

## Introduction

A quality improvement project evaluating the effectiveness of patient portal reminder messages in increasing post-treatment retesting rates of individuals diagnosed with chlamydia and/or gonorrhea.

## Background & Significance

### Reported Cases of Chlamydia & Gonorrhea

STI	United States	New Jersey	Essex County
Chlamydia	1,808,703	31,393	6,064
Gonorrhea	616,392	9,973	2,362

True prevalence of chlamydia and gonorrhea is estimated to be in the magnitude of **4 million** and **1.6 million cases**, respectively.

### Factors Influencing Prevalence of Infections

- Suboptimal number of screenings and diagnostic testing
- Insufficient retesting rates
- Stigmatization of sexually transmitted infections
- Limited access to healthcare services
- Knowledge deficits

### Adverse Health Complications of Infections

<b>Chlamydia</b>	<ul style="list-style-type: none"> <li>• Females: Pelvic inflammatory disease, ectopic pregnancy, tubal infertility, increased chances of HIV</li> <li>• Males: Epididymitis, reactive arthritis, infertility</li> </ul>
<b>Gonorrhea</b>	<ul style="list-style-type: none"> <li>• Females: similar symptoms to Chlamydia infection, urethritis, cervicitis, conjunctivitis</li> <li>• Males: Epididymitis &amp; urethritis</li> </ul>

### Financial Implications

- Combined financial burden of \$679 million in medical costs.
- Lifetime cost of \$364 for women and \$30 for men per chlamydia case versus \$354 for women and \$79 for men per gonorrhea case.

### Current Guidelines for Screening & Retesting

<b>Screenings</b>	<ul style="list-style-type: none"> <li>• Females: Frequent screenings for high-risk, sexually active females</li> <li>• Males: Screening for individuals in high STI prevalence and annual testing for MSM every 3-6 months if high-risk</li> </ul>
<b>Retesting</b>	<ul style="list-style-type: none"> <li>• <b>3 months following diagnosis and treatment of Chlamydia and/or Gonorrhea</b></li> </ul>

## Objectives

- Increase number of patients using the patient portal within 3 months.
- Increase retesting rate of patients diagnosed with chlamydia and/or gonorrhea post-treatment with patient portal reminder messages within 3 months.

## Methods

**Design:** Quality Improvement Study

**Setting:** Community-based health center in Newark, NJ

**Sample:** 19 patients who are English speaking, over the age of 18, have access to the center's patient portal, & have been treated for chlamydia and/or gonorrhea at the center; only 13 received reminder message

**Measures:**

<b>First Stage of Project</b>	<ul style="list-style-type: none"> <li>• Distribution of pamphlets that serve as guides for patient portal registration &amp; navigation to all patients who enter facility for appointments</li> <li>• Electronic copy sent to patients with email addresses on file</li> </ul>
<b>Second Stage of Project</b>	<ul style="list-style-type: none"> <li>• Reviewed charts of patients between June- September 2021 that met the inclusion criteria.</li> <li>• Data was de-identified &amp; pertinent information was entered into data abstraction tool.</li> <li>• Eligible study subjects received a retesting reminder message via patient portal. A second message was sent if no retesting appointments were made after first message.</li> <li>• Retesting appointment information of test results &amp; symptoms were also entered into data abstraction tool.</li> </ul>

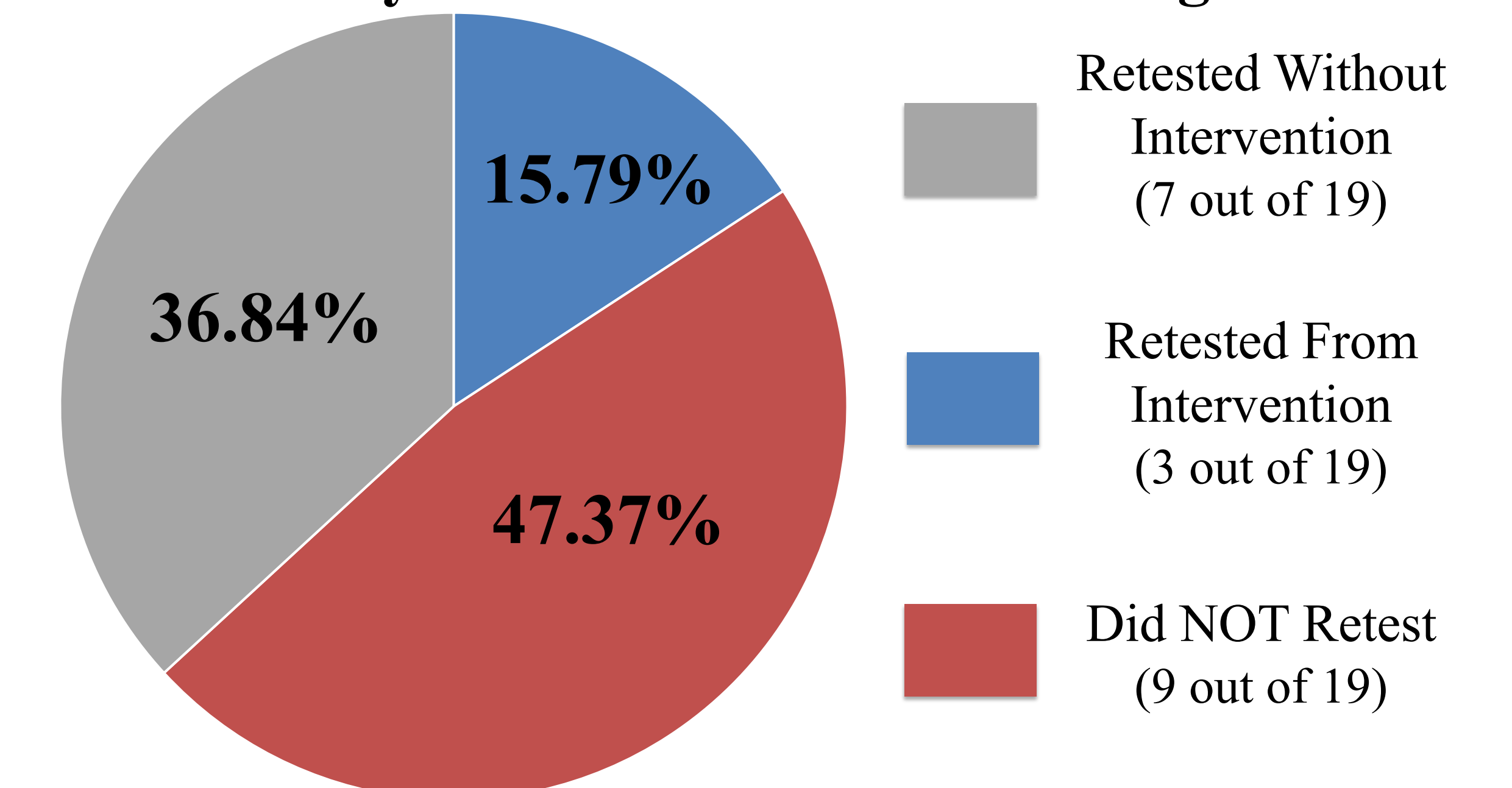
**Analysis:** Descriptive statistics used to depict sample & explain frequencies & quantities of study variables

Intervention	# of Messages Sent	# Retested	Retesting Rate
Pre-Intervention	0	6	31.58%
1 <sup>st</sup> reminder message (10/20)	13	7	36.84%
2 <sup>nd</sup> reminder message (11/5)	12	9	47.37%
Post-Intervention	-	10	52.63%

## Results

Percentage of Patients Registered for Patient Portal Pre-Intervention: **0.06%**  
 Percentage of Patients Registered for Patient Portal Post-Intervention: **0.08%**  
**Patient Portal Pamphlets Increased Registration Rate by 0.02%**

### Chlamydia & Gonorrhea Retesting Rates



Retesting Rate Pre-Intervention: **31.58%** (6 of 19)  
 Total Retesting Rate Post-Intervention: **52.63%** (10 of 19)  
 Retesting Rate Increased by **21.05%** post intervention  
 Retesting Due to Intervention: **15.79%**

## Discussion

**Conclusion:** Reminder messages delivered through a patient portal system is an effective method in increasing STI retesting rates within 3 months of treatment.

**Limitations:**

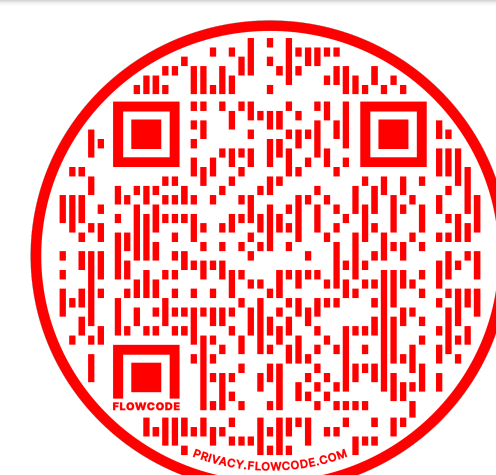
- Limited sample size that was eligible for the reminder message intervention.
- Short timeframe to deliver retesting reminders due to modifications made to original reminder message.
- Inconsistent use of the patient portal by patients led to many of the reminder messages being missed.

**Implications:**

- *Economic Benefits:* Cost-effective method of increasing retesting rates since patient portal is already a part of the health center's daily operations with no additional fees to use.
- *Patient Care:* Patient portal usage helps increase patient engagement which can help improve management of health.
- *Healthcare Policy:* Supports the current screening & retesting guidelines established by the CDC & USPSTF.
- *Clinical Practice:* Promotes a collaborative partnership between providers and patients to achieve optimal health outcomes.

## References & Contact Information

**References:**  
Please scan QR code for list



**Contact Information:**  
Please scan QR code for email address

