IMPROVED PUBLIC HEALTH RESPONSE TO *C. TRACHOMATIS*:

Evidence from studies of the Baltimore, MD USA population, 1997 – 2009

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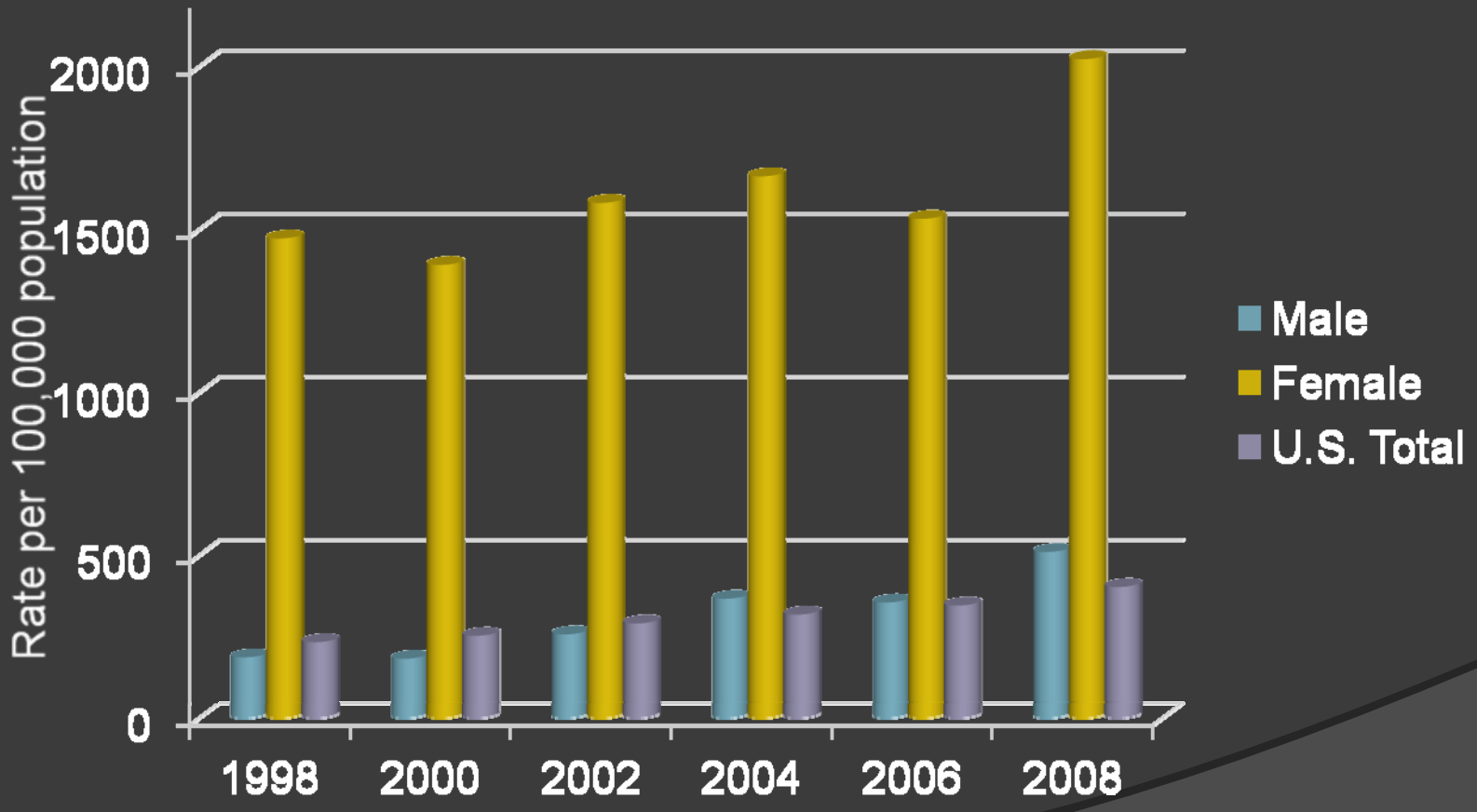
C. trachomatis most common reportable infectious disease in U.S.

- Over 1.2 million cases in 2008
- Routine screening recommended for all sexually active women <25 years of age (USPSTF, 2007)
- No current recommendations for screening men

Reported CT rates by sex: Baltimore City, MD USA



Source: Baltimore City Health Department (2010)

STI surveillance data are limited for inferring trends in the population burden of infection

- Increased case rates may reflect:
  - Increased or expanded screening
  - Increased diagnoses due to enhanced test performance
  - Better reporting
  - Increased risk behaviors of screened population
  - Increase in disease

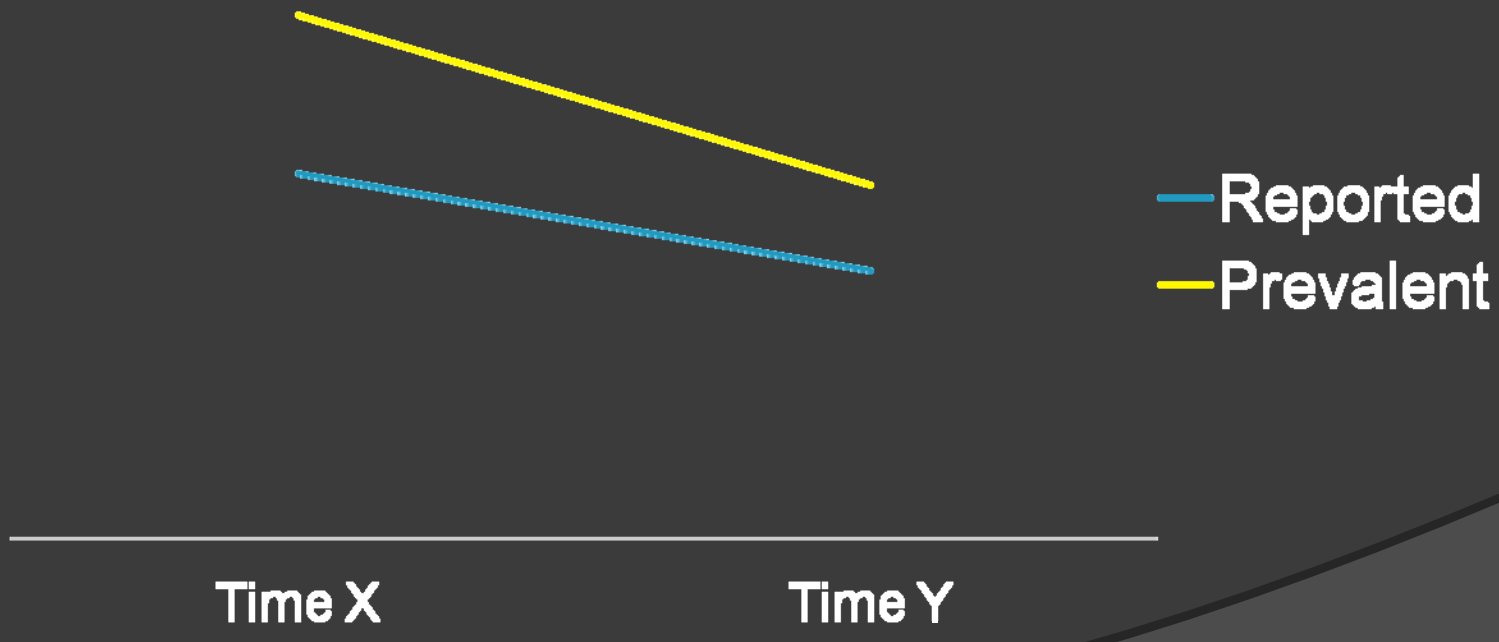
Population based approaches to measuring STI prevalence

- Integrate population-based sampling methods with STI biomarkers
- Provide more accurate understanding of prevalence and patterns of undiagnosed infections
- Complement traditional surveillance data

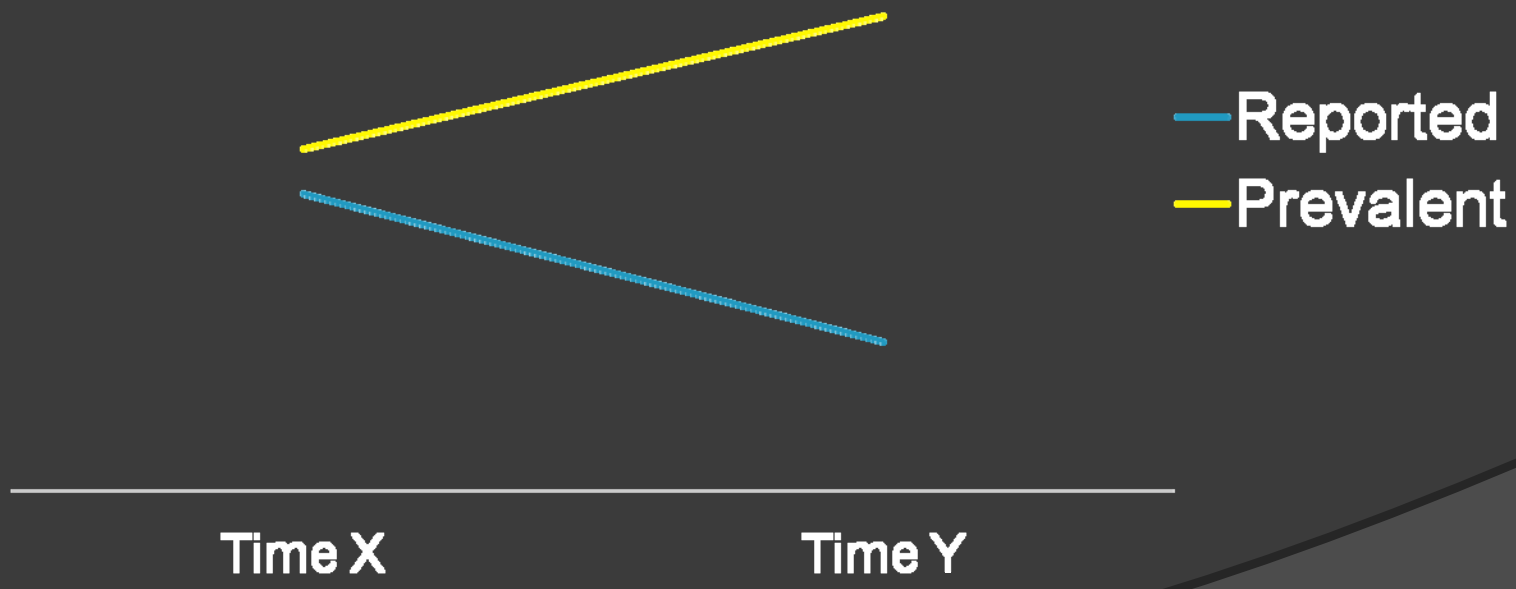
Monitoring STIs in the Population

- A new paradigm for STI epidemiology, including *C. trachomatis*
- Focus simultaneously on
  - *Diagnosed* CT infections reported to local health departments
  - *Undiagnosed* CT infections prevalent in the population

Trends in STI epidemiology: scenario 1



Trends in STI epidemiology: scenario 2



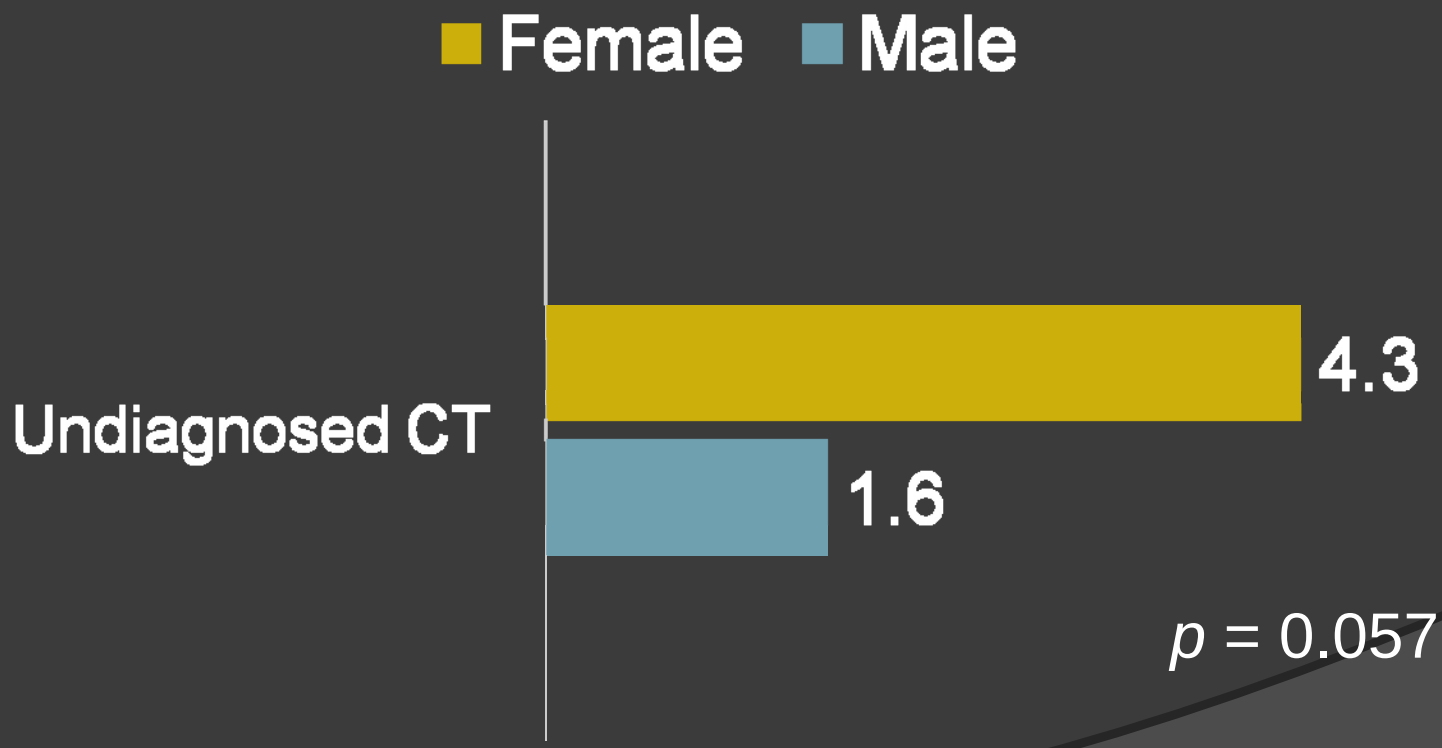
Study Aims

- To examine trends, by sex, in diagnosed and prevalent *C trachomatis* infections among young adults in Baltimore, Maryland USA in 1997-98 and 2006-09.

1997-98 Baltimore STI and Behavior Survey (BSBS)

- In-person, probability survey
- 728 aged 18-35 completed ACASI on sexual behavior, STI history
- 579 (80%) respondents provided urine specimens, LCR testing

1997-98 BSBS: Estimated CT prevalence



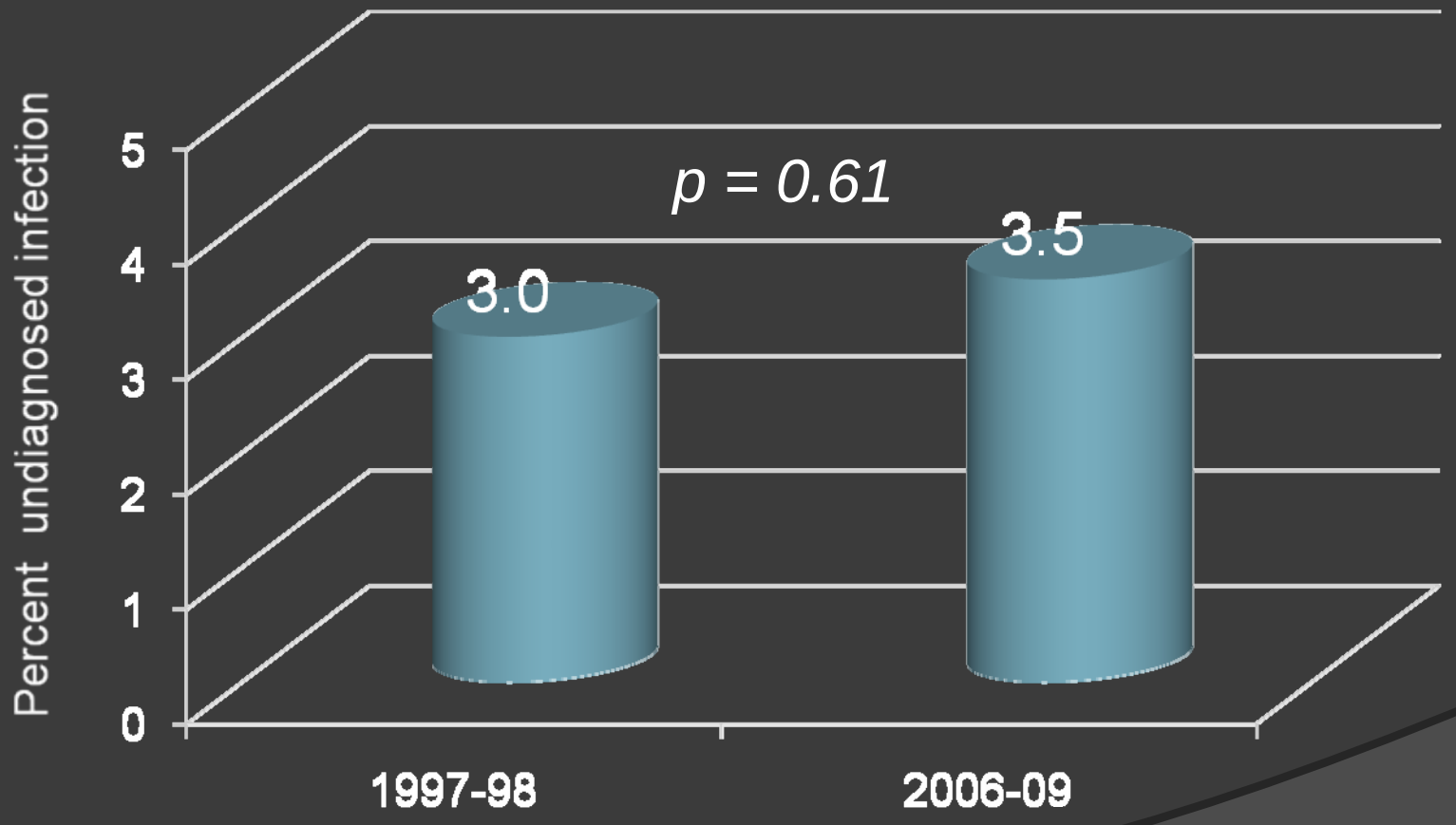
2006-09 MSSP Survey Program

- Baltimore adolescents and adults, ages 15 to 35 yrs
- T-ACASI on sexual behaviors and STI history
- Mail-out, mail-back specimen collection, Gen Probe testing

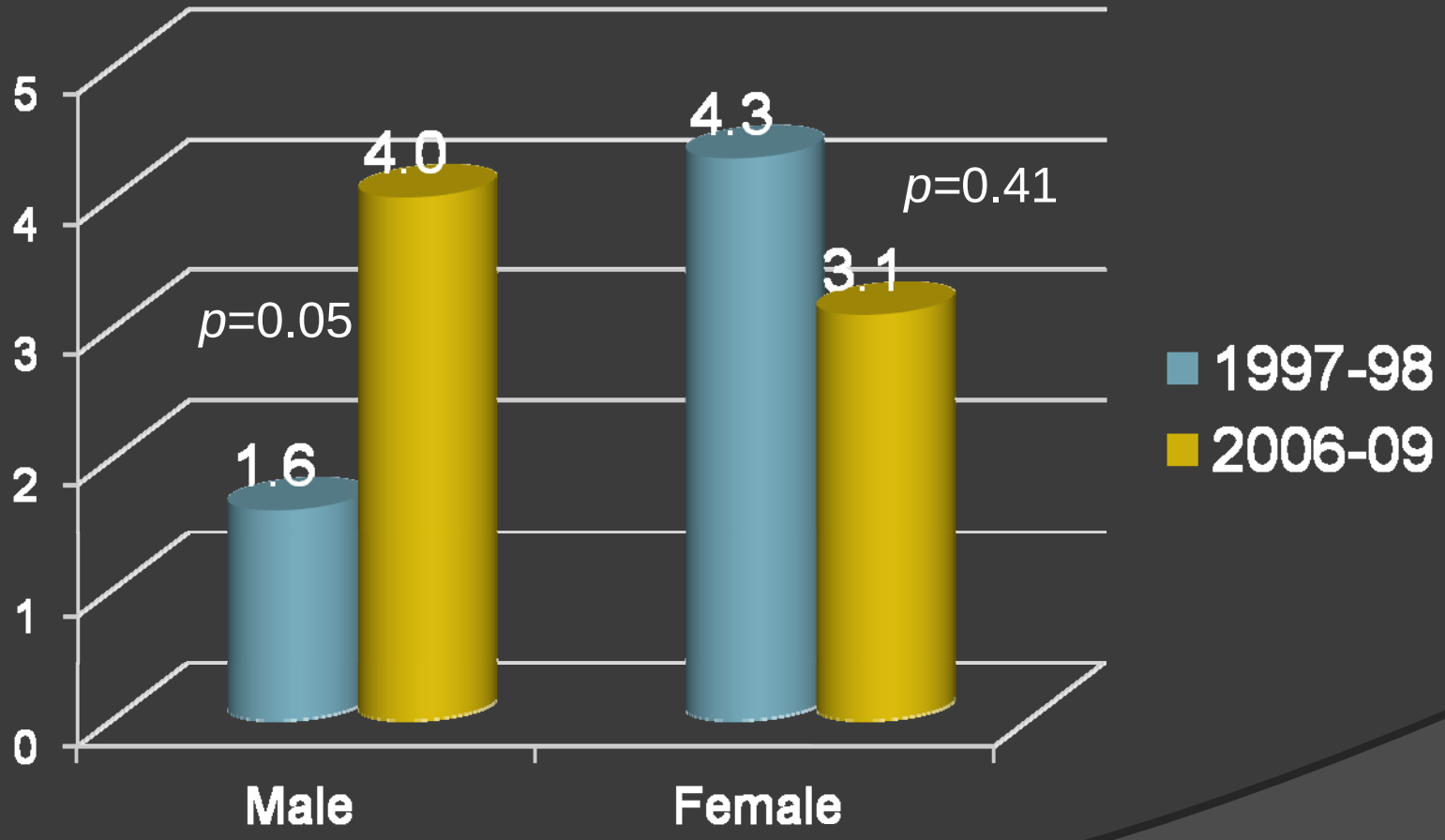
2006-09 MSSP Survey Program

- Interviews completed with 2,936 (59%) eligible respondents
- 2,471 (73%) provided specimens for CT testing

Overall CT prevalence stable across surveys



Variation in CT survey prevalence by gender



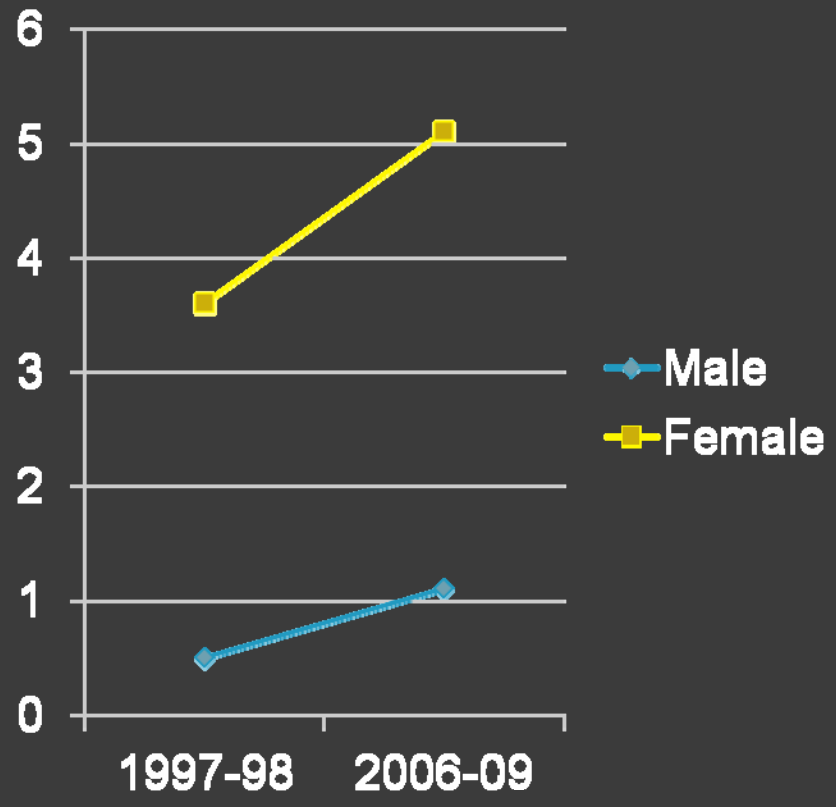
CT diagnoses to Baltimore City Health Department

	1998		2006-09	
	No. cases	Pop %	No. cases	Pop %
Males				
	391	0.5	878	1.1
Females				
	3255	3.6	4475	5.0

Source: BCHD case counts of CT infection,1998 and September 2006-June 2009 and US Census estimates of Baltimore population ages 18-35

Variation in CT trends by sex

Pop. Prevalence, survey



Pop. %, BCHD reports

Conclusions

- From 1997 to 2009, CT reported diagnoses increased, among both males and females.
- Overall population survey estimates stable, however insignificant decline in CT prevalence among females and increase among males.

Conclusions

- Expanded screening results in more diagnosed and treated cases – a major public health benefit for women
- However, many infections among young men remain undiagnosed in Baltimore

Conclusions

- In communities with high levels of infection, routine screening of men and women may be recommended

Conclusions

- Given the limitations of chlamydia surveillance data, prevalence data from representative surveys can make important contributions to understanding the epidemiology of these STIs