

Syphilis Time-to-Treatment in STD Clinics Versus Private Clinics — Arizona, 2009–2012

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Syphilis

- Sexually transmitted infection
 - Spirochete bacterium *Treponema pallidum*
- Primary syphilis most infectious stage
- Untreated syphilis might result in severe complications and death
- Ongoing epidemic of syphilis among men who have sex with men in urban areas



Syphilis Treatment

- **Injected penicillin G in a single dose is recommended treatment**
- **Timely treatment needed to reduce transmission and prevent additional cases**
- **Time-to-treatment associated with clinical care setting**

Healthcare Reform and Syphilis

- Healthcare reform might give greater access to private clinics
- ↑ patients with medical homes
- ↓ funding for public health clinics
- Need for public STD clinics?

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Objective

- **Determine clinic setting that provides most prompt treatment**
 - **Compared time-to-treatment for incident primary and secondary syphilis cases by evaluation and treatment setting**

Methods

- **Arizona's STD surveillance system**
- **2 Arizona counties (Maricopa and Pima)**
 - Operate public STD clinics
- **2009–2012 incident and reported cases of primary and secondary syphilis**
- **Evaluation and Treatment categories**
 - At public clinic
 - Evaluated at private clinic, treated at public clinic
 - At private clinic

Definitions

- **Time-to-treatment** — number of days from syphilis evaluation to initiation of syphilis treatment
- **Treated** — treatment reported in surveillance system within 90 days of specimen collection
- **Untreated** — no reported treatment 90 days after specimen collection.

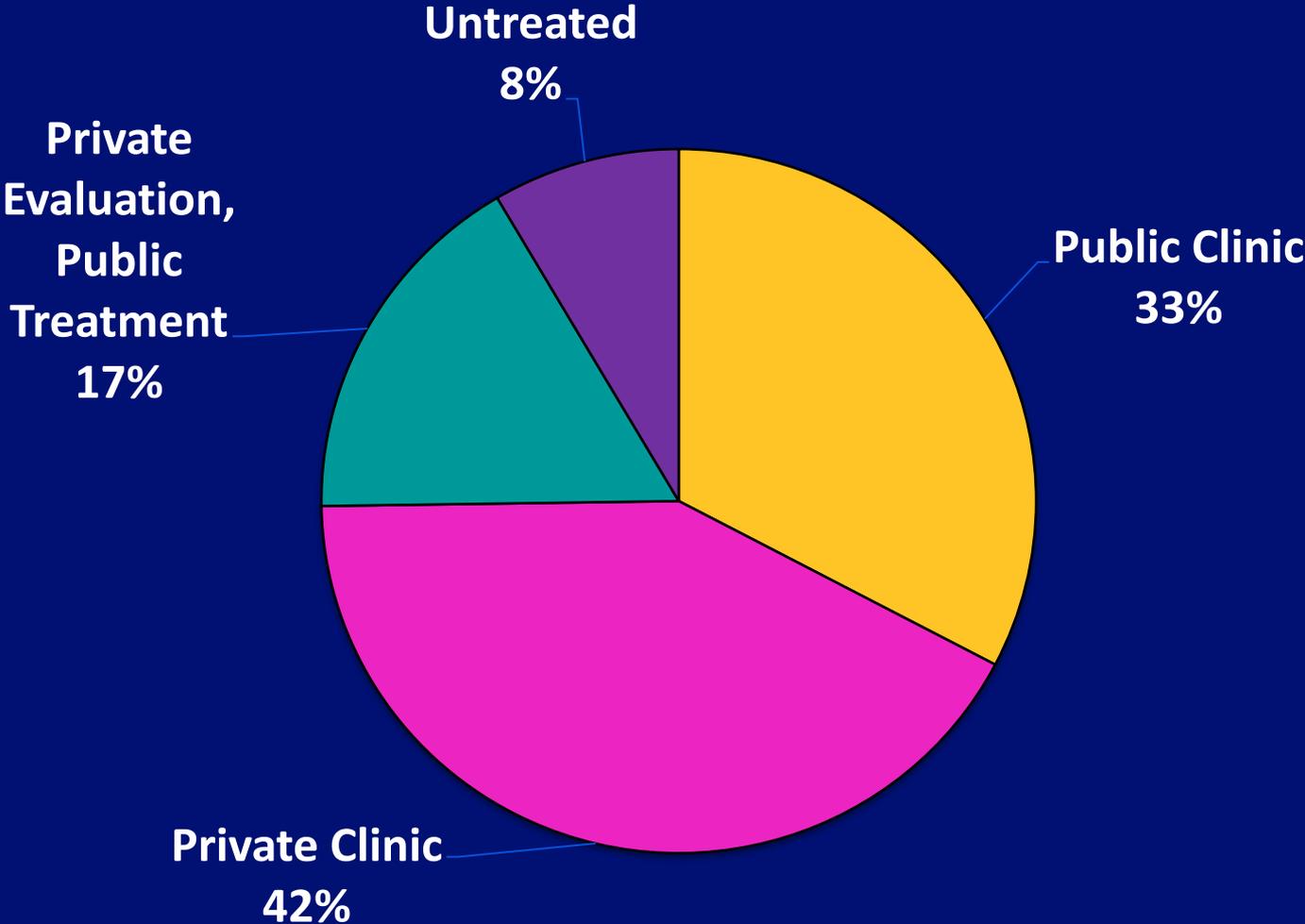
Analysis

- **Kruskal-Wallis test**
 - Comparison of non-parametric time-to-treatment data
- **Chi-square**
 - Group demographic comparisons

Demographics (n = 884)

	No. (%)
Gender	
Male	818 (93)
Female	66 (7)
Race/Ethnicity	
White Non-Hispanic	329 (40)
Hispanic	310 (38)
Black Non-Hispanic	87 (11)
Other	40 (5)
Unknown	47 (6)
Age median (range)	32 (15–74)

Evaluation and Treatment Categories (n = 884)



Demographics of Patients with Treated Syphilis (n = 809)

Characteristic	Public Clinic (n = 289)	Private Evaluation, Public Treatment (n = 148)	Private Clinic (n = 372)
	No. (%)	No. (%)	No. (%)
Gender			
Female	16 (29)	9 (16)	31 (55)
Male	273 (36)	138 (19)	341 (45)
Unknown	0 (0)	1 (100)	0 (0)
Race Ethnicity			
White Non-Hispanic	106 (32)	49 (15)	174 (53)
Hispanic	136 (44)	68 (22)	106 (34)
Age median (range)	30 (16–63)	30 (16–74)	35 (15–70)

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Treatment Status of Syphilis Cases by Evaluation Setting and Gender

Characteristic	Treated (n = 809)	Untreated (n = 75)	Odds Ratio (95% Confidence Interval)
	No. (%)	No. (%)	
Evaluation Setting			
Evaluated in private clinic	520 (90)	58 (10)	1.90 (1.10–3.40)
Evaluated in public clinic	289 (95)	17 (5)	Ref
Gender			
Female	56 (88)	8 (12)	1.55 (0.66–3.26)
Male	752 (92)	67 (8)	Ref

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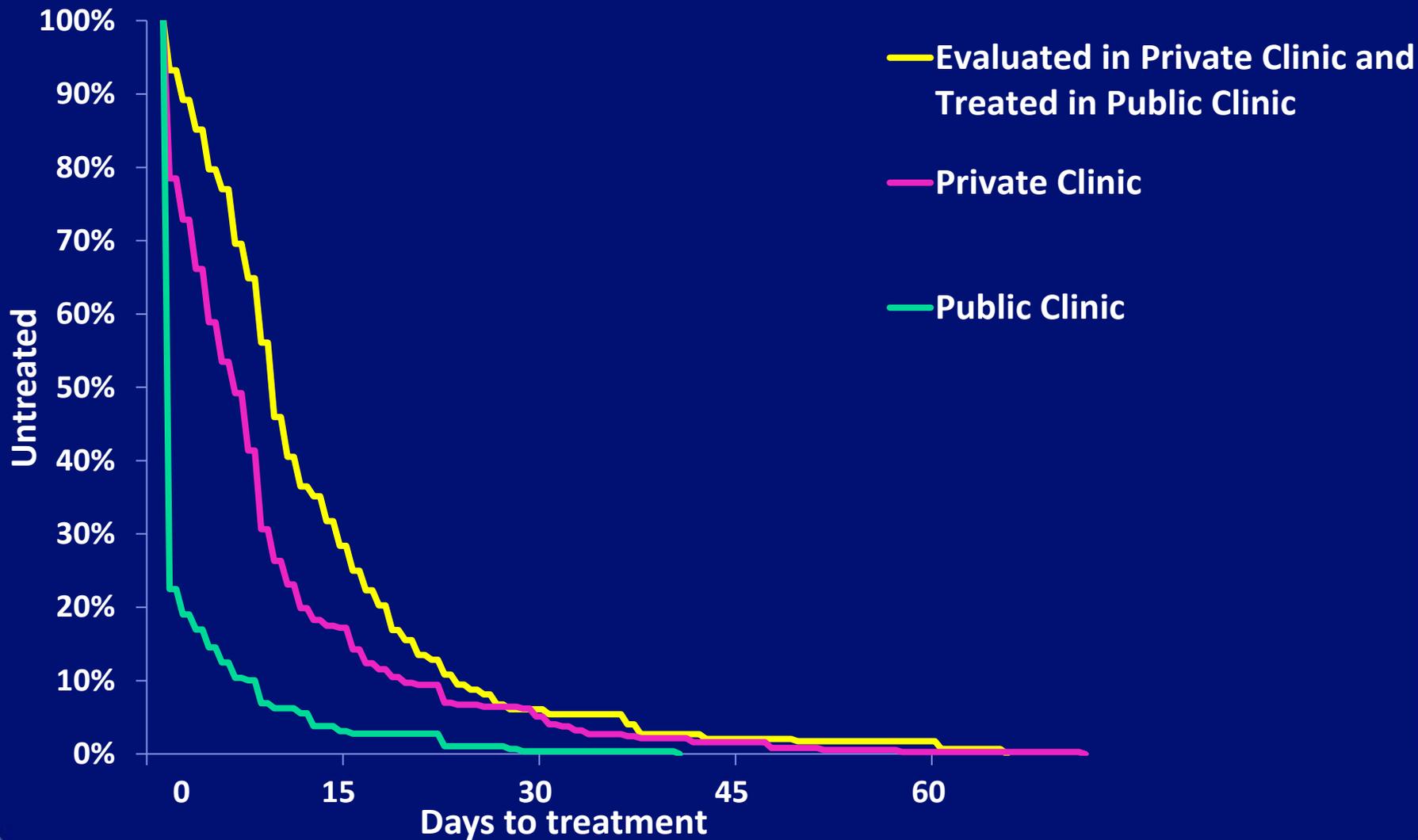
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Median Time-to-Treatment by Evaluation and Treatment Clinic

Category	Median Time-to-Treatment (days)	10 th – 90 th range	<i>P</i> value
Public clinic (n = 289)	0	0–6.5 days	Ref
Evaluated in private clinic, treated in public clinic (n = 148)	8	2–25 days	<.001
Private clinic (n = 372)	5	0–18 days	<.001

Time-to-Treatment Curve



Conclusions

- **Majority (92%) of patients treated**
- **Publicly funded clinic cases received the timeliest treatment**
 - Fewer patients evaluated and treated at publicly funded STD clinics
- **Patients diagnosed in private clinics were more likely untreated**
- **Public STD clinics remain crucial to syphilis disease control**

Limitations

- **Data obtained from surveillance database**
- **Demographics self-reported**
- **Potential for unreported cases**

Discussion

- **Public STD clinics provide presumptive treatment**
- **Delays in treatment for private clinic cases**
 - **Penicillin \$175 per treatment; sporadic diagnosis**
 - **Improvement of time-to-treatment among private clinics**

Public Health Recommendations

- **Address disparities in treatment**
 - **Ensure results notification and follow-up appointments**
 - Accurate patient contact information
 - Automatic follow-up appointments
 - **Provide presumptive treatment in context of high-risk syphilis exposure or clinical signs**
 - **Create partnerships between public health clinics and private**
 - 2009 — Maricopa County STD Program started partnering with 4 private clinics

- **Continue support of publicly funded STD clinics**

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