

**Supplemental Table 1. Provider Type, Observation Period, and Patient Characteristics by Treatment Data Availability.**

<b>Variables<sup>1</sup></b>	<b>Treatment Data</b>		<b>P-value</b>
	<b>Missing N=7,049 n (%)</b>	<b>Non-Missing N=9,597 n (%)</b>	
Provider type CDPH Non-CDPH	261 (10.7) 6,788 (48.8)	2,169 (89.3) 7,428 (52.2)	<0.001
Federally Qualified Health Center No Yes	6,169 (42.0) 1,345 (49.6)	8,537 (58.0) 1,366 (50.4)	<0.001
Observation Period April 2011 through July 2012 August 2012 through December 2012	4,913 (40.9) 2,136 (46.0)	7,093 (59.1) 2,504 (54.0)	<0.001
Age in years 13-19 20-24 25-29 30-39 40-49 ≥ 50	2,537 (43.5) 2,207 (40.6) 969 (39.5) 820 (43.4) 360 (47.4) 156 (53.8)	3,288 (56.5) 3,223 (59.4) 1,483 (60.5) 1,069 (56.6) 400 (52.6) 134 (46.2)	<0.001
Gender Female Male	3,987 (46.1) 3,051 (38.2)	4,657 (53.9) 4,927 (61.8)	<0.001
Race/Ethnicity Non-Hispanic Black Non-Hispanic White Hispanic Non-Hispanic Other	4,155 (35.6) 361 (35.9) 286 (38.3) 2,172 (70.1)	7,505 (64.4) 644 (64.1) 461 (61.7) 925 (29.9)	<0.001

<sup>1</sup> Not all cells sum to N due to missing data.

‘CDPH’ = Chicago Department of Public Health

**Table 1. Distribution of case characteristics by provider type.**

Variables*	non-CDPH Providers N=7,428 n (%)	CDPH STD Clinics N=2,169 n (%)
Age in years		
Median (IQR)	21.0 (18-26)	23.0 (20-29)
13-19	2,823 (38.0)	465 (21.4)
20-24	2,439 (32.8)	784 (36.2)
25-29	1,041 (14.0)	442 (20.4)
30-39	755 (10.2)	314 (14.5)
40-49	278 (3.7)	122 (5.6)
≥ 50	92 (1.2)	42 (1.9)
Gender		
Female	4,135 (55.7)	522 (24.1)
Male	3,284 (44.3)	1,643 (75.9)
Race/Ethnicity		
Non-Hispanic Black	5,582 (75.8)	1,923 (88.7)
Non-Hispanic White	557 (7.6)	87 (4.0)
Hispanic	374 (5.1)	87 (4.0)
Non-Hispanic Other	853 (11.6)	72 (3.3)
Observation Period		
April 2011 through July 2012	5,388 (72.5)	1,705 (78.6)
August 2012 through December 2012	2,040 (27.5)	464 (21.4)
Median time to treatment in days (IQR)	0.0 (0-6)	0.0 (0-0)
Time from diagnosis date to treatment date		
0 days (same day treatment)	3,612 (51.7)	1,676 (78.6)
1 – 6 days	1,610 (23.1)	43 (2.0)
7 – 13 days	1,089 (15.6)	101 (4.7)
14 – 20 days	302 (4.3)	126 (5.9)
21 – 27 days	115 (1.7)	62 (2.9)
28 or more days	253 (3.6)	125 (5.9)
Provider setting		
Hospital, Medical Center	3,080 (41.5)	
Community Health Center	2,147 (28.9)	
Private Provider	996 (13.4)	
Family Planning, Obstetrics & Gynecology	609 (8.2)	
Jail, Prison	274 (3.7)	
School, University Health Clinic	168 (2.3)	
ED, Urgent Care, Immediate Care	78 (1.1)	
Non-CDPH public health clinic	23 (0.3)	
Veterans' Administration	8 (0.1)	
HIV Care Clinic	7 (0.1)	
Online testing service	6 (0.1)	
Outreach	5 (0.1)	
Other	16 (0.2)	
Missing	11 (0.2)	
Federally Qualified Health Center		
No	6,059 (81.7)	
Yes	1,360 (18.3)	

Number of gonorrhea cases reported over observation period at originating test facility		
<10	1,803 (24.3)	
10 – <50	2,425 (32.7)	
50 – <100	1,370 (18.4)	
100 or more	1,830 (24.6)	

\* Not all cells sum to N due to missing data.

IQR = Interquartile range.

**Table 2. Recommended, Alternative, and Not Recommended Treatment Regimens by Provider Type and Period<sup>+</sup>.**

	CDPH Provider		Non-CDPH	
	Period 1 N=1,705 n (%)	Period 2 N=464 n (%)	Period 1 N=5,388 n (%)	Period 2 N=2,040 n (%)
<b>Recommended Adequate*</b>	<b>1,215 (71.3)</b>	<b>375 (80.8)</b>	<b>3,421 (63.5)</b>	<b>1,405 (68.9)</b>
DT: Ceftriaxone + Azithro or Doxy	1,046 (61.3)	375 (80.8)	2,980 (55.3)	1,400 (59.2)
DT: Cefpodoxime + Azithro or Doxy	137 (8.0)		57 (1.1)	
DT: Cefixime + Azithro or Doxy	30 (1.8)		284 (5.3)	
DT: Other treatment both	2 (0.1)	0 (0.0)	100 (1.9)	5 (1.4)
<b>Acceptable Alternative</b>	<b>66 (3.9)</b>	<b>3 (0.6)</b>	<b>200 (3.7)</b>	<b>99 (4.9)</b>
DT: Cefixime + Azithro or Doxy		2 (0.4)		55 (4.9)
ST: Azithromycin 2g PO	66 (3.9)	1 (0.2)	192 (3.6)	42 (2.8)
IV Therapy	0 (0.0)	0 (0.0)	8 (0.1)	2 (0.2)
<b>Any Adequate (Recommended or Acceptable Regimen)</b>	<b>1,281 (75.1)</b>	<b>378 (81.5)</b>	<b>3,621 (67.2)</b>	<b>1,504 (73.7)</b>
<b>Not Recommended</b>	<b>424 (24.9)</b>	<b>86 (18.5)</b>	<b>1,767 (41.5)</b>	<b>536 (26.3)</b>
DT: Cefpodoxime + Azithro or Doxy		0 (0.0)		2 (0.9)
DT: Doses not specified	9 (0.5)	2 (0.4)	0 (0.0)	0 (0.0)
ST: Ceftriaxone 250mg IM	243 (14.3)	31 (6.7)	1,190 (26.1)	400 (21.0)
ST: Ceftriaxone 1g IM	0 (0.0)	0 (0.0)	9 (0.2)	10 (0.4)
ST: Cefixime 400mg PO	9 (0.5)	1 (0.2)	144 (3.3)	29 (2.5)
ST: Cefpodoxime 400mg PO	32 (1.9)	0 (0.0)	18 (0.7)	2 (0.2)
DT: Ceftriaxone 125mg IM $\pm$ other <sup>#</sup>	3 (0.2)	0 (0.0)	116 (6.0)	4 (1.2)
ST: <i>C. trachomatis</i> treatment only <sup>^</sup>	127 (7.3)	51 (11.0)	280 (5.1)	88 (5.2)
Other, not sufficient	1 (0.1)	1 (0.2)	10 (0.4)	1 (0.1)

<sup>+</sup> Period 1 = April 2011 through July 2012; Period 2 = August through December 2012.

\*Adequate treatment indicates that drug and dose were administered according to CDC STD Treatment Guidelines.

“DT” = Dual therapy; “ST” = Single therapy; “IM” = Intramuscular; “PO” = By mouth; “Azithro” = Azithromycin; “Doxy” = Doxycycline; “+” = in conjunction with  
<sup>^</sup>“*C. trachomatis* treatment only” indicates treatment with only orally administered Azithromycin in 1 gram dose, or only doxycycline regimen of 7-14 days.

<sup>#</sup> Ceftriaxone 125mg IM administered alone, or in conjunction with Azithromycin or Doxycycline.

**Table 3. Patient factors associated with recommended treatment among cases seen by CDPH providers.**

	Recommended Treatment*		Crude PRR [95% CI]	Adjusted PRR [95% CI] N=2,129
	Yes, N=1,590 n (%)	No, N=579 n (%)		
Age in years				
13-19	319 (70.3)	138 (29.7)	ref	ref
20-24	572 (74.9)	197 (25.1)	1.06 [0.99 – 1.14]	1.04 [0.98 – 1.12]
25-29	319 (74.0)	115 (26.0)	1.05 [0.97 – 1.14]	1.01 [0.93 – 1.09]
30-39	222 (73.6)	83 (26.4)	1.05 [0.96 – 1.14]	1.01 [0.92 – 1.10]
40-49	85 (70.5)	36 (29.5)	1.00 [0.88 – 1.14]	0.98 [0.86 – 1.11]
≥ 50	30 (76.2)	10 (23.8)	1.08 [0.91 – 1.30]	1.08 [0.91 – 1.28]
Gender				
Female	340 (65.1)	182 (34.9)	ref	ref
Male	1,248 (76.0)	395 (24.0)	1.17 [1.09 – 1.25]	1.16 [1.08 – 1.25]
Race/Ethnicity				
Non-Hispanic Black	1,432 (74.5)	491 (25.5)	ref	ref
Non-Hispanic White	44 (50.6)	43 (49.4)	0.68 [0.55 – 0.84]	0.68 [0.55 – 0.84]
Hispanic	61 (70.1)	26 (30.0)	0.94 [0.82 – 1.08]	0.95 [0.82 – 1.09]
Non-Hispanic Other	53 (73.6)	19 (26.4)	0.99 [0.86 – 1.14]	0.97 [0.85 – 1.11]
Same day treatment				
No	306 (67.0)	151 (33.0)	ref	ref
Yes	1,260 (75.2)	416 (24.8)	1.12 [1.05 – 1.20]	1.07 [1.00 – 1.15]
Observation Period				
April 2011 through July 2012	1,215 (71.3)	490 (28.7)	ref	ref
August through December 2012	375 (80.8)	89 (19.2)	1.08 [1.04 – 1.13]	1.11 [1.05 – 1.17]

\*All comparisons of patient factors by recommended treatment outcome were statistically significant at the  $p < 0.01$  level by chi-square test except for age ( $p$ -value = 0.57).

PRR = Prevalence Rate Ratio; CI = Confidence Interval; ref = reference.

**Table 4. Patient factors associated with recommended treatment among cases seen by non-CDPH providers.**

	Recommended Treatment*		Crude PRR [95% CI]	Adjusted PRR [95% CI] N=6,907
	Yes, N=4,826 n (%)	No, N=2,602 n (%)		
Age in years				
13-19	1,737 (61.5)	1,086 (38.5)	ref	ref
20-24	1,631 (66.9)	808 (33.1)	1.08 [1.01 – 1.16]	1.02 [0.98 – 1.07]
25-29	736 (70.7)	305 (29.3)	1.15 [1.06 – 1.25]	1.04 [0.99 – 1.11]
30-39	480 (63.6)	275 (36.4)	1.03 [0.92 – 1.15]	0.98 [0.92 – 1.05]
40-49	186 (66.9)	92 (33.1)	1.09 [0.92 – 1.28]	0.98 [0.91 – 1.06]
≥ 50	56 (60.9)	36 (39.1)	0.99 [0.80 – 1.22]	0.95 [0.84 – 1.06]
Gender				
Female	2,396 (57.9)	1,739 (42.1)	ref	ref
Male	2,425 (73.8)	859 (26.2)	1.28 [1.19 – 1.37]	1.10 [1.05 – 1.16]
Race/Ethnicity				
Non-Hispanic Black	3,679 (65.9)	1,903 (34.1)	ref	ref
Non-Hispanic White	393 (70.6)	164 (29.4)	1.07 [0.87 – 1.31]	1.01 [0.94 – 1.09]
Hispanic	241 (64.4)	133 (35.6)	0.98 [0.85 – 1.12]	0.96 [0.89 – 1.03]
Non-Hispanic Other	478 (56.0)	375 (44.0)	0.85 [0.77 – 0.94]	0.91 [0.84 – 0.98]
Same day treatment				
No	1,775 (52.7)	1,594 (47.3)	ref	ref
Yes	2,712 (75.1)	900 (24.9)	1.43 [1.30 – 1.56]	1.31 [1.17 – 1.46]
Number of gonorrhea cases reported over observation period at originating test facility				
<10	906 (50.3)	897 (49.8)	ref	ref
10 – <50	1,563 (64.5)	862 (35.5)	1.28 [1.15 – 1.43]	1.24 [1.13 – 1.36]
50 – <100	895 (65.3)	475 (34.7)	1.30 [1.09 – 1.55]	1.22 [1.04 – 1.42]
100 or more	1,462 (79.9)	368 (20.1)	1.59 [1.36 – 1.86]	1.41 [1.26 – 1.56]
Percent of cases with missing treatment data at originating test facility				
<50%	3,852 (68.4)	1,778 (31.6)	ref	ref
≥ 50%	974 (54.2)	824 (45.8)	0.79 [0.68 – 0.92]	0.84 [0.76 – 0.92]
Observation Period				
April 2011 through July 2012	3,421 (63.5)	1,967 (36.5)	ref	ref
August through December 2012	1,405 (68.9)	635 (31.1)	1.09 [1.00 – 1.18]	1.01 [0.95 – 1.08]

\*All comparisons of patient factors by recommended treatment outcome were statistically significant at the p<0.01 level by chi-square test. PRR = Prevalence Rate Ratio; CI = Confidence Interval; ref = reference.