

# Supplemental Information

## APPENDIX 1 SURVEY QUESTIONS

1. Does a specialized team (eg, Sexualized Assault Nurse Examiners) conduct medical evaluations for children presenting to your emergency department with sexual abuse/assault?
  - a. Yes
  - b. No
  
2. What year was the specialized team initiated?
3. Does your emergency department have a specialized pathway or order set for children with suspected sexual abuse/assault?
  - a. Yes
  - b. No
  
4. What year was the clinical pathway initiated?
5. What time cutoff in hours does your emergency department use for pubertal patients presenting with sexual assault for the following: STI testing, chlamydia/gonorrhea prophylaxis, emergency contraception?
  - a. 24 hours or less
  - b. 48 hours or less
  - c. 72 hours or less
  - d. 96 hours or less
  - e. 120 hours or less
  - f. No time cutoff
  
6. Sometimes clinicians may forego STI testing in cases of acute sexual assault in pubertal children to avoid impacting future criminal proceedings. Does this practice occur at your hospital?
  - a. Yes
  - b. No
  - c. Sometimes
  
7. Some hospitals may provide adolescents with prescriptions for STI prophylaxes/emergency contraception following acute sexual assault rather than administering the medications in the emergency department. What is the general practice at your hospital for prescribing the following:

	Administer During Visit	Provide Prescription	Both Practices Used
Chlamydia prophylaxis			
Gonorrhea prophylaxis			
Emergency contraception			

## Appendix 2 PHIS CTC Codes for Testing and Prophylaxis

Test Category	CTC Code
Test	
Pregnancy	Pregnancy test (316110)
Chlamydia	Any of the following: Microbial identification nucleic acid probe with amplification (382052) Microbial identification nucleic acid probe (382042) Chlamydia culture (361231) Chlamydia antigen (361234) Chlamydia smear (361232) Chlamydia antibody (361233) Polymerase chain reaction (382050)
Gonorrhea	Any of the following: <i>Neisseria gonorrhoea</i> culture (361220) Microbial identification nucleic acid probe with amplification (382052) Microbial identification nucleic acid probe (382042) Polymerase chain reaction (382050)
Trichomoniasis	Any of the following: Wet mount (300310) Wet prep for parasites (363070) Nucleic acid probe (382040)
Prophylaxis	
Emergency contraception	Any of the following: Levonorgestrel (151153) Contraceptives (151181) Norgestrel (151163) Conjugated estrogens (151103) Estrogen-progestin combinations (151127)
Chlamydia	Any of the following: Azithromycin (122421) Doxycycline (123115) Levofloxacin (123215) Erythromycin (122401)
Gonorrhea	Any of the following: Ceftriaxone sodium (122231) Cefotaxime sodium (122211) Cefixime (122207) Cefpodoxime (122217) Cefuroxime (122177) Ciprofloxacin (123201) if discharge year 2004–2007
Trichomoniasis	Metronidazole (124164)

**Appendix 3** Validation of CTC Codes for Testing and Prophylaxis in Sexually Assaulted Adolescents at 4 Hospitals

Indication	Sensitivity (95% CI)	Specificity (95% CI)	Positive Predictive Value (95% CI)	Negative Predictive Value (95% CI)
<b>Pregnancy test</b>				
Hospital 1	98.5 (95.6–99.7)	94.1 (71.3–99.9)	99.5 (97.1–100.0)	84.2 (60.4–96.6)
Hospital 2	78.4 (61.8–90.2)	71.4 (29.0–96.3)	93.5 (78.6–99.2)	38.5 (13.9–68.4)
Hospital 3	70.4 (49.8–96.2)	94.7 (74.0–99.9)	95.0 (75.1–99.9)	69.2 (48.2–85.7)
Hospital 4	100.0 (91.0–100.0)	100.0 (54.1–100.0)	100.0 (91.0–100.0)	100.0 (54.1–100.0)
Total	90.4 (88.3–92.3)	92.0 (87.4–95.4)	98.0 (96.8–98.9)	69.0 (63.1–74.5)
<b>Chlamydia test</b>				
Hospital 1	99.5 (97.5–100)	100.0 (81.5–100.0)	100.0 (98.3–100.0)	94.7 (74.0–99.9)
Hospital 2	95.0 (75.1–99.9)	100.0 (88.4–100.0)	100.0 (82.4–100.0)	96.8 (83.3–99.9)
Hospital 3	88.2 (63.6–98.5)	93.9 (79.8–99.3)	88.2 (63.6–98.5)	93.9 (79.8–99.3)
Hospital 4	100.0 (92.1–100.0)	100.0 (47.8–100.0)	100.0 (92.1–100.0)	100.0 (47.8–100.0)
Total	98.0 (96.8–98.9)	97.4 (95.2–98.7)	98.8 (97.7–99.4)	95.8 (93.3–97.6)
<b>Gonorrhea test</b>				
Hospital 1	99.5 (97.5–100.0)	100.0 (80.5–100.0)	100.0 (98.3–100.0)	94.4 (72.7–99.9)
Hospital 2	94.7 (74.0–99.9)	96.8 (83.3–99.9)	94.7 (74.0–99.9)	96.8 (83.3–99.9)
Hospital 3	94.1 (71.3–99.9)	93.9 (79.8–99.3)	88.9 (65.3–98.6)	96.9 (83.8–99.9)
Hospital 4	100.0 (92.1–100.0)	80.0 (28.4–99.5)	97.8 (88.5–99.9)	100.0 (39.8–100.0)
Total	98.6 (97.6–99.3)	93.7 (90.8–95.9)	97.1 (95.7–98.1)	97.0 (94.7–98.5)
<b>Trichomoniasis test</b>				
Hospital 1	100.0 (97.8–100.0)	97.7 (88.0–99.9)	99.4 (96.7–100.0)	100.0 (91.8–100.0)
Hospital 2	—	—	—	—
Hospital 3	100.0 (2.5–100.0)	97.8 (88.2–99.9)	50.0 (1.3–98.7)	100.0 (92.0–100.0)
Hospital 4	—	—	—	—
Total	65.8 (59.7–71.5)	99.3 (98.4–99.7)	96.6 (92.8–98.8)	89.9 (87.7–91.8)
<b>Emergency contraception</b>				
Hospital 1	96.3 (91.5–98.8)	100.0 (95.4–100.0)	100.0 (97.2–100.0)	94.0 (86.5–98.0)
Hospital 2	95.5 (77.2–99.9)	90.9 (70.8–98.9)	91.3 (72.0–98.9)	95.2 (76.2–99.9)
Hospital 3	88.0 (68.8–97.5)	76.2 (52.8–91.8)	81.5 (61.9–93.7)	84.2 (60.4–96.6)
Hospital 4	100.0 (87.7–100.0)	82.4 (56.6–96.2)	90.3 (74.2–98.0)	100.0 (76.8–100.0)
Total	96.0 (94.1–97.4)	86.1 (82.5–89.2)	90.6 (88.1–92.7)	93.9 (91.1–96.0)
<b>Chlamydia treatment</b>				
Hospital 1	98.9 (96.0–99.9)	100.0 (94.1–100.0)	100.0 (97.9–100.0)	96.8 (89.0–99.6)
Hospital 2	96.4 (81.7–99.9)	86.4 (65.1–97.1)	90.0 (73.5–97.9)	95.0 (75.1–99.9)
Hospital 3	100.0 (86.8–100.0)	87.5 (67.6–97.3)	89.7 (72.6–97.8)	100.0 (83.9–100.0)
Hospital 4	100.0 (89.4–100.0)	94.1 (71.3–99.9)	97.1 (84.7–99.9)	100.0 (79.4–100.0)
Total	99.1 (98.1–99.6)	91.2 (88.2–93.7)	95.0 (93.2–96.4)	98.3 (96.5–99.3)
<b>Gonorrhea treatment</b>				
Hospital 1	98.2 (95–99.6)	100.0 (94.7–100.0)	100.0 (97.8–100.0)	95.8 (88.1–99.1)
Hospital 2	96.0 (79.6–99.9)	88.0 (68.8–97.5)	88.9 (70.8–97.6)	95.7 (78.1–99.9)
Hospital 3	92.3 (74.9–99.1)	87.5 (67.6–97.3)	91.3 (72.0–98.9)	91.3 (72.0–98.9)
Hospital 4	80.6 (62.5–92.5)	94.7 (74.0–99.9)	96.2 (80.4–99.9)	75.0 (53.3–90.2)
Total	89.8 (87.3–91.9)	91.9 (89.1–94.2)	94.2 (82.8–88.9)	86.1 (82.8–88.9)
<b>Trichomoniasis treatment</b>				
Hospital 1	97.7 (93.4–99.8)	98.8 (93.5–100.0)	99.2 (95.7–100.0)	96.5 (90.0–99.3)
Hospital 2	100.0 (83.9–100.0)	100.0 (85.2–100.0)	100.0 (83.9–100.0)	100.0 (85.2–100.0)
Hospital 3	100.0 (2.5–100.0)	95.6 (84.9–99.5)	33.3 (0.8–90.6)	100.0 (91.8–100.0)
Hospital 4	85.7 (42.1–99.6)	100.0 (90.7–100.0)	100.0 (54.1–100.0)	97.4 (86.5–99.9)
Total	96.0 (93.2–97.9)	98.6 (97.4–99.3)	96.3 (93.6–98.2)	98.4 (97.3–99.2)

Calculations were not performed for trichomoniasis testing at hospitals 2 and 4 because there were no true- or false- positives.

**Appendix 4** Association of Hospital-Level and Patient-Level Factors With Chlamydia Prophylaxis, Gonorrhea Prophylaxis, and Emergency Contraception

Factor	Chlamydia Prophylaxis		Gonorrhea Prophylaxis		Emergency Contraception	
	OR	95% CI	OR	95% CI	OR	95% CI
<b>Hospital level</b>						
Pathway	1.60	1.26–2.02	1.56	1.20–2.03	1.47	1.13–1.91
Team	0.70	0.48–1.01	0.66	0.47–0.94	0.78	0.56–1.07
<b>Region</b>						
Midwest	Referent	Referent	Referent	Referent	Referent	Referent
Northeast	1.02	0.62–1.69	0.99	0.62–1.57	1.20	0.86–1.66
South	0.66	0.47–0.92	0.68	0.49–0.95	0.78	0.55–1.09
West	0.57	0.33–0.99	0.65	0.39–1.08	0.88	0.55–1.39
<b>Patient level</b>						
<b>Age, y</b>						
12	Referent	Referent	Referent	Referent	Referent	Referent
13	1.51	1.35–1.68	1.49	1.34–1.66	1.42	1.28–1.58
14	1.82	1.49–2.22	1.79	1.50–2.15	1.56	1.29–1.89
15	2.51	1.94–3.24	2.38	1.83–3.10	2.00	1.51–2.64
16–18	2.41	1.89–3.09	2.24	1.76–2.86	1.73	1.34–2.24
<b>Gender</b>						
Male	Referent	Referent	Referent	Referent	–	–
Female	3.82	3.08–4.73	3.77	3.03–4.69	–	–
<b>Race/ethnicity</b>						
Non-Hispanic white	Referent	Referent	Referent	Referent	Referent	Referent
Non-Hispanic black	1.09	0.91–1.30	1.13	0.95–1.35	1.04	0.89–1.23
Hispanic	0.68	0.46–1.00	0.68	0.45–1.00	0.70	0.48–1.03
Other	1.01	0.83–1.22	1.03	0.86–1.22	1.03	0.84–1.25
<b>Insurance</b>						
Private	Referent	Referent	Referent	Referent	Referent	Referent
Public	1.00	0.87–1.15	1.01	0.87–1.16	0.98	0.83–1.15
Uninsured	1.15	0.84–1.56	1.14	0.85–1.53	1.19	0.84–1.69
Other	0.98	0.69–1.41	1.02	0.71–1.48	0.88	0.59–1.30
Discharge year	1.10	1.03–1.17	1.09	1.02–1.16	1.07	1.01–1.14

Results generated from logistic regression models accounting for clustering by hospital. Emergency contraception model included female patients only. The year the patient was discharged from the ED (2004 to 2013) was included as a continuous variable.