

Contraception as a Multi-Purpose SRH Technology

Advancing Prevention Technologies Symposium

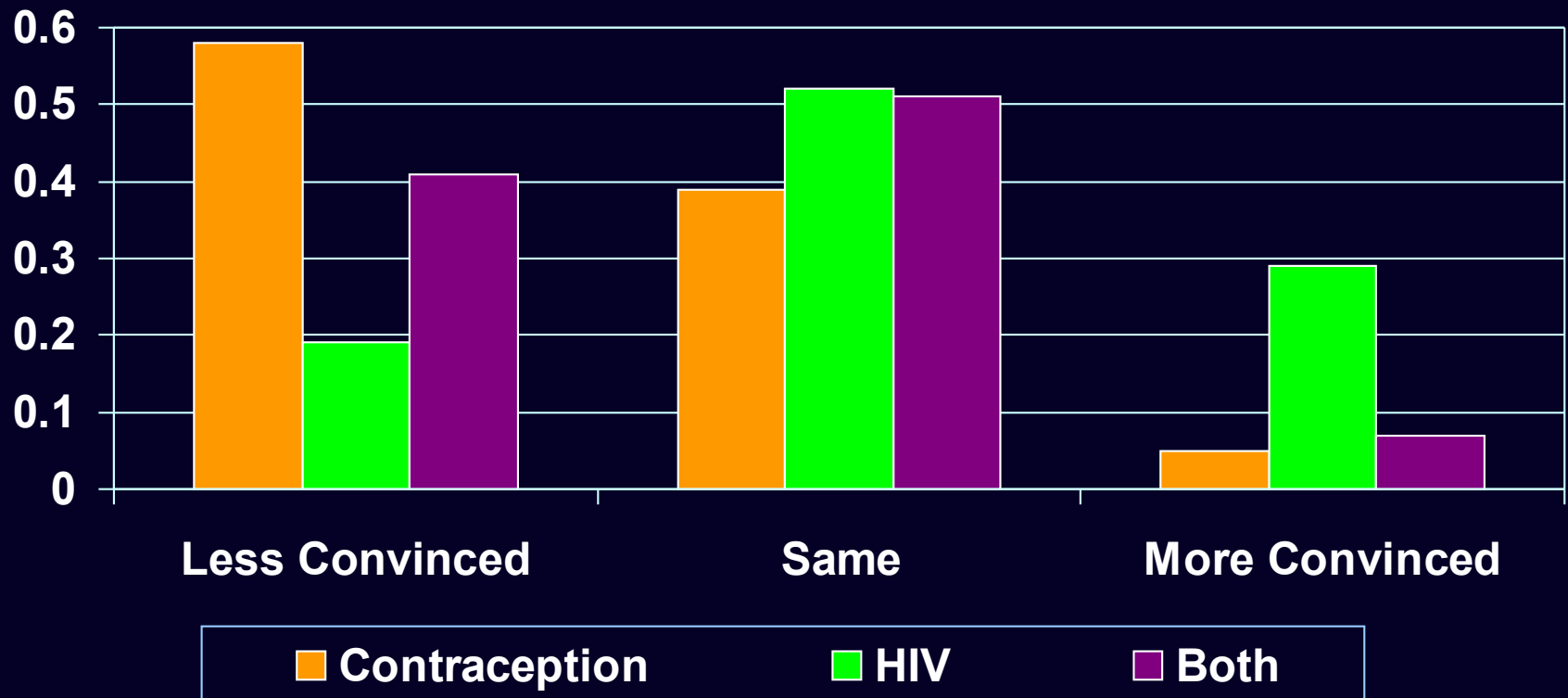
Berkeley, CA

March 24, 2009

Family Planning and HIV/STD: Strange or Natural Bedfellows

- **Three decades of courtship**
- **Similarities**
- **Differences**
- **“Divided We Fail”**

Different Views on Hormone/HIV Association - 1996



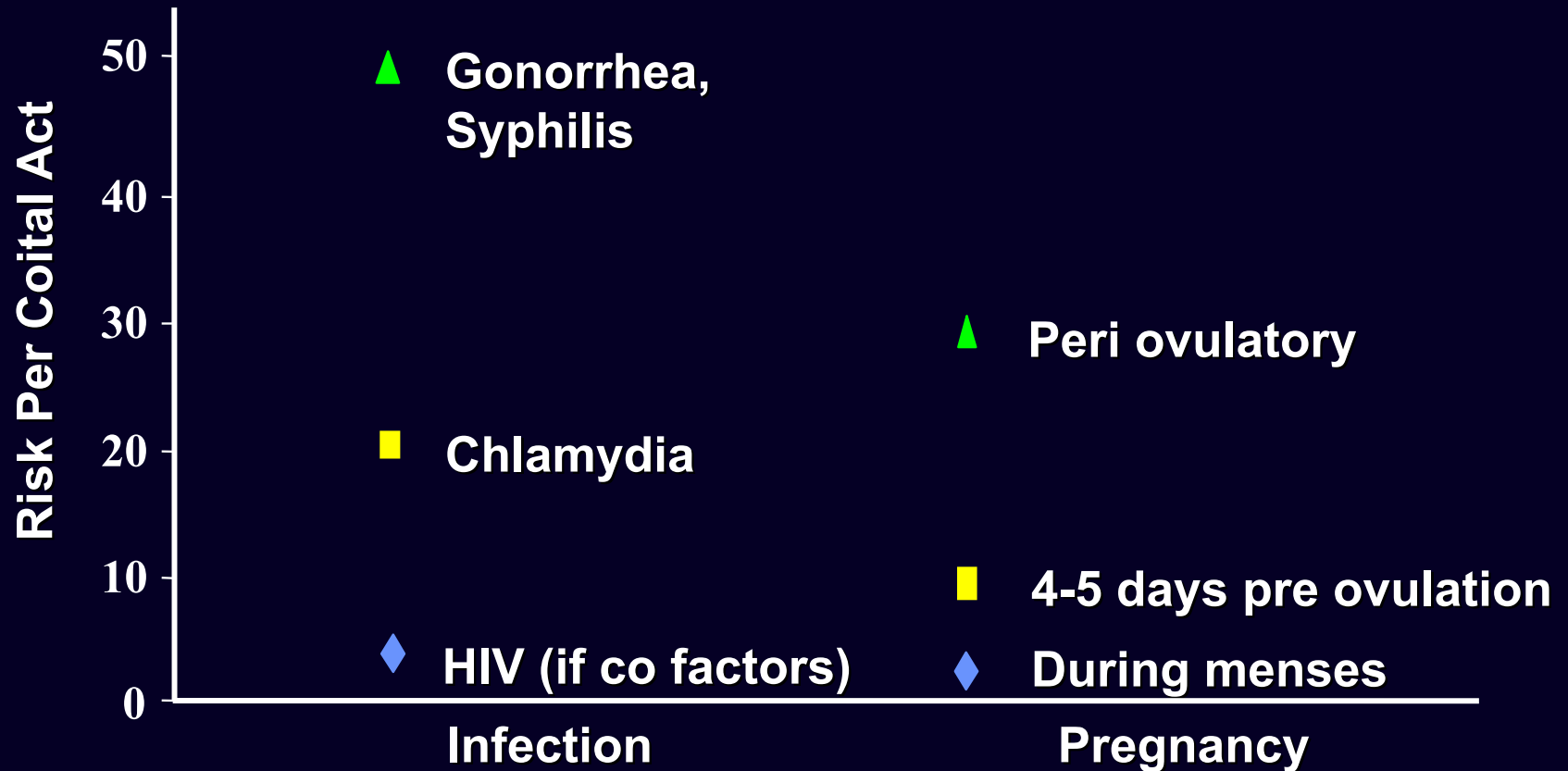
Contraception and STD/HIV: The Rationale

- **Most persons choosing contraception are uninfected – even in high prevalence regions**
- **Their main concern (besides not getting pregnant) is staying uninfected**
- **What do the data show for the two most widely available contraceptives: male condoms, hormonals?**

Dual Protection - Key Concepts

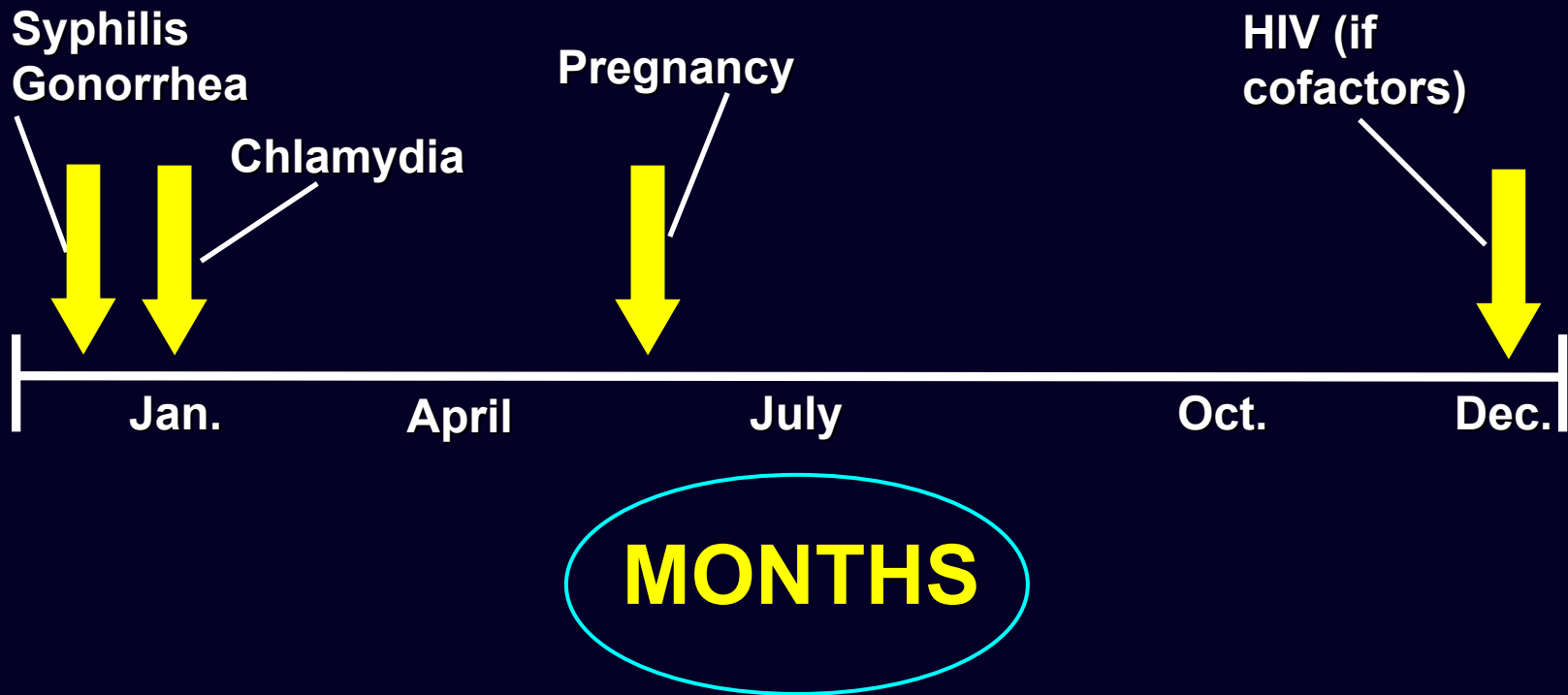
- **Risks of pregnancy and infection**
- **Effectiveness of contraception**
 - ideal use
 - typical use
- **Effectiveness of HIV prevention**
 - ideal use
 - typical use

Risk of Events Per Single Act of Unprotected Intercourse

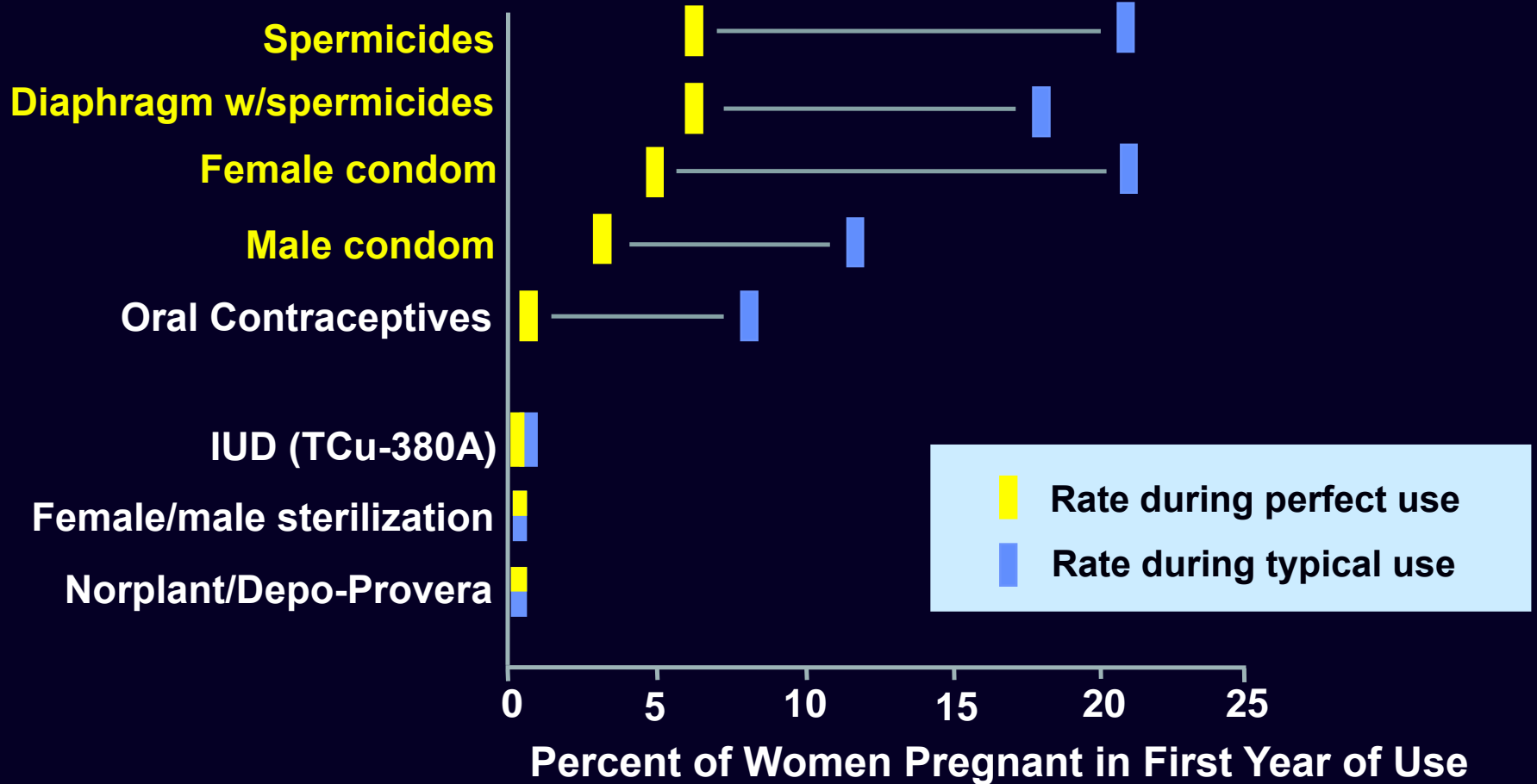


Sources: Anderson (1999); Wilcox (1995)

Estimated Risks from 2 Acts of Unprotected Intercourse Per Week

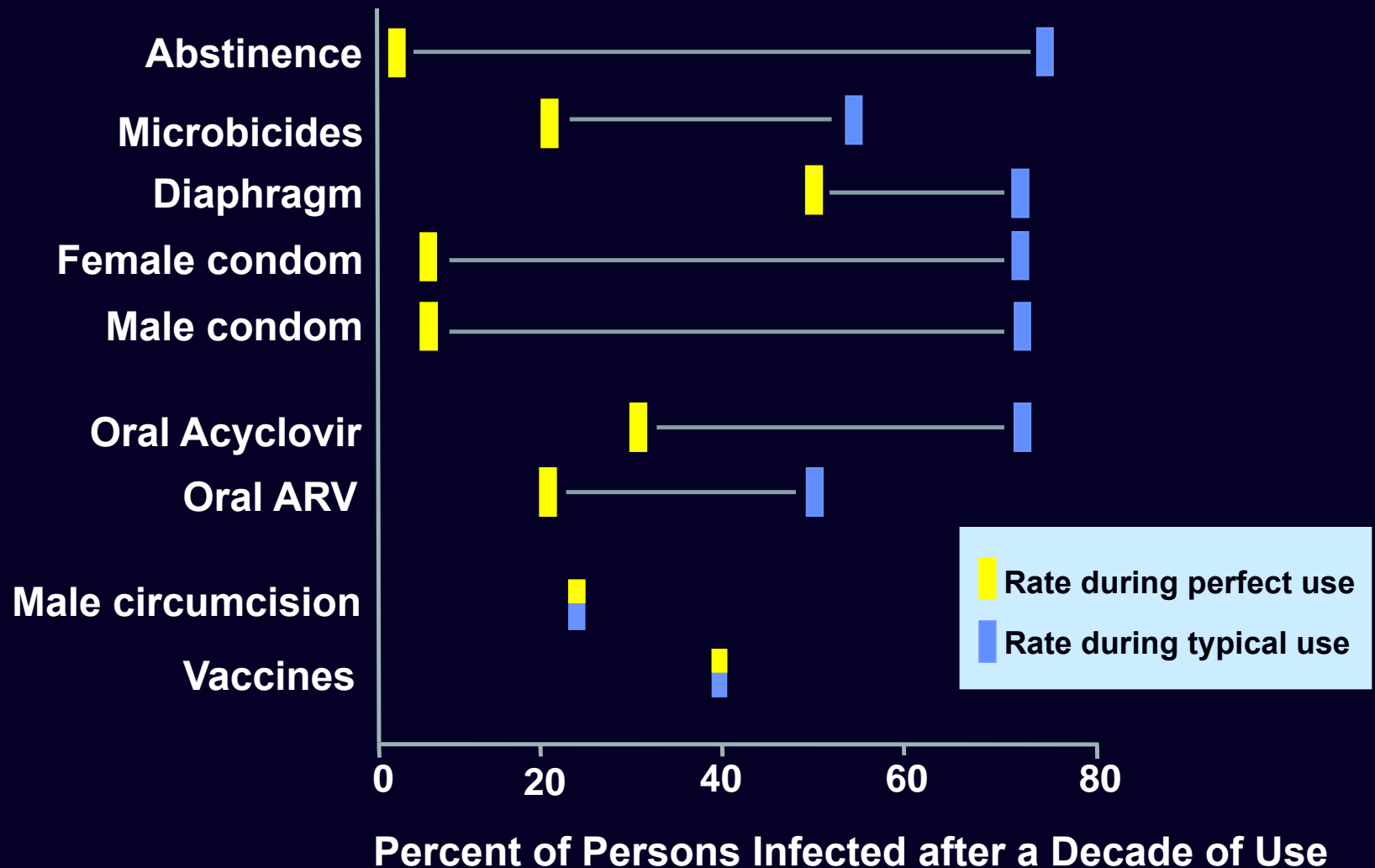


Contraceptive Pregnancy Rates



Source: Trussell (2008)

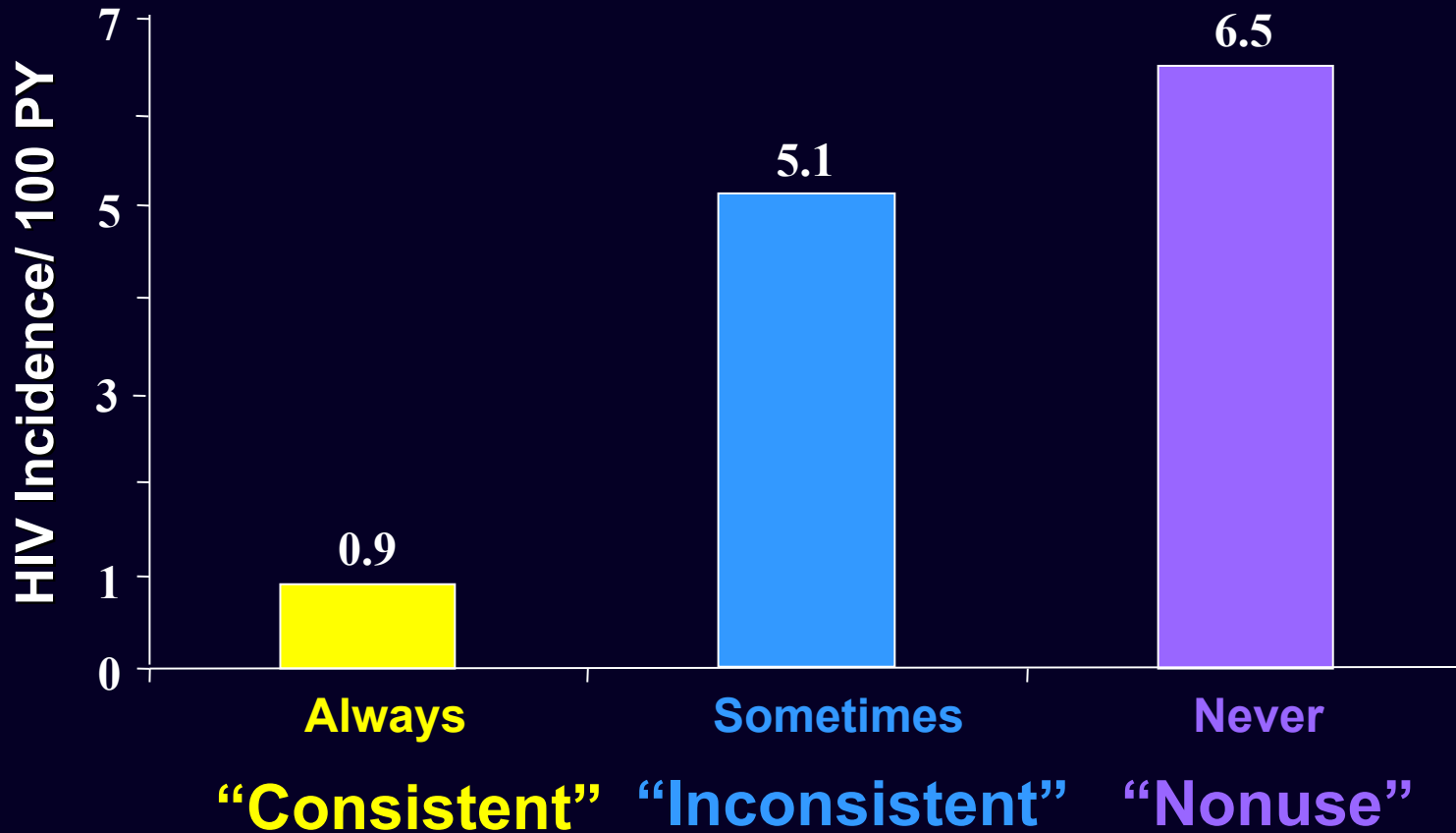
HIV Prevention Tools - Infection Rates



Contraception and STD/HIV: The Most Widely Available Methods

- **Male Condoms**
- **Hormonals**

Risk of HIV Transmission, By Consistency of Condom Use, Discordant Couples



Source: Davis and Weller (1999)

Condom Efficacy – Philippines Study

- Design: RCT of antibiotic prophylaxis in naval seamen on shore leave
- Participants:
 - Placebo group
 - Sex workers (30% gonorrhoea)
- Questionnaire: Sexual behaviors on leave
- Outcome: Gonorrhoea/NGU

Source: Hooper, 1978, AJE

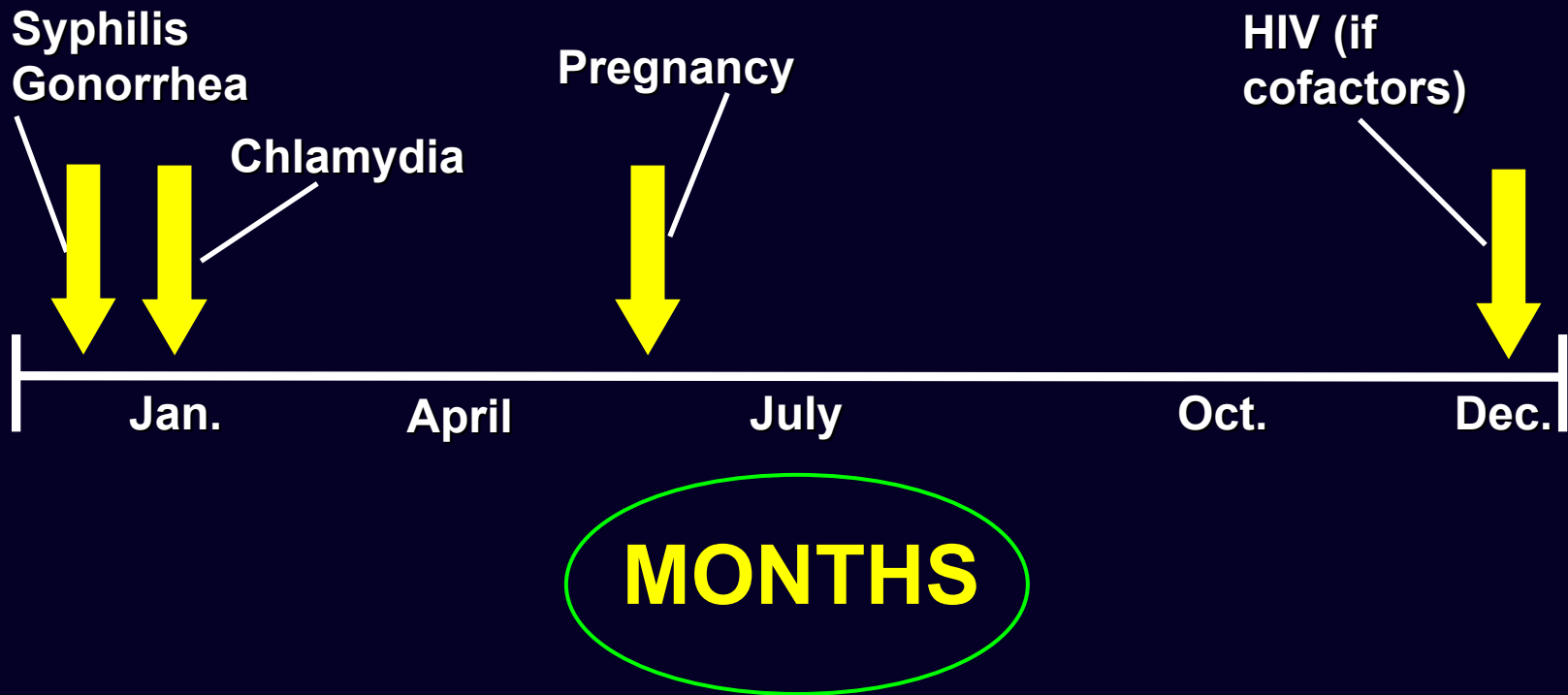
Condom Efficacy – Gonorrhea and NGU

<u>Condom Use</u>	<u>Number exposed</u>	<u>Number infected</u>	<u>Rate</u>
Users	29	0	0.0*
Non-users	499	71	14.2%
Total	528	71	13.4%

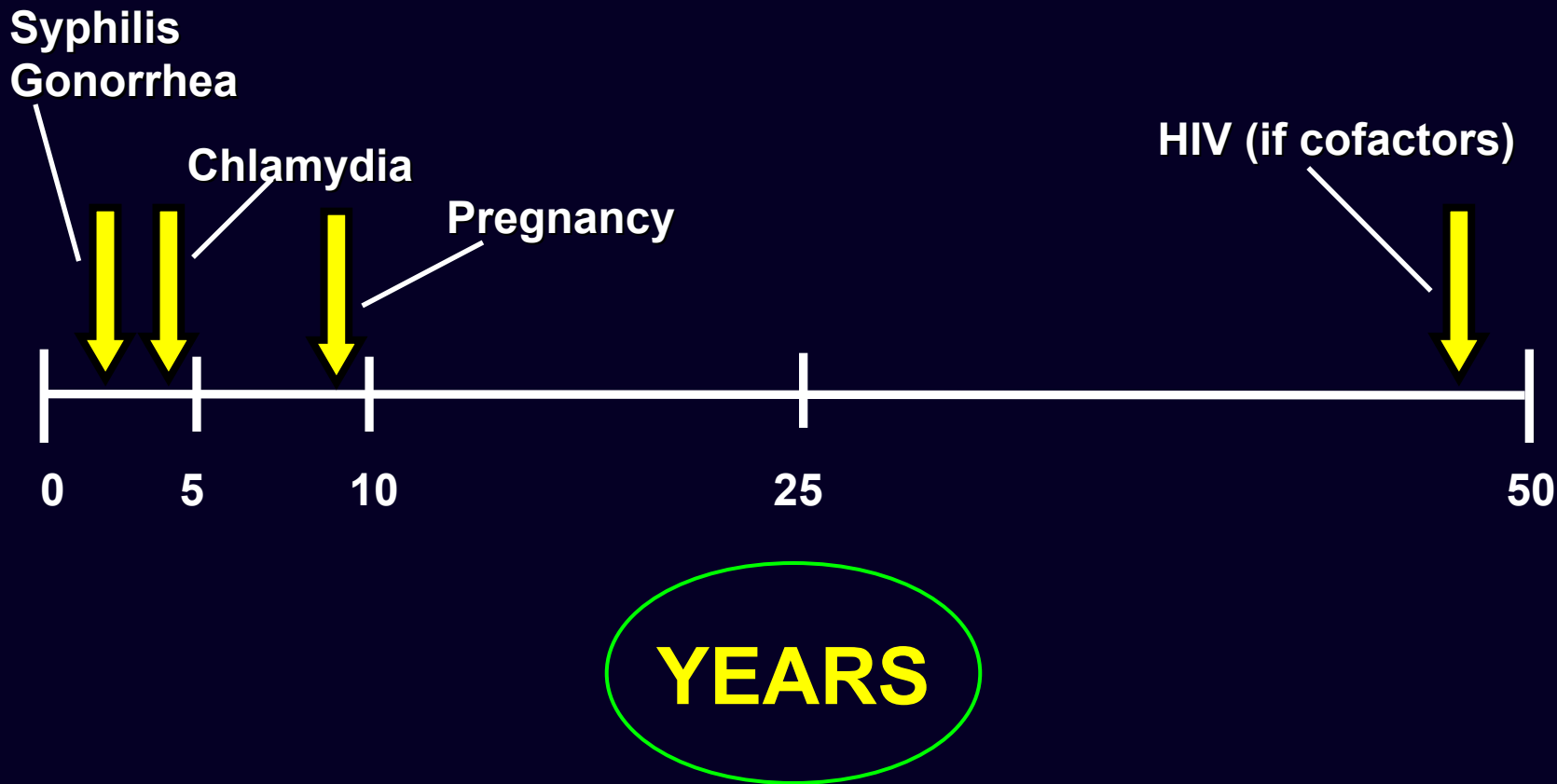
* $p < 0.05$ by Fisher's, 1-tailed test

Source: Hooper, 1978; Cates and Holmes, 1995

Estimated Risks from 2 Acts of Unprotected Intercourse Per Week



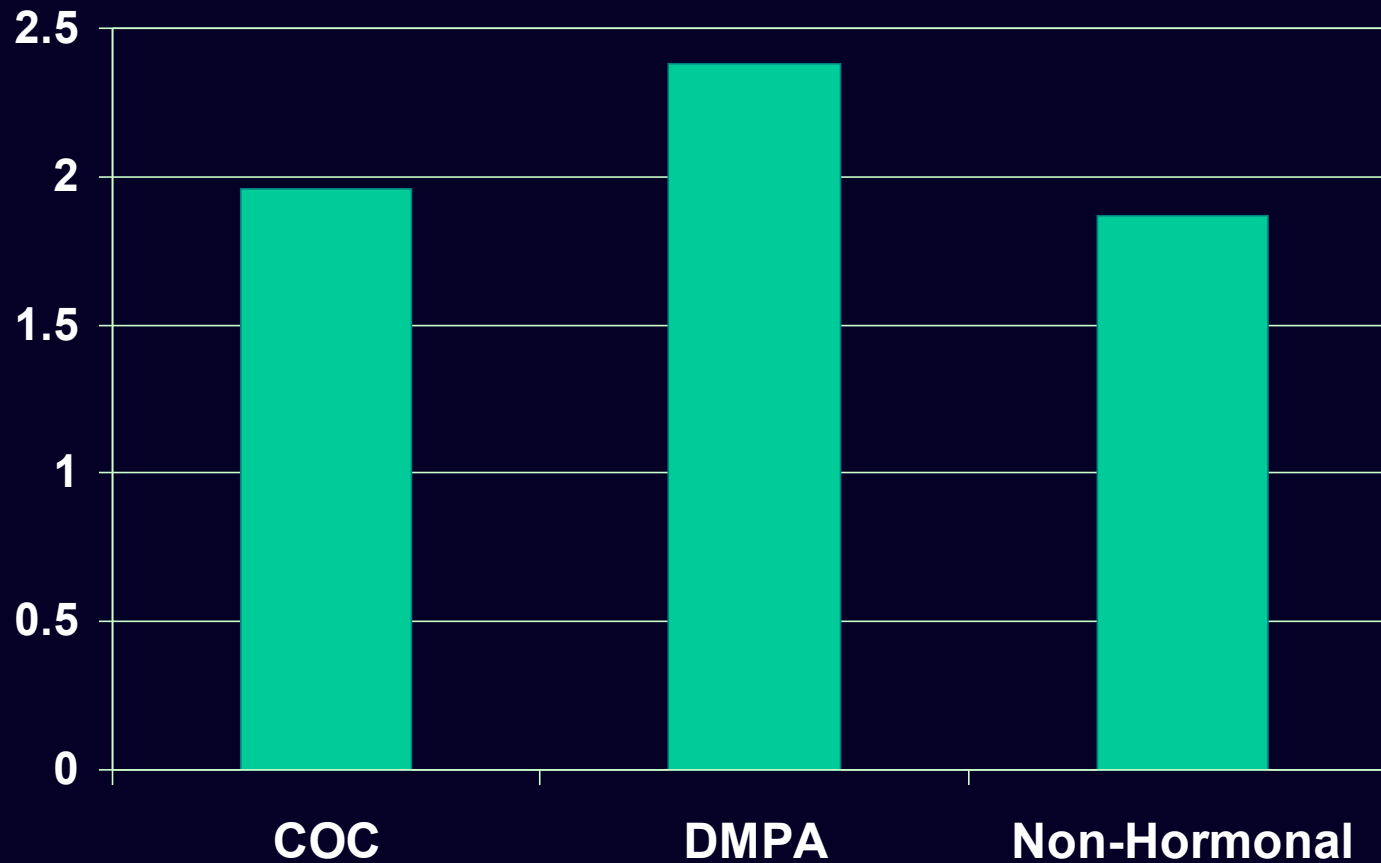
But If Protected by Condoms



Hormones and STD/HIV Possible Mechanisms

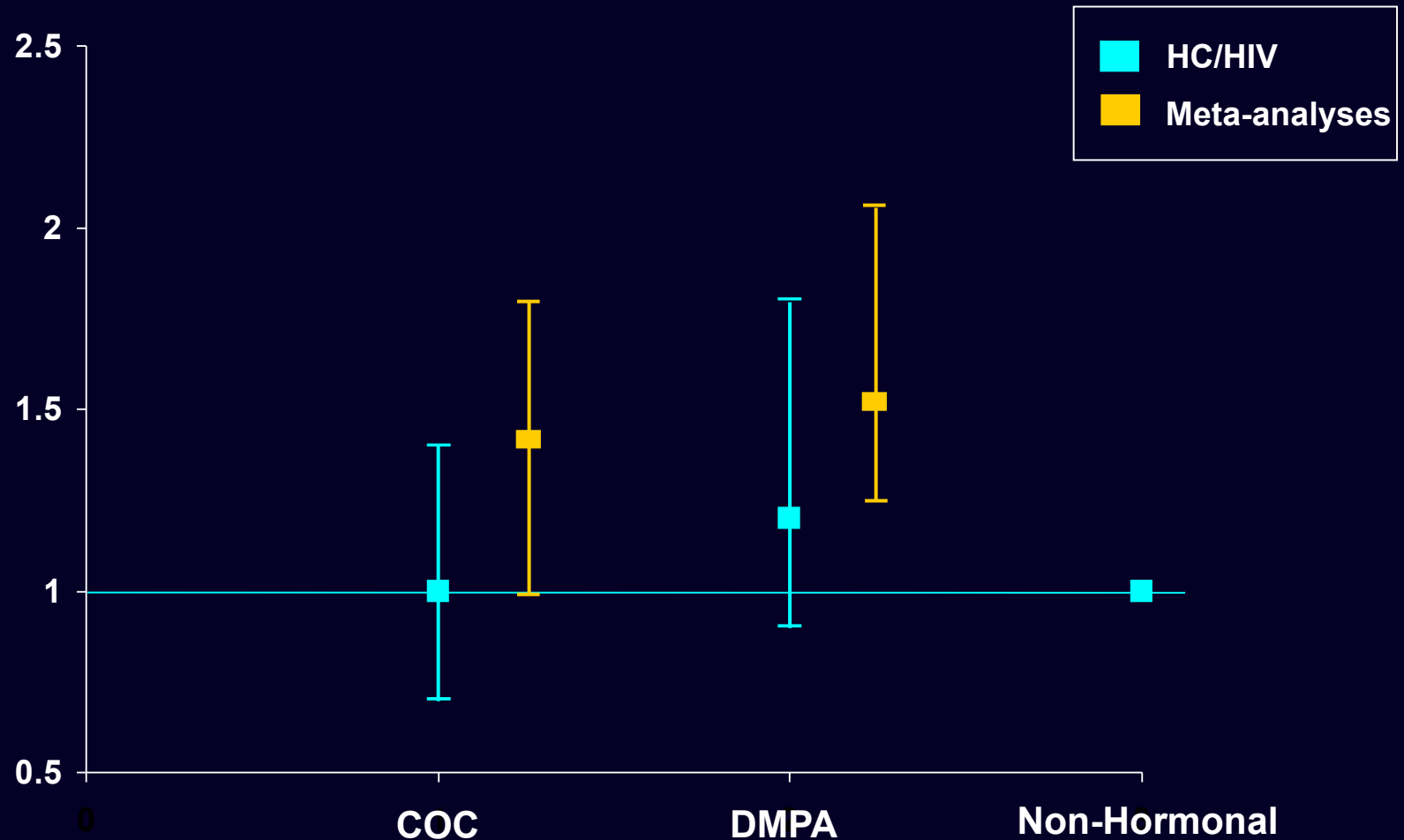
- **Vaginal and cervical epithelium
(ectopy, etc.)**
- **Cervical mucus**
- **Menstrual patterns**
- **Vaginal and cervical immunology**
- **Viral (HIV) replication**
- **Acquisition of other STI**

Overall HIV Incidence by Contraceptive Group



Source: Morrison (2006)

Relative Risk in HC/HIV Study Compared to Previous Meta-analyses



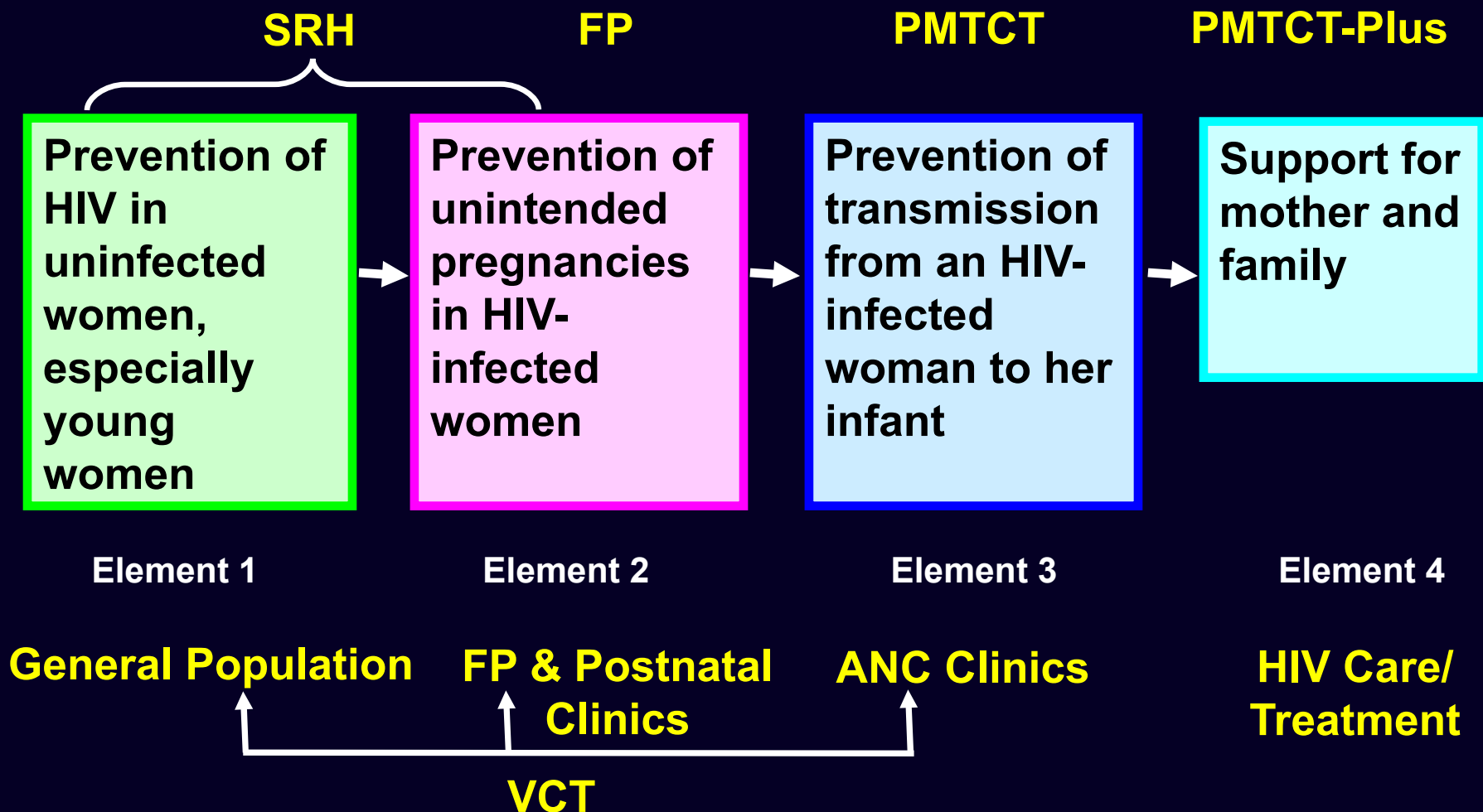
HC/HIV Data: Implications

- **Encouraging findings overall**
 - Point estimates lower than other well-done studies
 - No significant association HC/HIV
- **A few unanswered questions**
 - HSV status
 - Young age
- **No change in WHO or IPPF Guidelines**

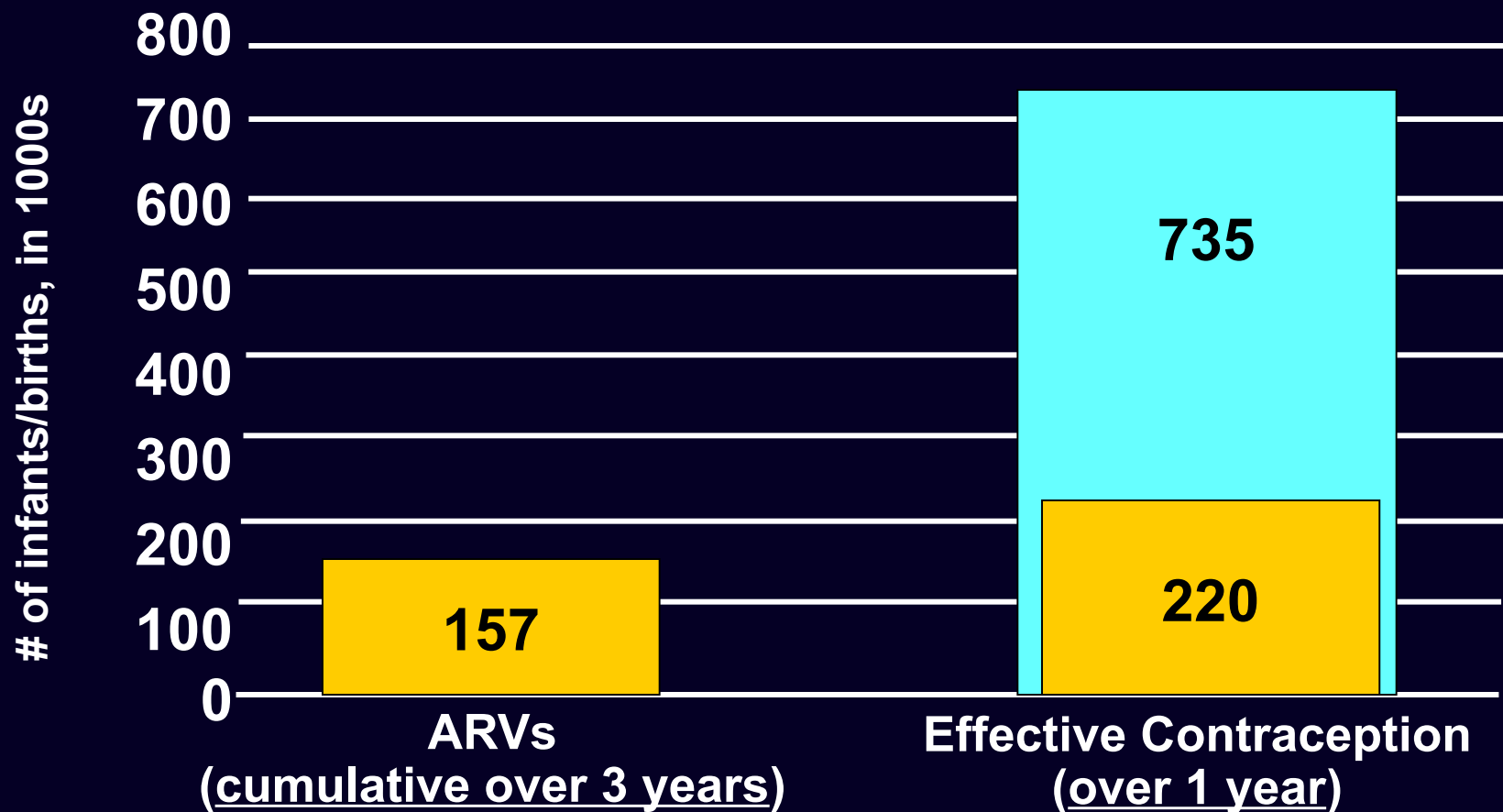
Contraception and HIV

- **Programmatic synergy**
- **Contraception as HIV prevention**
- **The “win-win” of a multipurpose approach**

WHO Four Element PMTCT Strategy



Contraception as HIV Prevention – Compared to ARVs



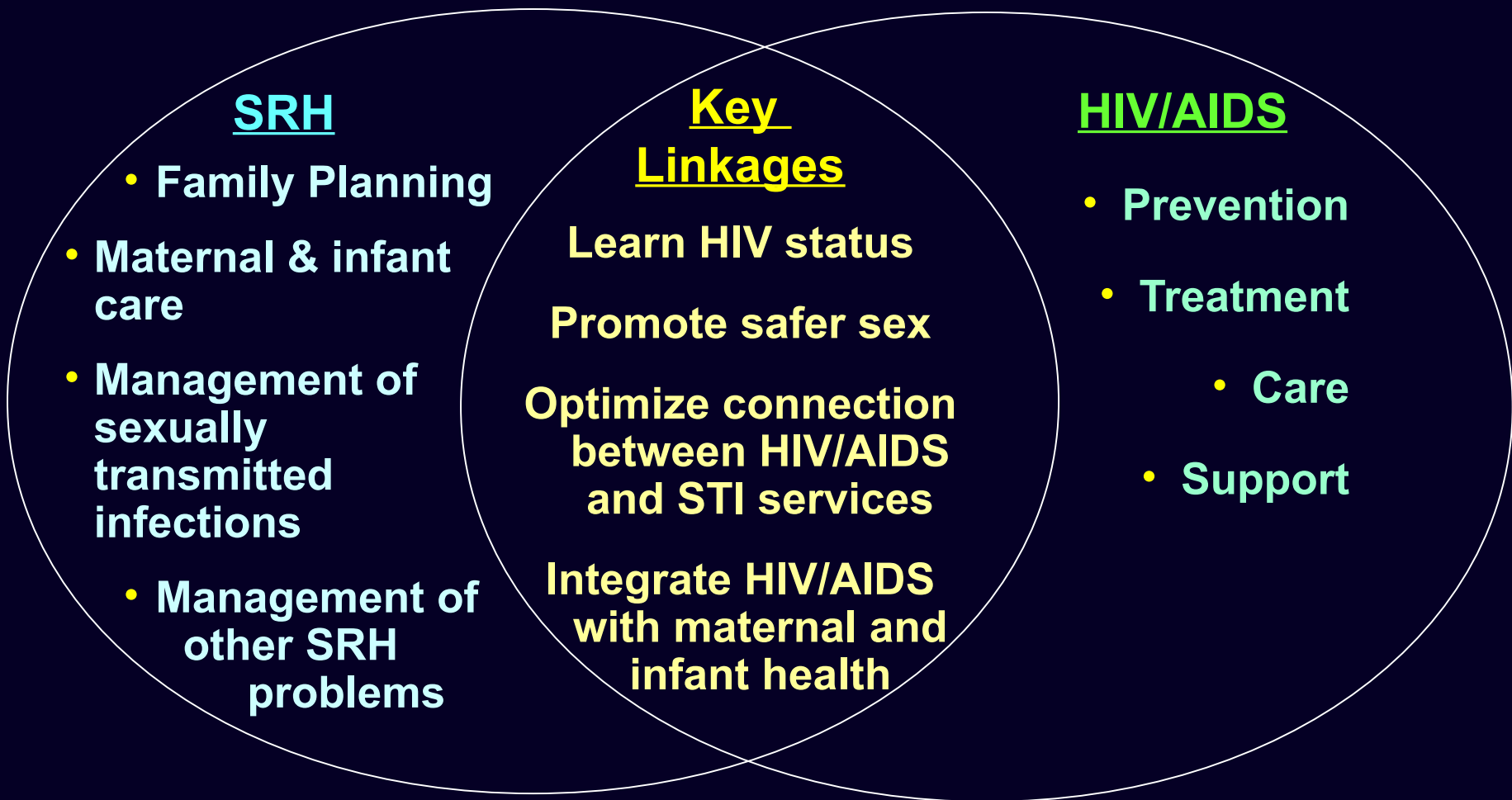
- # infants spared HIV infection
- # unintended births prevented

Sources: PEPFAR (2008), Reynolds (2008)

Contraception – The BEST KEPT SECRET in HIV Prevention

- **Effective contraception for HIV-infected women who do not wish to become pregnant**
 - Prevents more infants becoming infected than NVP
 - Decreases the number of future orphans
- **Key Question – how best to promote the SRH/HIV linkages?**

SRH and HIV: Key Linkages



The Sexual Health Triad

“Divided We Fail”

