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Introduction

- Mycoplasma genitalium* (MG) is a new sexually transmitted infection (STI) per national guidelines and strategies to identify individuals at risk for infection are limited
- A high score on a sex risk quiz predicted STI in prior research, but it is not known if the risk quiz identifies individuals at risk of MG

Objective

- To determine if the sex risk quiz predicts MG infection in adolescent and young (AYA) women

Methods

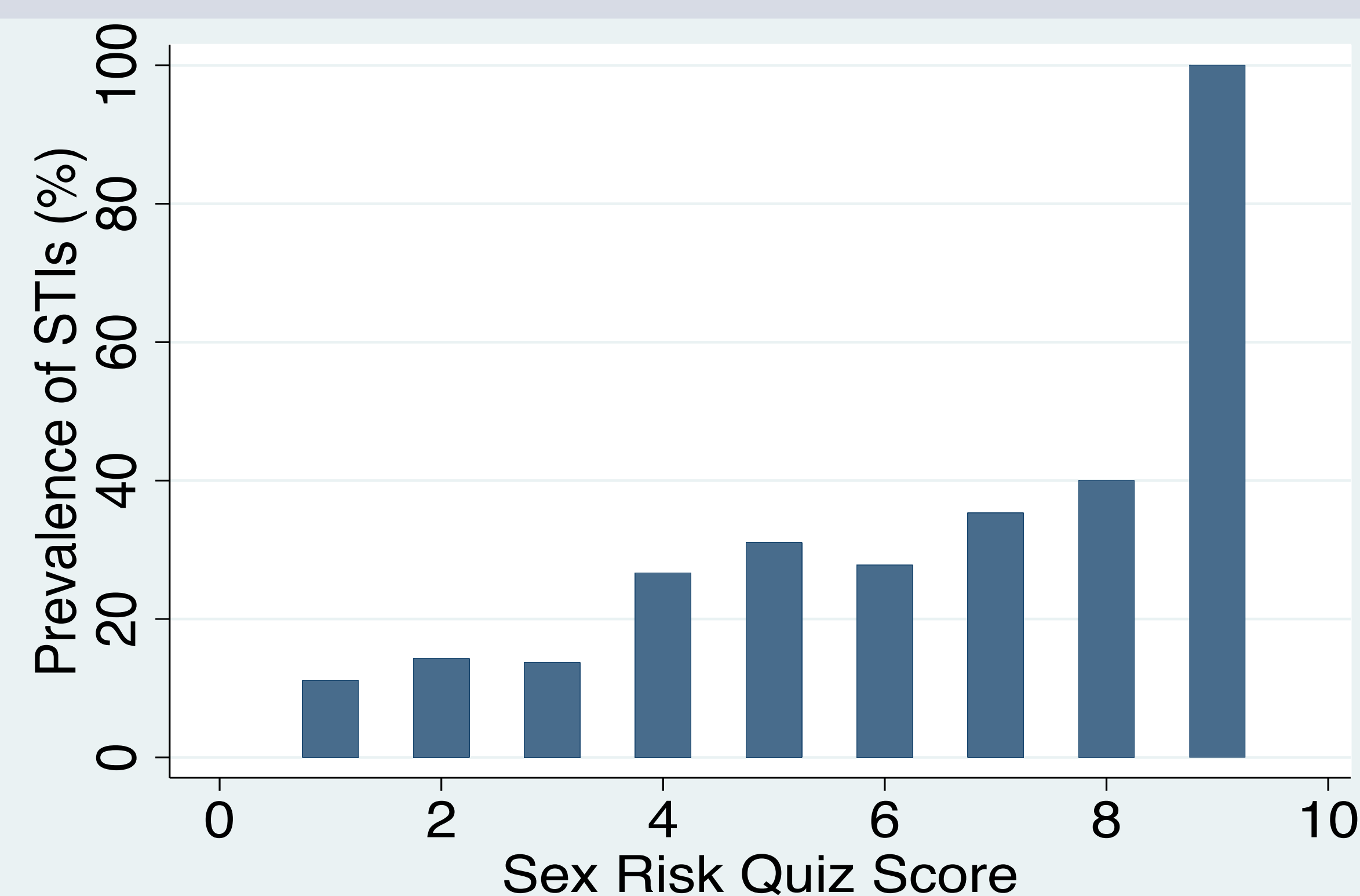
- Cross-sectional analysis from a prospective longitudinal study
- Pregnant and nonpregnant female patients, aged 13 to 29 years, seeking routine obstetric and gynecologic care at a large academic medical center were recruited by trained research staff
- Self- or clinician-collected vaginal swabs were tested via Hologic/Gen-Probe transcription-mediated amplification for *Mycoplasma genitalium* (MG), *Trichomonas vaginalis* (TV), *Chlamydia trachomatis* (CT), and *Neisseria gonorrhoeae* (GC)
- Participants provided demographic and medical information and completed an Age-Modified Sexual Risk Quiz
- Risk quiz scores were categorized as low-, medium-, and high-risk based on STI prevalence for each quiz score (Figure 1)
- Multivariable logistic regression was used to examine the association of the sex risk quiz score and STI infection
- Johns Hopkins Medicine Institutional Review Board Approval

Table 1. Age-Modified Sex Risk Quiz

Questions	Score
1. Are you less than 25 years old?	Yes = 1 point. N = 0 points.
2. Have you had a new sex partner, or multiple partners, in the last 90 days?	Yes = 1 point. N = 0 points.
3. Do you have more than one current sex partner at the present time?	Yes = 1 point. N = 0 points.
4. Have you ever been told you had, or been treated for, an STI in the past?	Yes = 1 point. N = 0 points.
5. How many sex partners have you had in the last 90 days?	10 or more = 3 points. 5-9 = 2 points. 2-4 = 1 point. 0-1 = 0 points.
6. When you have sex, do you use a condom?	Never = 3 points. Sometimes = 3 points. Always = 0 points.

Results

Figure 1. Prevalence of STIs by Sex Risk Quiz Score



Risk Quiz Categorization: Low [0-3], Medium [4-6], High [7-10]

Results (continued)

Table 2. Participant Characteristics

Characteristics	Category	Number (%)		
		Not Pregnant Participants N = 328	Pregnant Participants N = 196	All Participants N = 556
Age	Mean [SD]	22.3 [3.8]	22.5 [3.7]	22.3 [3.7]
Race	Black	257 (78.4)	166 (84.7)	453 (81.5)
	Other or Unknown	71 (21.6)	30 (15.3)	103 (18.5)
Hispanic Ethnicity	Yes	8 (2.4)	6 (3.1)	14 (2.5)
Education	≤ 8 th grade	3 (0.9)	2 (1.0)	6 (1.1)
	High School or GED	187 (57.0)	145 (74.0)	359 (64.6)
	Other	138 (42.1)	49 (25.0)	191 (34.4)
Marital Status	Single	209 (63.7)	103 (52.6)	327 (58.8)
	Married	12 (3.7)	17 (8.7)	32 (5.8)
	Committed Relationship	105 (32.0)	73 (37.2)	192 (34.5)
History of STI	Yes	168 (51.2)	93 (47.4)	280 (50.4)
Condom Use	Always	68 (20.7)	9 (4.6)	84 (15.1)
	Sometimes	156 (47.6)	71 (36.2)	240 (43.2)
	Never	103 (31.4)	115 (58.7)	230 (41.4)
Symptoms	Excessive vaginal discharge	69 (21.0)	23 (11.7)	100 (18.0)
	Dysuria	14 (4.3)	1 (0.5)	17 (3.1)

Figure 2. Overview of Participant Sex Risk Quiz Results

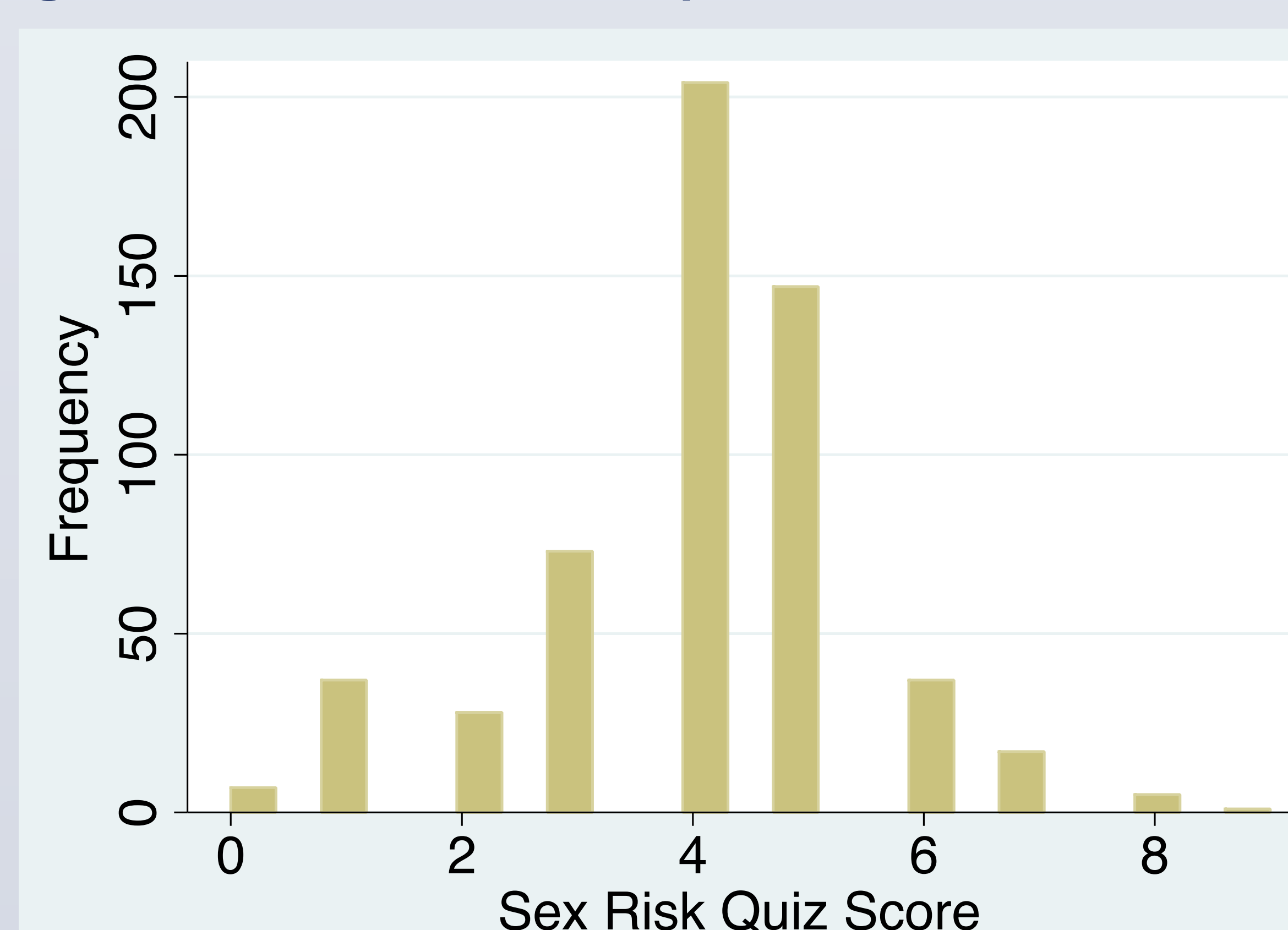


Table 3. Overview of STI Prevalence by Pregnancy Status

STI	Number (%)		
Pregnancy Status	Not Pregnant Participants	Pregnant Participants	All Participants
Mycoplasma	39 (11.9)	27 (13.8)	70 (12.6)
Trichomonas	21 (6.4)	20 (10.2)	45 (8.1)
Chlamydia	22 (6.7)	15 (7.7)	39 (7.0)
Gonorrhea	5 (1.5)	2 (1.0)	7 (1.3)
Any STI	73 (22.3)	53 (27.0)	135 (24.3)

Results (continued)

Table 4. Multivariable Logistic Regressions on the Association of Sex Risk Quiz Score Category and STIs

Ages 13-29 Years

<i>Mycoplasma Genitalium</i>			
Sex Risk Quiz Score Category	aOR (95% CI)		
	Not Pregnant Participants	Pregnant Participants	All Participants
Low	1.00	1.00	1.00
Medium	1.97 (0.76-5.13)	2.35 (0.49-11.23)	1.94 (0.91-4.14)
High	3.07 (0.74-12.75)	11.67 (0.50-274.76)	3.13 (0.92-10.66)
Any Sexually Transmitted Infection (MG, TV, CT, and/or GC)			
Sex Risk Quiz Score Category	aOR (95% CI)		
	Not Pregnant Participants	Pregnant Participants	All Participants
Low	1.00	1.00	1.00
Medium	1.43 (0.72-2.83)	3.78 (1.02-14.09)	2.08 (1.18-3.67)
High	2.30 (0.74-7.08)	7.44 (0.35-159.69)	3.43 (1.25-9.37)

Ages < 25 Years

<i>Mycoplasma Genitalium</i>			
Sex Risk Quiz Score Category	aOR (95% CI)		
	Not Pregnant Participants	Pregnant Participants	All Participants
Low	1.00	*	1.00
Medium	4.26 (0.90-20.18)	*	3.55 (1.02-12.34)
High	8.21 (1.24-54.33)	*	7.24 (1.48-35.48)
Any Sexually Transmitted Infection (MG, TV, CT, and/or GC)			
Sex Risk Quiz Score Category	aOR (95% CI)		
	Not Pregnant Participants	Pregnant Participants	All Participants
Low	1.00	1.00	1.00
Medium	2.05 (0.82-5.14)	3.99 (0.45-35.20)	2.49 (1.14-5.43)
High	4.93 (1.30-18.60)	9.44 (0.27-331.19)	4.59 (1.39-15.15)

* This logistic regression was not performed because there was inadequate risk score distribution

** Model controls for age and race

Conclusions

- The sex risk quiz predicts MG infection in female AYA less than 25 years of age
- The quiz also predicts having at least one STI (MG, TV, CT, and/or GC) in female AYA age 13-29 years and among female AYA less than 25 years of age

Limitations

- Non-probability clinic-based sampling
- Limited generalizability

Implications

- The sex risk quiz is a useful tool to help medical providers identify patients at risk of MG or STIs in a clinical setting
- Routine screening in this population at risk for STIs is warranted