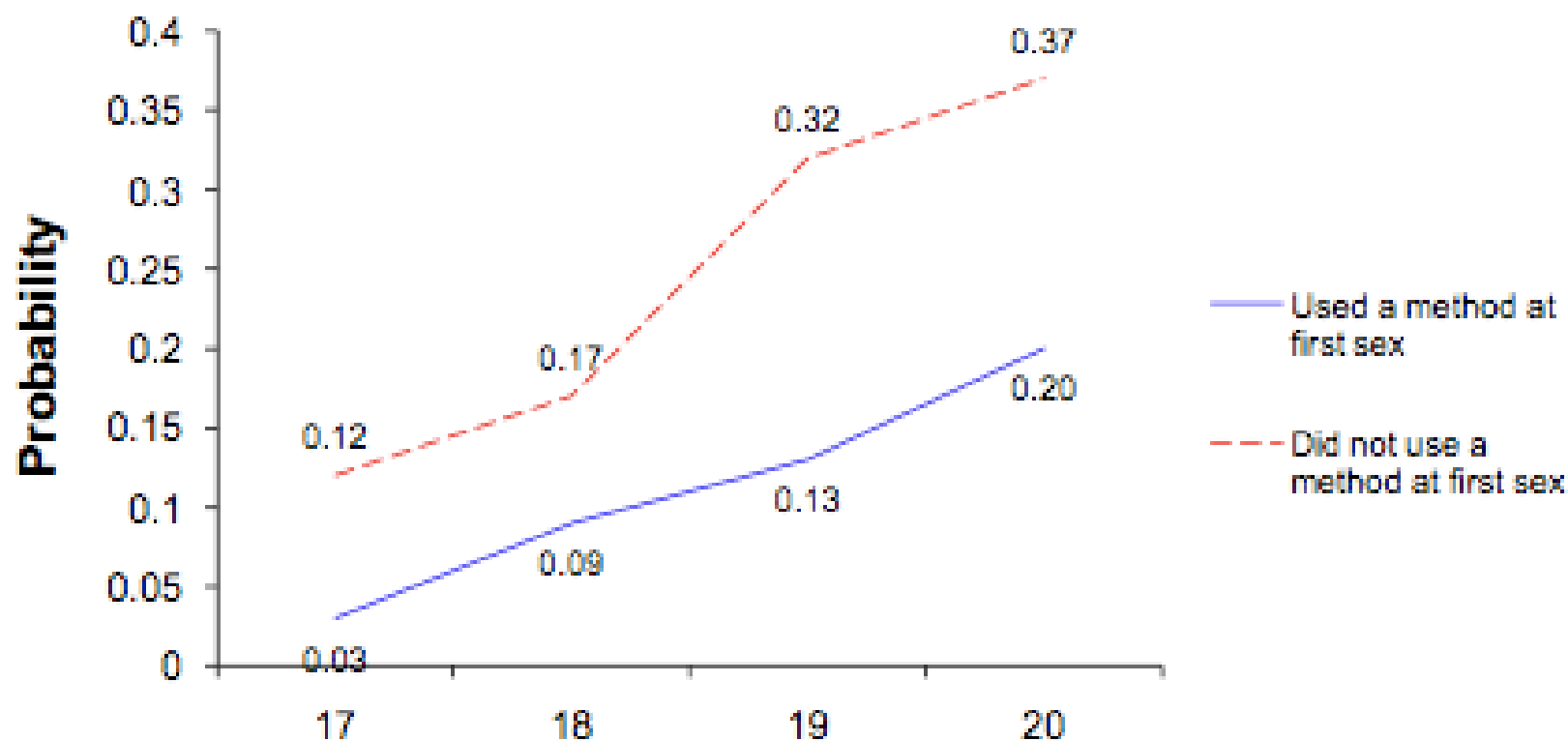
Source: CDC/NCHS, National Survey of Family Growth, 2006-2008. Table 13 in this report.

Figure 9. Use of contraception at first sex among females aged 15-19, by method used: United States, 2002 and 2006-2008.



Source: CDC/NCHS, National Survey of Family Growth, 2006-2008. Table 14 in this report.

Figure 10. Probability of a first birth by age 17, 18, 19, and 20 for women 15-24 years of age, by whether they used contraception at first intercourse: United States, 2006-2008.

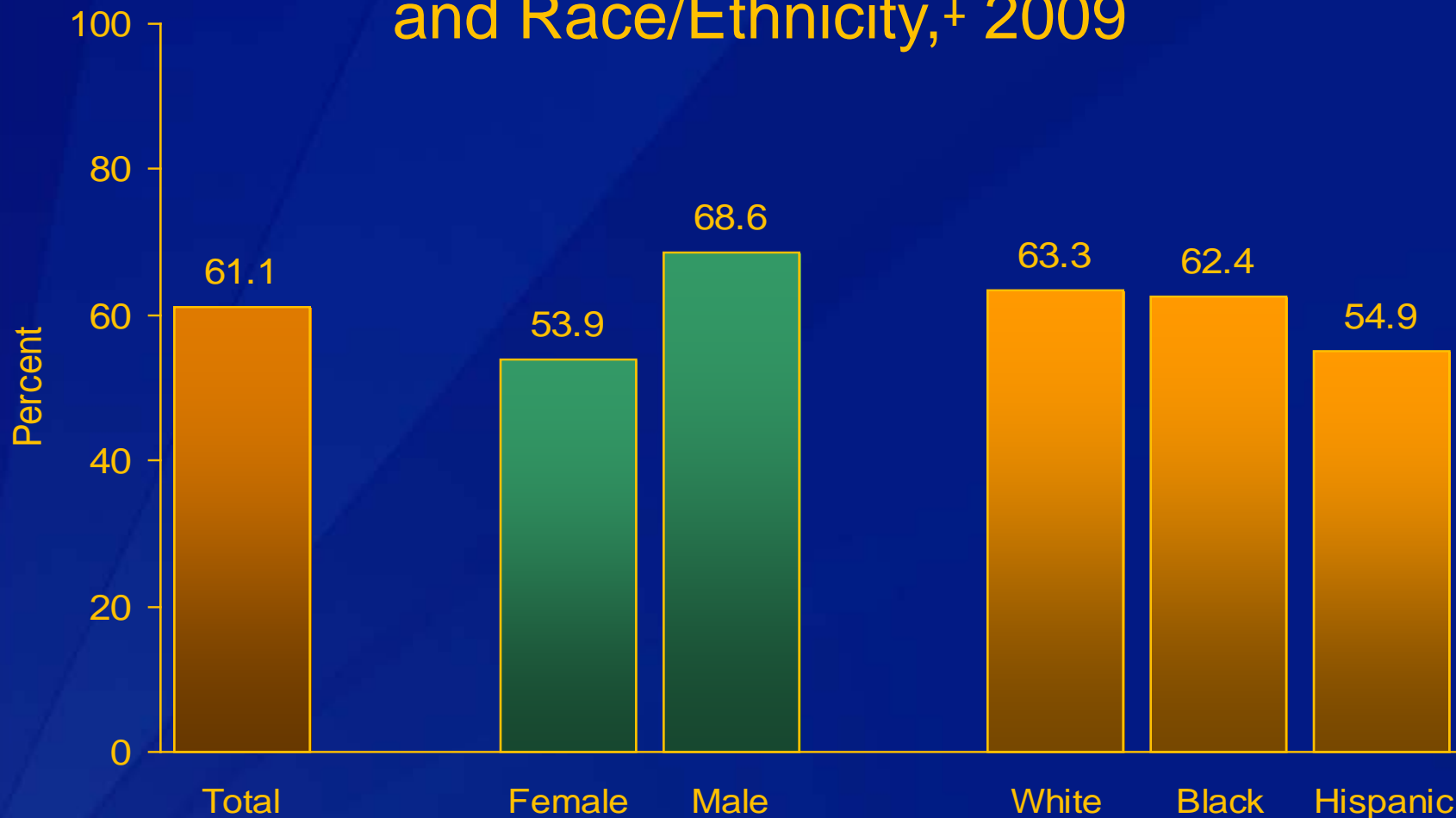


Source: CDC/NCHS, National Survey of Family Growth, 2006-2008. Table 17 in this report.

Contraceptive Use at Last Sex

- Females, aged 15-19: 84%
- Males, aged 15-19: 93%

Percentage of High School Students Who Used a Condom During Last Sexual Intercourse,* by Sex† and Race/Ethnicity,‡ 2009



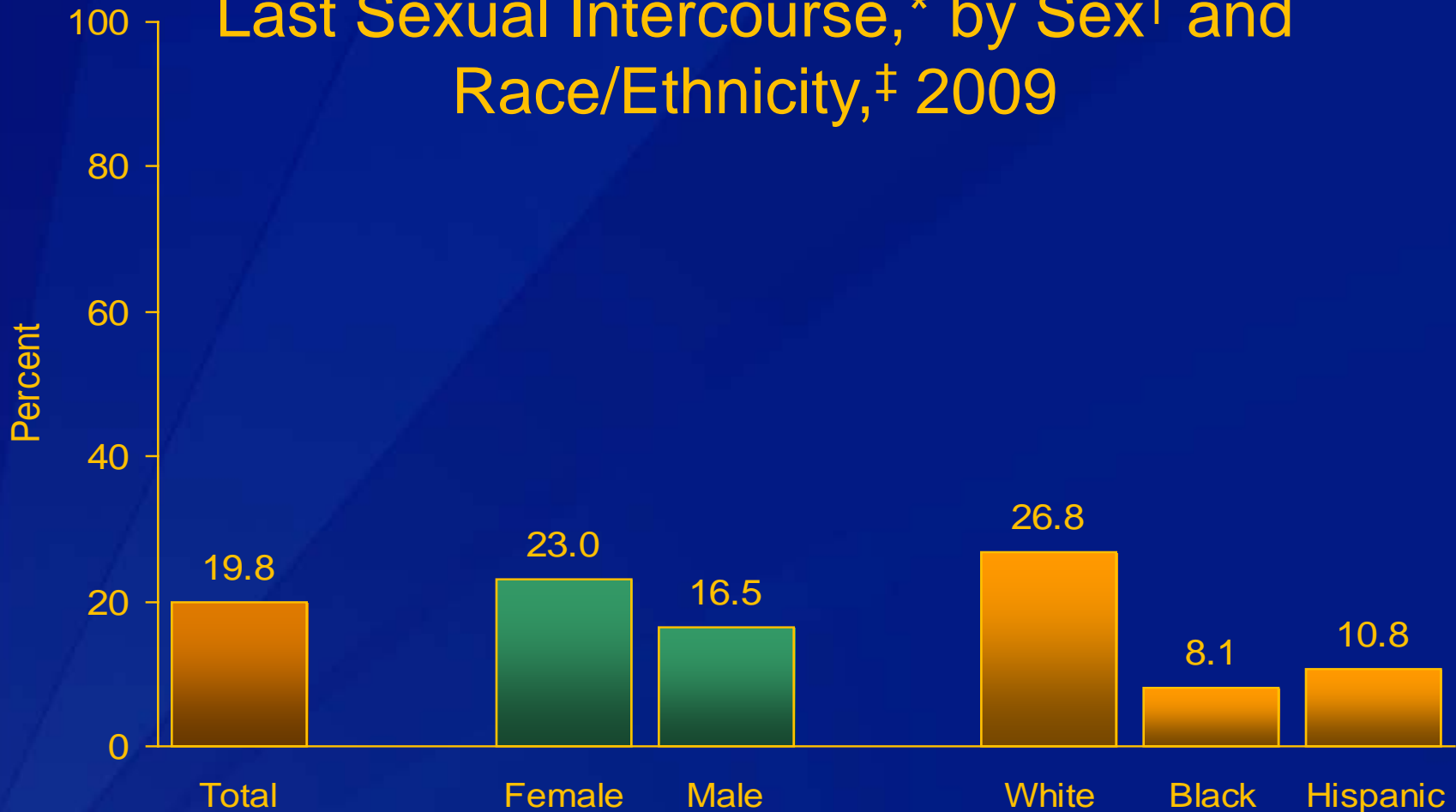
* Among the 34.2% of students nationwide who had sexual intercourse with at least one person during the 3 months before the survey.

† M > F

‡ W, B > H

National Youth Risk Behavior Survey, 2009

Percentage of High School Students Who Used Birth Control Pills to Prevent Pregnancy Before Last Sexual Intercourse,* by Sex† and Race/Ethnicity,‡ 2009



* Among the 34.2% of students nationwide who had sexual intercourse with at least one person during the 3 months before the survey.

† F > M

‡ W > B, H

National Youth Risk Behavior Survey, 2009

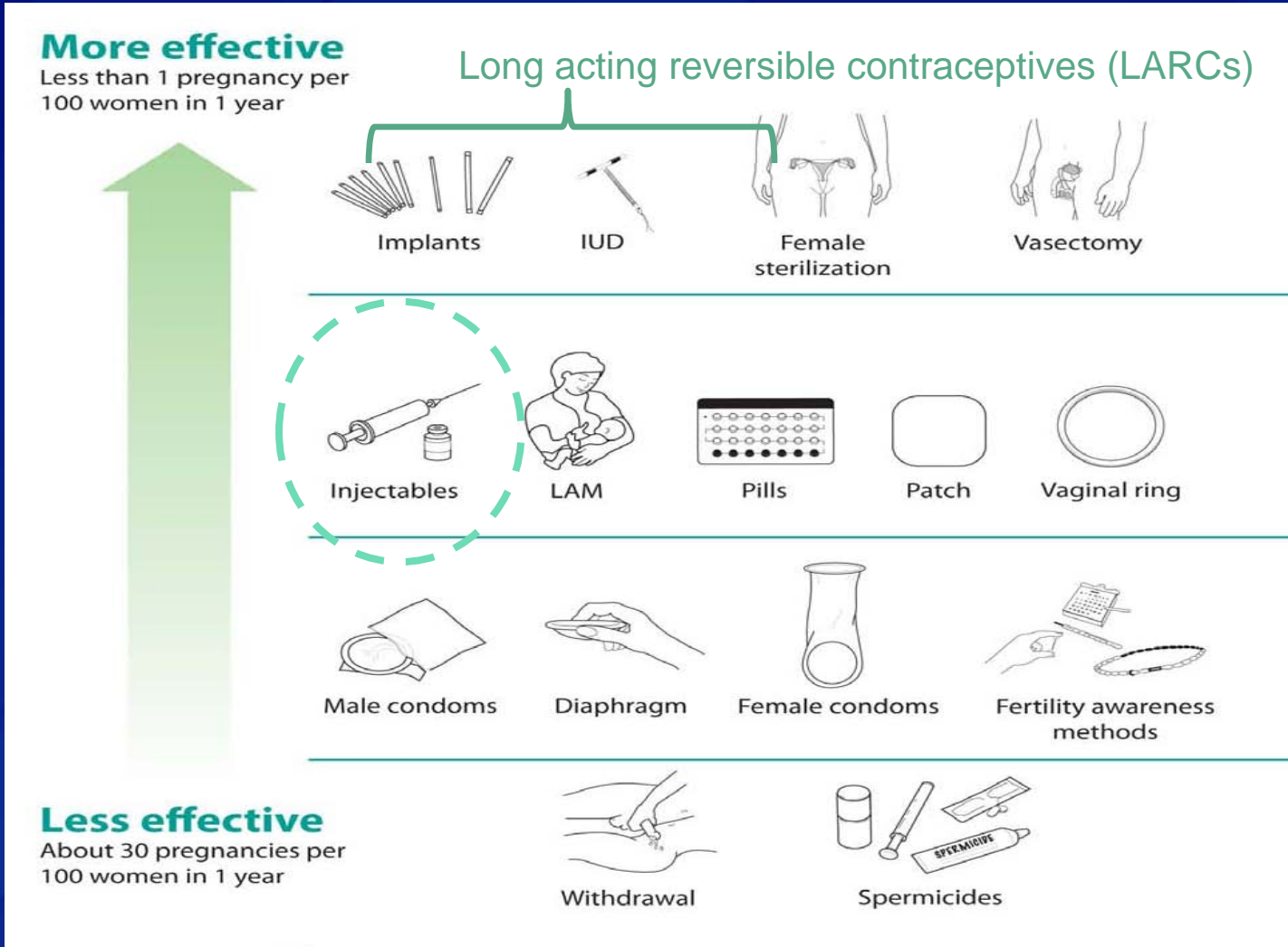
So why are teen pregnancy rates so high?

- 46% due to non-use of contraception
- 54% due to contraceptive failure
 - Effectiveness of method
 - Consistent and correct use

Santelli et al., 2006



Typical Effectiveness of Family Planning Methods



Tier 1

Tier 2

Tier 3

Tier 4

Adapted from: WHO. Family Planning: A Global Handbook

Long Acting Reversible Contraception (LARC)

- “Forgettable contraception”
- Not dependent on compliance/adherence
- Available in US:
 - IUDs
 - Contraceptive implant
 - DMPA
- “expanding access to LARC for young women has been declared a national priority” (IOM)
- “Encourage implants and IUDs for all appropriate candidates, including nulliparous women and adolescents.” (ACOG 2009)

Method choice

Use of contraception at last sex among females ages 15-19, who had sex in the last 3 months, 2006-2008

Method	%
Any method	84
Condoms (Tier 3)	55
Pills (Tier 2)	31
Other hormonals (Tier 1-2)	10
Other methods (Tier 1-4)	9
No method	17

Correct and consistent use

- Methods that require more effort by the user have higher typical failure rates
- Correct and consistent use of pills and condoms generally poor for all ages
- Women ages 18-24, in last 3 months
 - 45% missed ≥ 1 pill
 - 62% did not use condoms every time

Contraceptive Methods for Adolescents: What's New?

- US Medical Eligibility Criteria for Contraceptive Methods
- Contraceptive methods and adolescents



Abstinence from vaginal, anal and oral intercourse is the only 100% effective way to prevent HIV, other STDs, and pregnancy.



U.S. Medical Eligibility Criteria for Contraceptive Use



MMWRTM

Morbidity and Mortality Weekly Report

www.cdc.gov/mmwr

Recommendations and Reports

June 18, 2010 / Vol. 59 / No. RR-4

U.S. Medical Eligibility Criteria for Contraceptive Use, 2010

**Adapted from the World Health Organization
Medical Eligibility Criteria for Contraceptive Use, 4th edition**

US Medical Eligibility Criteria for Contraceptive Use, 2010

- Evidence-based guidance on safety of contraceptive methods for women with medical conditions and characteristics, including age
- Published by CDC in June 2010
- Adapted from World Health Organization global guidance
- Meant for health care providers to use when counseling women, men, and couples about contraceptive method choice

WHO Medical Eligibility Criteria Categories

1. No restriction for the use of the contraceptive method
2. The advantages of using the method generally outweigh the theoretical or proven risks
3. The theoretical or proven risks usually outweigh the advantages of using the method
4. An unacceptable health risk if the contraceptive method is used

Smoking and Contraceptive Use

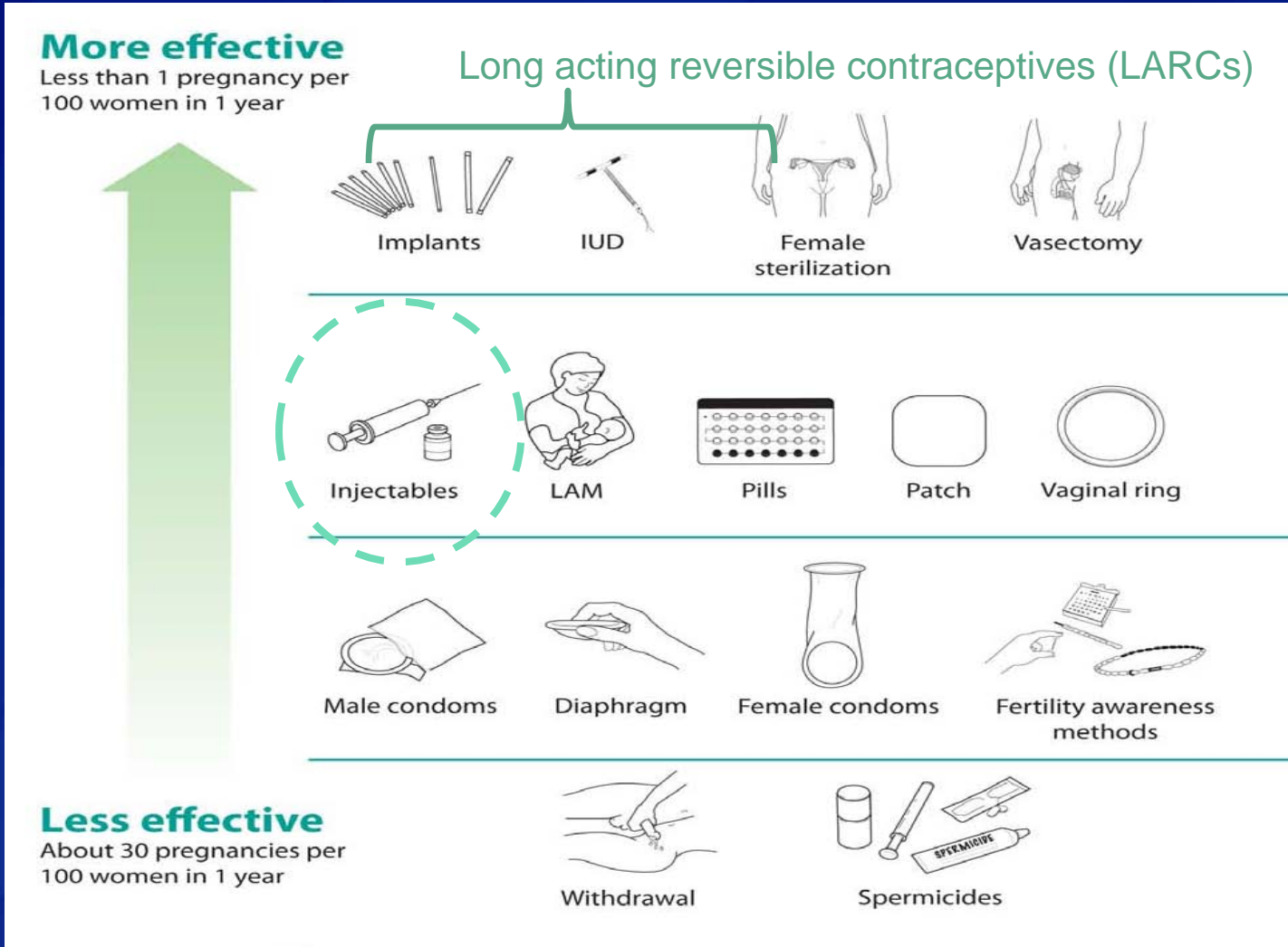
<i>CONDITION</i>	<i>COC</i>	<i>CIC</i>	<i>POP</i>	<i>NET-EN DMPA</i>	<i>IMP</i>	<i>Cu-IUD</i>	<i>LNG-IUD</i>
<i>SMOKING</i>							
a) Age < 35	2	2	1	1	1	1	1
b) Age ≥ 35							
(i) < 15 cigarettes/day	3	2	1	1	1	1	1
(ii) ≥ 15 cigarettes/day	4	3	1	1	1	1	1

Summary of MEC by age

Method	COC, Patch, Ring	POP	Implant	Barrier	Injection	IUD
Age	< 40	All ages	All ages	All ages	<18	< 20
MEC	1	1	1	1	2	2

1	No restriction
2	Generally can use
3	Generally do not use
4	Do not use

Typical Effectiveness of Family Planning Methods



Tier 1

Tier 2

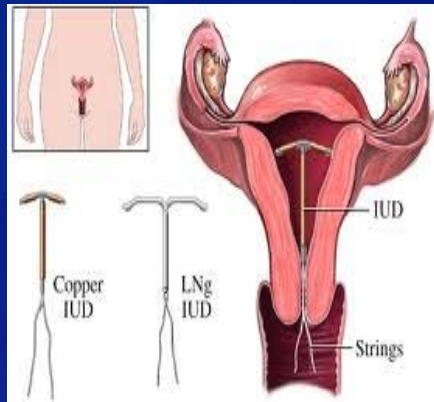
Tier 3

Tier 4

Adapted from: WHO Family Planning: A Global Handbook

Tier 1 Methods

- Levonorgestrel-releasing intrauterine system
- Copper IUD
- Implant



Levonorgestrel-releasing intrauterine system (IUS)

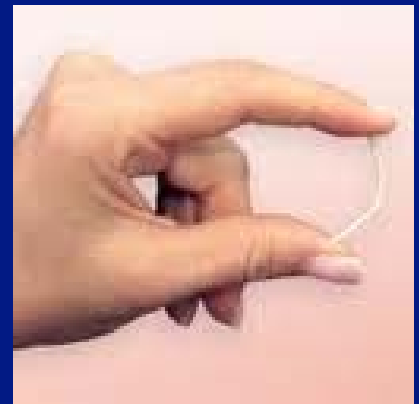
- Effective for at least 5 years
- Side effects: irregular bleeding
- US MEC for ages < 20: 2
- US MEC for nulliparous women: 2
- US MEC for high personal risk of STI: 2/3
- Does not protect against sexually transmitted infections (STIs)

Copper intrauterine device (IUD)

- Effective for at least 12 years
- Side effects: irregular bleeding, heavy bleeding
- US MEC for ages < 20: 2
- US MEC for nulliparous women: 2
- US MEC for high personal risk of STI: 2/3
- Does not protect against STIs

Contraceptive implant

- Effective for at least 3 years
- Side effects: irregular bleeding
- US MEC for all ages: 1
- Does not protect against STIs



Tier 2 Methods

- Injectable
- Pill
- Patch
- Ring



Contraceptive injection

- One injection every 3 months
- Reliable contraception for 3 months, but effects may last up to 9 months
- Side effects: irregular bleeding
- US MEC for ages ≤ 18 : 2
 - Bone mineral density
 - Weight
- Does not protect against STIs



Contraceptive pills

- Combined pills contain estrogen and progestin
- Progestin-only pills contain only progestin
- Extended use
- Side effects: irregular bleeding
- US MEC for ages ≤ 40 : 1
- Do not protect against STIs



Contraceptive patch

- Releases estrogen and progestin, so similar to combined pills
- One patch per week for 3 weeks, then 1 patch-free week
- Side effects: irregular bleeding
- US MEC for ages ≤ 40 : 1
- Does not protect against STIs



Contraceptive vaginal ring

- Releases estrogen and progestin, so similar to combined pills
- One ring for 3 weeks, then 1 ring-free week
- Side effects: irregular bleeding
- US MEC for ages ≤ 40 : 1
- Does not protect against STIs



Myths and misconceptions

- Myth: Contraceptive pills cause cancer
 - Fact: Protects against ovarian and endometrial cancer
- Myth: IUDs cause pelvic inflammatory disease and infertility
 - Fact: Chlamydia and gonorrhea cause PID and can lead to infertility
- Myth: DMPA causes fractures
 - Fact: Small amount of bone mineral density lost during use, regained after discontinuation

Non-contraceptive benefits

- Bleeding changes
 - LNG-IUD, DMPA, implants, contraceptive pills may improve bleeding patterns
 - Amenorrhea
- Cancer protection
 - Combined oral contraceptives protect against ovarian and endometrial cancer
- Improvement in acne
 - Combined oral contraceptive

Tier 3



- Condoms (male and female)
- Diaphragms, cervical cap, sponge
- Fertility awareness-based methods

Tier 4

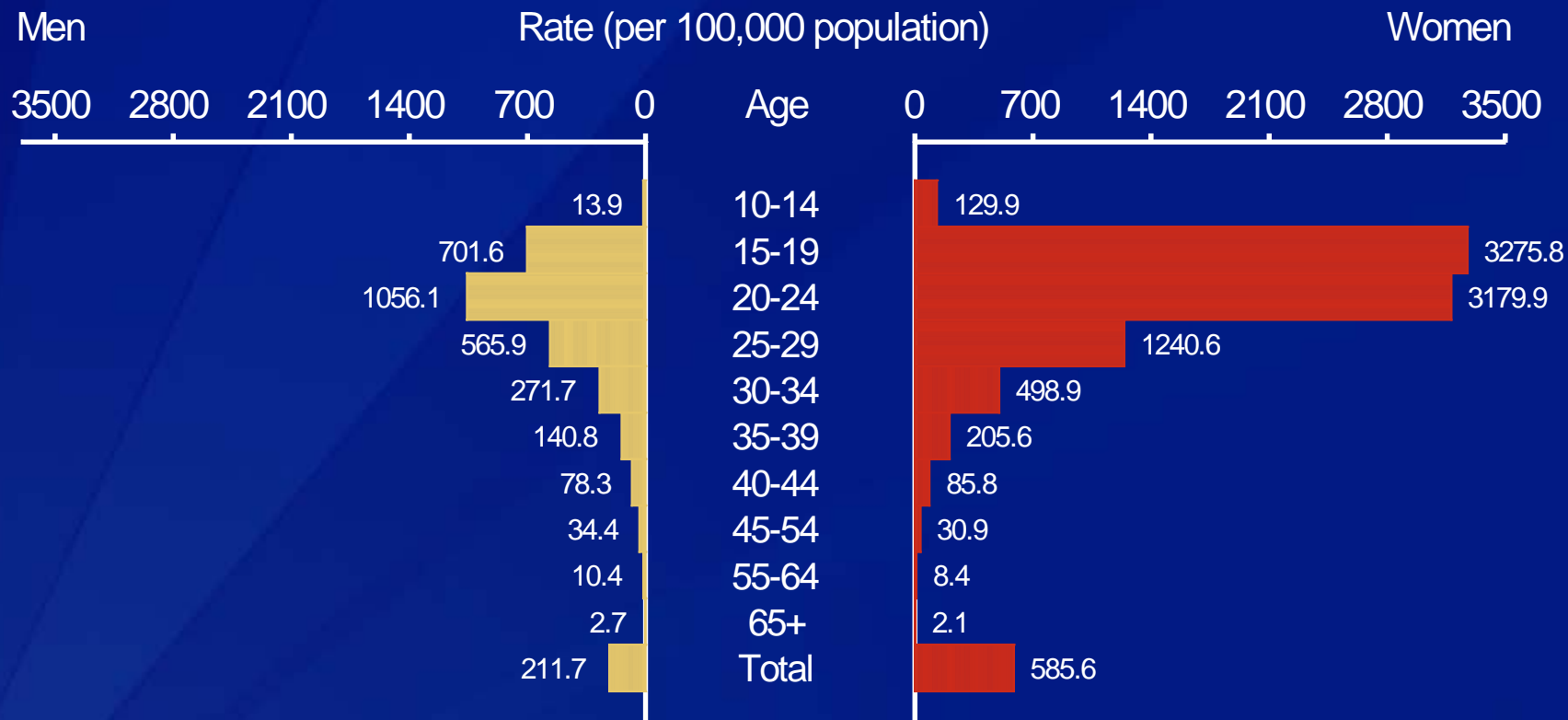
- Withdrawal
- Spermicides

Condoms



- Male and female condoms
- US MEC for all ages: 1
- Male latex condoms reduce risk of STIs, including HIV, when used correctly and consistently

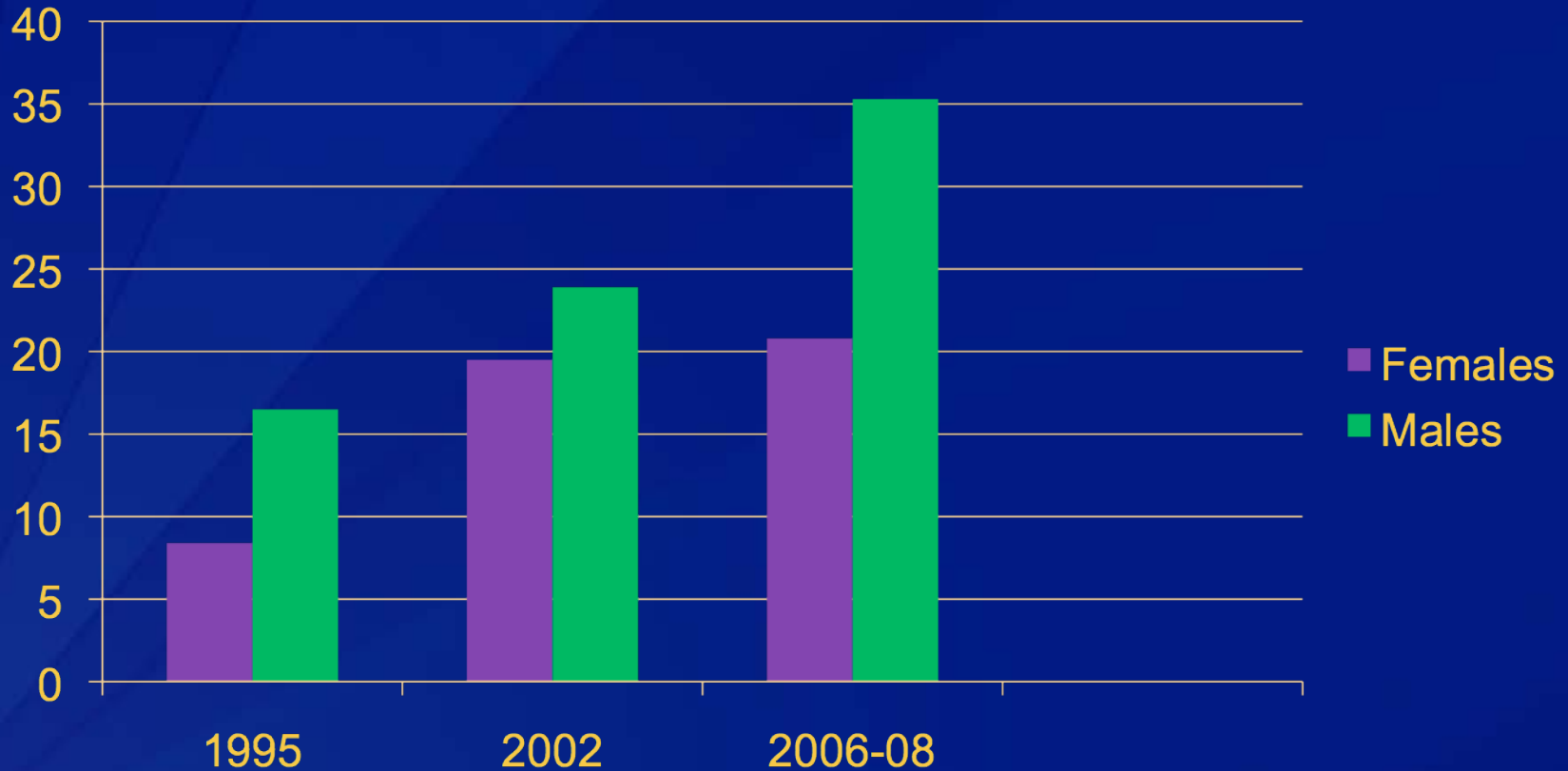
Chlamydia — Age- and sex-specific rates: United States, 2008



CDC, 2008

Dual Protection

Use of dual methods (condom and hormonal method) among 15-19 year olds, who had sex in 3 months prior to interview



Abma et al., NSFG, 2010.

Emergency contraceptive pills

- Take up to 120 hours after unprotected sex
- Current products: levonorgestrel
 - Without prescription: ages 17+
 - Prescription: ages < 17
- New formulation: ulipristal acetate
 - Marketed in late 2010
 - May be more effective than levonorgestrel
 - Prescription only

Take Home Messages

- Rates of adolescent pregnancy in the US are decreasing, but remain high
- Adolescents who are at risk of unintended pregnancy need access to highly effective contraceptive methods.
- Adolescents are eligible to use all methods of contraception
 - there is no contraceptive method that an adolescent cannot use based on age alone
- Long-acting, reversible contraception (LARCs) may be particularly suitable for many adolescents
 - IUDs
 - Implants

Resources

- **US MEC published in CDC's Morbidity and Mortality Weekly Report (MMWR):**

http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5904a1.htm?s_cid=rr5904a1_w

- **CDC evidence-based family planning guidance documents:**

<http://www.cdc.gov/reproductivehealth/UnintendedPregnancy/USMEC.htm>

- **WHO evidence-based family planning guidance documents:**

http://www.who.int/reproductivehealth/publications/family_planning/en/index.html

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