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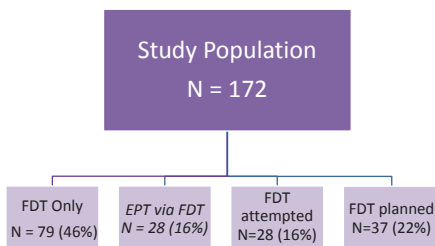
## Introduction

Chlamydia is the most and gonorrhea the second most frequently reported infectious disease in the US. From 2008 to 2012 the number of reported cases of chlamydia in Arizona increased 24% and 80.2% for gonorrhea. Chlamydia and gonorrhea are known as "silent" diseases as most patients are asymptomatic. However, if they are left untreated they can lead to severe complications. Chlamydia and gonorrhea are easily treated with antibiotics. Field Delivered Therapy (FDT) has commonly been used to treat infectious disease, such as tuberculosis. In 2009, Maricopa County implemented a FDT program to increase compliance with treatment of these two STDs.

## Methods

Available data on all eligible patients and partners that received Field Delivered Therapy (FDT) between 2011 and 2014 for the treatment of gonorrhea and chlamydia. Data sources included pharmacy records and the electronic medical record systems for collection of gender, age, race/ethnicity, diagnosis, number of partners, time to treatment, and zip code. We defined Central Phoenix as the zip codes designated as Central Phoenix by Maricopa County. The data were then divided into four FDT groups. These included: (1) FDT only, (2) partner therapy via FDT (3) FDT attempted, and (4) FDT planned. SPSS was utilized to analyze the data.

Figure 1: Study Groups



## Results

The chart review revealed 172 total patients that either received, attempted or planned field delivered therapy during the time frame that data was collected (Figure 1). The average age of the FDT population was 23.8 years and 61% of the population was female and were patients (79.6%). The patients most commonly were infected with chlamydia (81.4%) versus gonorrhea (9.3%) versus gonorrhea and chlamydia (9.3%). The mean time to treatment for these patients was 24.6 days. The mean number of partners was 6.6. Most of the patients (79.6%) lived outside of Central Phoenix (Table 1). The patients that received FDT were less than or equal to 25 years old (62%), the EPT as FDT patients were all over the age of 25 years old, 75% were less than 19 years old.

Table 1: Demographic and Clinical Characteristics of the Total FDT Population

Variables	Total Population N=172
Age (years, SD)	23.8 ± 7.2
Gender (male, %)	61 (35.5)
Person Treated (n, %)	
Patient	137 (79.6)
Partner	35 (20.4)
Type of infection (n, %)	
CT	140 (81.4)
GC	16 (9.3)
GC and CT	16 (9.3)
Time To Treatment (days, SD)	24.6 ± 39.9
Pregnancy	
Yes (%)	15 (8.2)
No (%)	152 (88.4)
Unknown (%)	5 (2.9)
Number of Partners (mean, SD)	6.6 ± 13.1
Location in Maricopa County (n, %)	
Central Phoenix	35 (20.4)
Not Central Phoenix	137 (79.6)

## Results (cont)

The gender of the FDT group was 78% female, while the FDT/EPT group was 75% males, the FDT attempted group was 71% female, and 60% female for the FDT planned group. Most patients lived outside of the Central Phoenix area: 88.3% of FDT patients, 71.4% of EPT via FDT, 40.7% of attempted FDT, and 83.8% of FDT planned. All patients (100%) that received EPT via FDT, FDT attempted 64.3% and FDT was planned 56.8% received treatment greater than 14 days. For the FDT group, a hospital (29.1%) was the most common site of diagnosis. For the FDT attempted group (39.3%) and FDT planned (43.2%), a majority of patients received testing at the STD clinic (Table 2).

Table 2: Demographic and Clinical Characteristics of the Total Population Stratified by FDT Status

Variables	FDT n=79	FDT and EPT N=28	FDT Attempted N=28	FDT Planned N=37	P-Value <sup>1</sup>
Age Category (n, %)					<0.001
< 25	49 (62.0)	0 (0)	14 (50.0)	23 (62.2)	
>25	30 (38.0)	28 (100)	14 (50.0)	14 (37.8)	
Age Category (n, %)					0.009
< 19	25 (31.7)	0 (0)	7 (25.0)	11 (29.7)	
>19	54 (68.4)	28 (100)	21 (75.0)	26 (70.3)	
Gender (males, %)	17 (21.5)	21 (75.0)	8 (28.6)	15 (40.5)	<0.001
Race (White, %)	21 (26.6)	7 (25.0)	3 (10.1)	8 (22.2)	0.38
Location (Central Phoenix, %)	10 (12.7)	8 (28.6)	11 (39.3)	6 (16.2)	0.01
Time To Treatment (days)					<0.001
< 14	35 (44.3)	0 (0)	10 (35.7)	21 (56.8)	
>14	44 (55.7)	28 (100)	18 (64.3)	16 (43.2)	
Provider (n, %)					<0.001
STD Clinic	12 (15.2)	1 (3.6)	11 (39.3)	16 (43.2)	
Hospital	23 (29.1)	0 (0)	3 (10.7)	9 (24.3)	
Urgent Care	5 (6.3)	0 (0)	0 (0)	0 (0)	
County Outreach	15 (18.9)	0 (0)	4 (14.3)	5 (13.5)	
Out Patient Clinic	15 (18.9)	0 (0)	4 (14.3)	4 (10.8)	
IHS	4 (5.1)	0 (0)	1 (3.6)	0 (0)	
Jails	5 (6.3)	0 (0)	1 (3.6)	1 (2.7)	
Other	0 (0)	0 (0)	0 (0)	0 (0)	
Unknown	0 (0)	27 (96.4)	4 (14.3)	2 (5.4)	

Reasons reported to CDIs by patients for not being able to present to the clinic for treatment included: the patient "could not make it into the clinic" (27.8%); work conflicts (19%); lack of transportation (11.4%). Several patients that received FDT were high school students (8.9%) and they received their treatment at school. The "other" category comprises many patients (19%). The reasons in this group ranged from cost, being on house arrest, living in a group home, or did not want family to find out (Table 3).

## Results (cont)

Table 3: Qualitative Reason for FDT

Variables	FDT group N=79
Could not make it into clinic	22 (27.8%)
Work conflicts	15 (19.0%)
Transportation issues	9 (11.4%)
School	7 (8.9%)
Easier for patient	4 (5.1%)
Primary caregiver	3 (3.8%)
Other	15 (19.0%)
Unknown	4 (5.1%)

## Discussion and Conclusions

Many of the patients that received FDT are young women that lived outside of Central Phoenix. However, a majority of the overall clients that received partner therapy via FDT were male, a typically hard to reach population for treatment of potentially asymptomatic infections. The FDT program at Maricopa County resulted in treatment of 172 individuals that might not have otherwise received treatment and would have infected other persons or re-infected their partner. Although Maricopa County continues to offer this service, staff and resources limit the ability to expand this program and it is difficult to get providers to write the prescriptions so the CDIs can fill and deliver them. Other disease priorities such as HIV and syphilis which are increasing in the Phoenix area detract from CDI time spent on chlamydia and gonorrhea investigations. This program may be considered for rural health programs where syphilis and HIV rates are low and staff time is more available for medication delivery. More research is needed regarding the cost-effectiveness of this program, especially in larger public health where funds are directed to other disease priorities.

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