



# Utilization of Online Scheduling in Urgent Care

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# Introduction

- ▶ Hurry up and wait!
  - Urgent care model: quick access, short visits, episodic care
  - Waiting does not fit the model
- ▶ Online registration reduces wait time in urgent care
- ▶ Problem: Number of walk-in patients exceeds those scheduling online in one urgent care clinic
- ▶ Population: Urgent care patients in southeastern U.S., diverse backgrounds, ages across lifespan

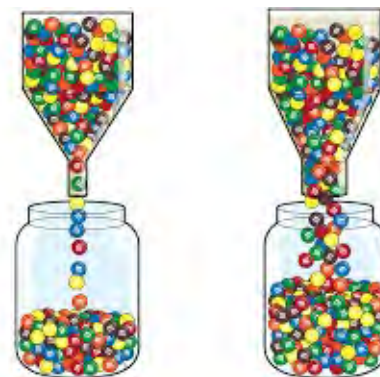
# Introduction

- ▶ DHHS 21<sup>st</sup> Century Cures Act: Patient Access to improve care
- ▶ Online-scheduling utilization 38% and walk-in visits 60%.



# Problem Statement

- ▶ The problem: walk-in patients exceed online patient scheduling
- ▶ Current practice: patients choose their mode of arrival walk-in, telephone, online-self-scheduling
- ▶ Focus of the problem: Increase online scheduling in one urgent care
- ▶ The problem identified during COVID-19 pandemic
  - Important to mitigate crowding
  - Analysis of patient management system data revealed decreased wait time for online scheduled patient
  - Low utilization of online scheduling



# Purpose

- ▶ To assess barriers to utilization of the online self-scheduling system at one urgent care clinic using a patient survey
- ▶ Reduce walk-in rates from 60% to 50% after implementation of a visual management tool and verbal instructions on how to access and use the online scheduling system.



# Objectives

- ▶ Stakeholder collaboration March 2021.
- ▶ Create survey to inform project March 2021
- ▶ Designed a visual management tool March 2021
- ▶ Trained staff on distribution of tool April 2021
- ▶ Implemented project change April 2021
- ▶ Tracked and Analyzed walk-in visit trends May 2021
- ▶ Presented findings to stakeholders May 2021

# Background

- ▶ Context for Urgent Care Setting
  - Free standing, ground level urgent care facility in a Metropolitan area in the southeastern U.S.
  - Serves patients of all ages for urgent complaints.
  - Began online reservations option in 2015
  - Mitigating crowding and staggering arrivals renewed importance

# Concepts

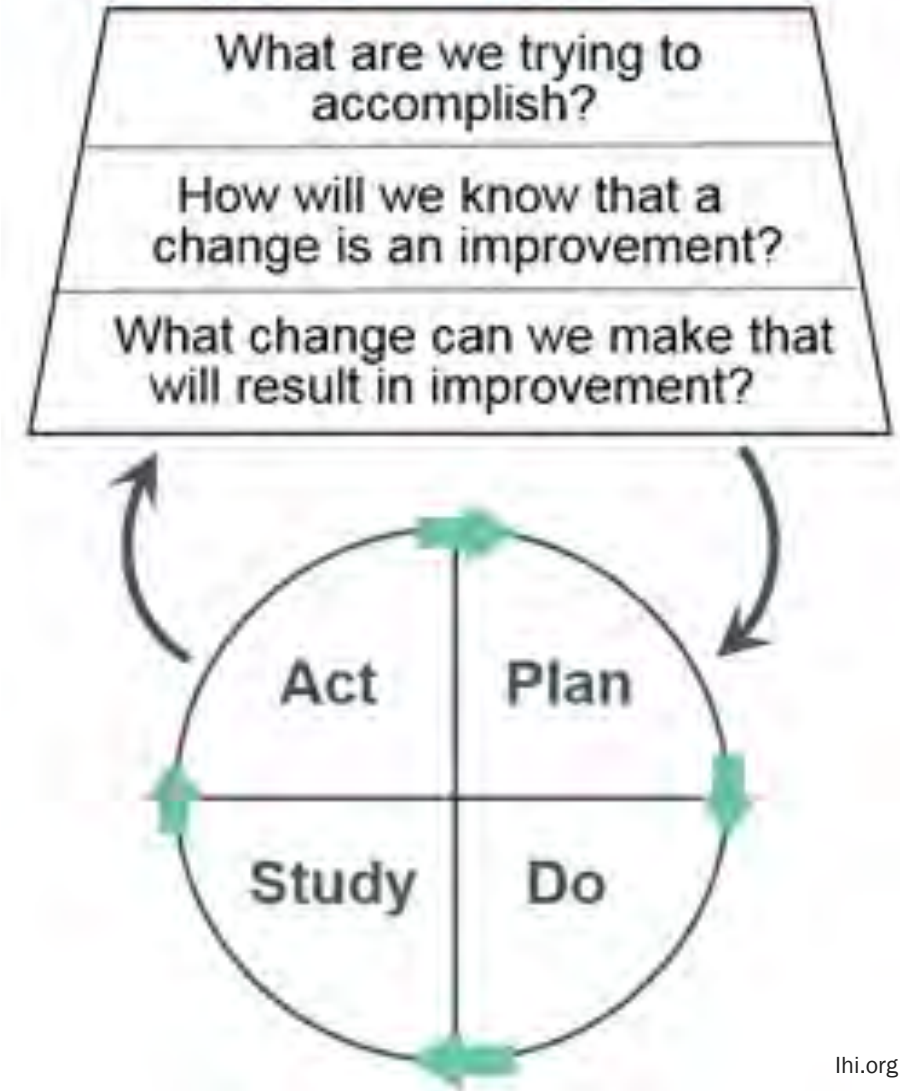
- ▶ Ambulatory Care Center (Urgent Care)
- ▶ Wait Times (Time to treatment, Time Factors)
- ▶ Open Access (advanced access, same-day scheduling, same day appointments, patient self-scheduling, appointment booking)
- ▶ Patient Experience



# Framework

- ▶ The Plan, Do, Study Act (PDSA)
  - Four-phase framework widely accepted for healthcare systems improvement
- ▶ **Plan:** Create Visual Management Tool
- ▶ **Do:** Distribute Tool
- ▶ **Study:** Observe & Analyze
- ▶ **Act:** Report data & Lessons

## Model for Improvement



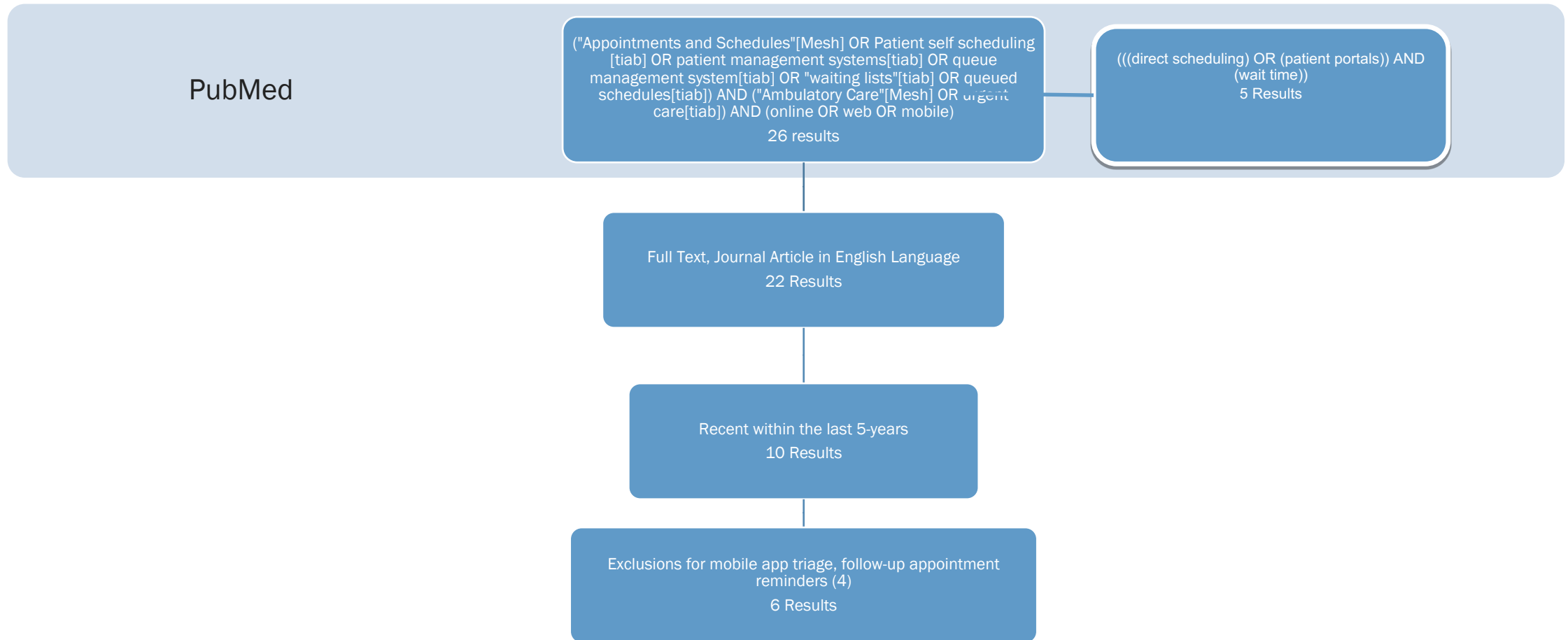
# Synthesis of the Evidence: Evidence Search

- ▶ What is the impact of a patient management tool promoting online patient self-scheduling versus unscheduled patient walk-in visits on patient wait time in the urgent care setting from April – May 2021?
- ▶ Search terms: Ambulatory Care, Urgent care, Outpatient clinics, Appointments and Schedules, Patient portals, Open access scheduling, Patient self scheduling, Direct Scheduling, Patient management systems, queue management system, waiting lists, queued schedules, online OR web OR mobile,
- ▶ Databases used: PubMed & CINAHL

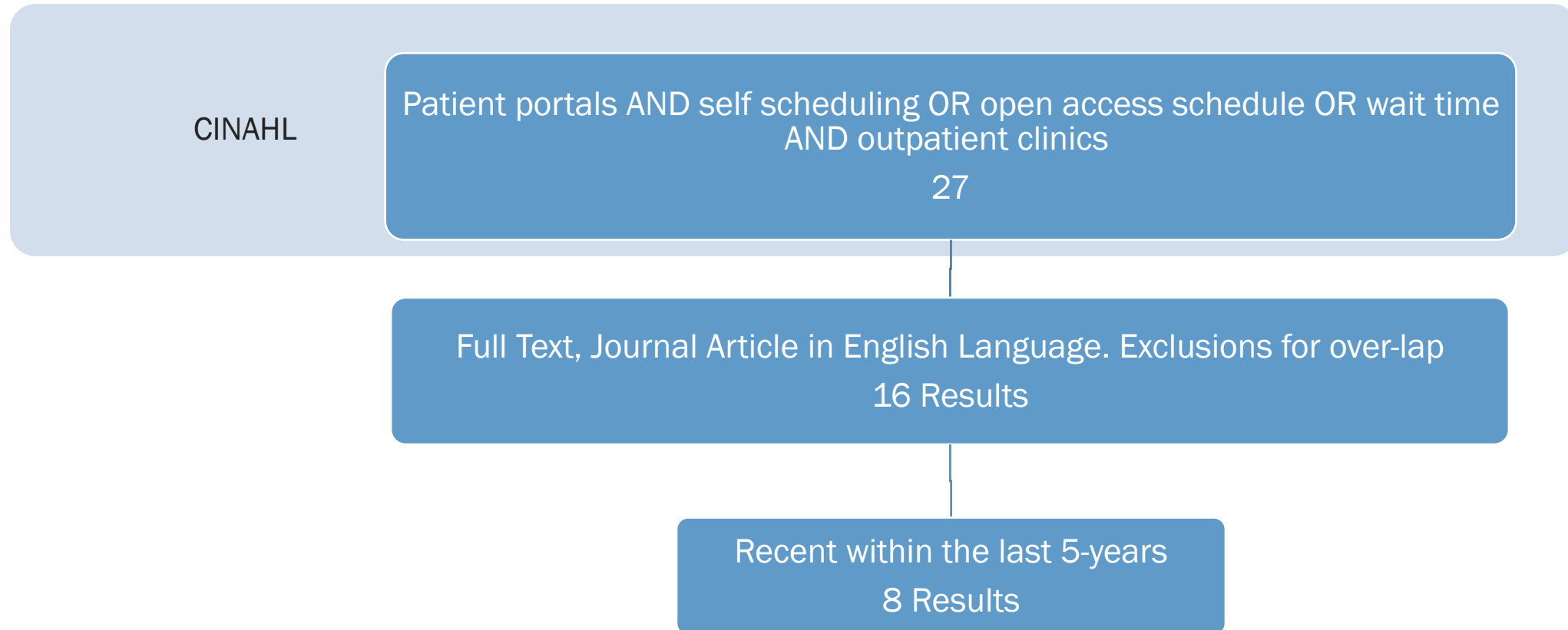
# Synthesis of the Evidence: Evidence Search

- ▶ Inclusion criteria: Peer-reviewed journal articles available in full-text and in the English language
- ▶ Search Results: Initial 58 articles, exclusions for mobile app triage, follow-up appointment, overlap
- ▶ 19 studies selected

# Flow Diagram



# Flow Diagram



# Synthesis of the Evidence

- ▶ Consensus that addressing wait time increases patient satisfaction
- ▶ Level of evidence: quality improvement, retrospective analysis and observational studies.
- ▶ High quality literature: large sample sizes, clear methods, and meaningful results.
- ▶ Use of Patient portal or Open Access provides patients with autonomy and access.
- ▶ Some studies say it's not wait time but perception of wait time.
- ▶ Scheduling improves efficiency and can be patient driven through portal or self-scheduling technology

# Evidence Summary

- Wait time is improved with efficiency, namely staggering arrival time and patient scheduling
- Interventions to address barriers to utilization of technology has been studied
- Gaps in evidence: use of patient self scheduling in urgent care to reduce wait time
- Scheduling utilization is “novel” while portal is more well known
- Wait time, patient satisfaction affected by various factors and chief complaint

# Methods

## ▶ **Project Design**

- **Quality improvement.** PDSA Framework for Quality Improvement

## ▶ **Setting**

- Urgent care clinic in the southeastern United States.

## ▶ **Participants**

- Participants: walk-in patients (n=459)
- Exclusions for emergencies



# Methods

## ► Implementation

- Consulted stakeholders: Medical Director, Clinical Manager, Providers, Nurses, Medical Assistants, Patient Services Specialists and Radiology Technicians
- Created a survey to capture barriers
- Analyzed results of the survey data
- Implemented a change by creating and distributing a visual management tool

# Methods

## ► Data Collection

- Survey distribution
- Patient reported survey analysis and patient volume monitoring
- VMT distribution and patient exposure tracking
- Registration mode analysis post intervention – patient management system data

# Methods: Data Collection Tools

## ► Survey

1. I am aware there is an online reservation option.
  - Yes
  - No
2. I have used the urgent care online reservation option to schedule an appointment in this health system.
  - Yes
  - No
3. I have access to a computer or smart phone.
  - Yes
  - No
4. I did not use online scheduling for today's visit because:
  - a. I don't know how to make an online reservation.
  - b. Today's visit was an emergency.
  - c. I prefer to register with a live person.
  - d. There were no available times.
  - e. The available times were not convenient for me.
  - f. I do not have access to a computer or smartphone.
5. I am comfortable with navigating the website on my computer or smartphone to make an online appointment in this clinic.
  - Yes
  - No
6. I plan to register online for future visits.
  - Yes
  - No If no, please state why \_\_\_\_\_

**Demographic Questions: Optional**

1) Age: \_\_\_\_\_  
(For pediatric patients: age of guardian registering patient)

2) Gender: \_\_\_\_\_  
(For pediatric patients: gender of guardian registering patient)

- Female
- Male

3) Primary Language:

- a) English
- b) Spanish
- c) Other: Please state \_\_\_\_\_

## ► Patient Management System Report

Patient Management System Report					
Patient Overview		Patient Overview Percents		Patient Wait Times (minute)	
total online patients	218	% online patients	32.01%	online patient wait avg	8.92
total walk-in patients	459	% walk-in patients	67.40%	walk-in patient wait avg	16.92
total staff added patients	4	% staff added patients	0.59%	staff added patient wait avg	6.50
total patients	681	% total patients	100.00%	total patient wait avg	14.30

# Methods

## Intervention: Visual Management Tool

**Urgent Care  
ONLINE RESERVATIONS**

**Atrium Health**

- 1** Reserve your spot at [www.atriumhealth.org](http://www.atriumhealth.org):
  - Minor illnesses (cold and flu symptoms, sore throats, bronchitis)
  - Minor injuries (sprains, fractures, cuts, burns)
  - Sports, camp, and work physicals
  - Workers' compensation / occupational medicine
- 2** Select > Get Care Now
- 3** Select > Get Locations  
Locate an urgent care near you to reserve your spot
- 4** Provide your name, phone number, and preferred visit time. Confirm your reservation!
- 5** Arrive for your reserved visit time

**Skip the line!**



# Budget

Item	Estimated Cost	Actual Cost
Fuel costs to clinic	\$75 (\$30/week for 2.5-weeks)	\$48.79
2 stacks of white	\$10 (\$5/paper)	\$10.67
Stapler	\$8	\$7.59
Staples	\$2	\$2.85
Visual management tool printing	\$175.00 (34.99/50 flyers)	\$63.39
Custom poster	\$25	\$29.95
PSS Salary Compensation in Kind	\$240 (13.97 approximately 1-hr per day for 2.5-weeks)	\$0
Instructional Design Consultation and Services in Kind Vanderbilt University	\$111 (approximately 3-hrs)	\$0
Total	\$646	\$163.24

# Analysis

- Patient reported barriers survey
  - 10 Responses from 65 potential
  - 15% response rate
  - Descriptive statistics – mean and ratio

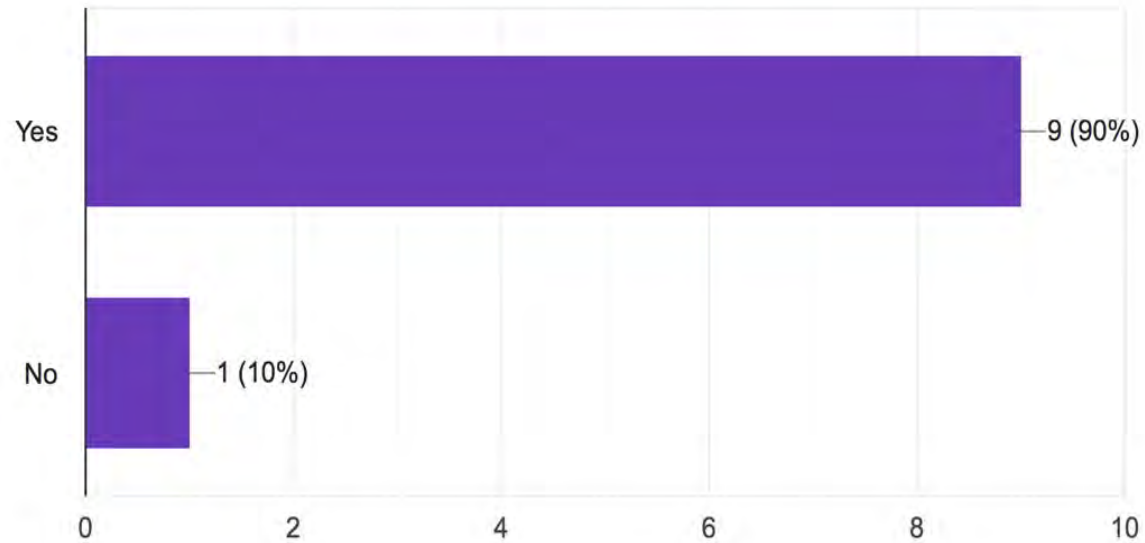
Variables	Frequency (n) %	Mean (SD)
Age		36 (SD 17.96)
16-24	3 (30%)	
25-34	1 (10%)	
35-44	2 (20%)	
45-54	1 (10%)	
55-64	1 (10%)	
65 and over	1 (10%)	
Gender	(x)	
Male	7 (70%)	
Female	3 (30%)	
Primary Language	(x)	
English	8 (80%)	
Spanish	2 (20%)	
Other – Free text response	0	



## Survey Assessing Barriers to Utilization of Online Scheduling System for Walk-in Patients

1. I am aware there is an online reservation option.

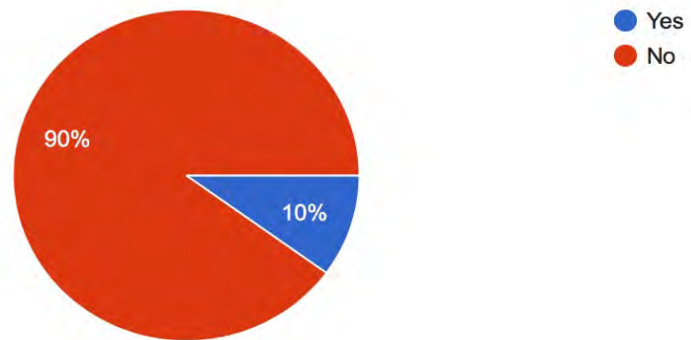
10 responses



# Survey Assessing Barriers to Utilization of Online Scheduling System for Walk-in Patients

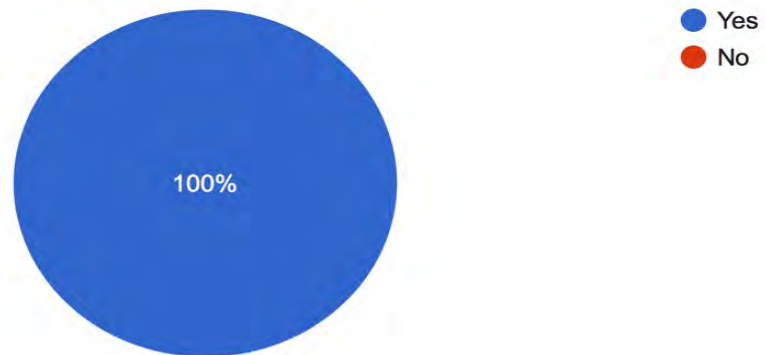
2. I have used the urgent care online reservation option to schedule an appointment in this health system.

10 responses



3. I have access to a computer or smart phone.

10 responses

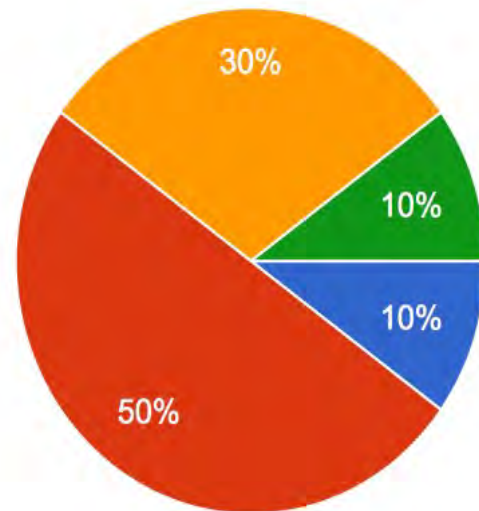




## Survey Assessing Barriers to Utilization of Online Scheduling System for Walk-in Patients

4. I did not use online scheduling for today's visit because:

10 responses

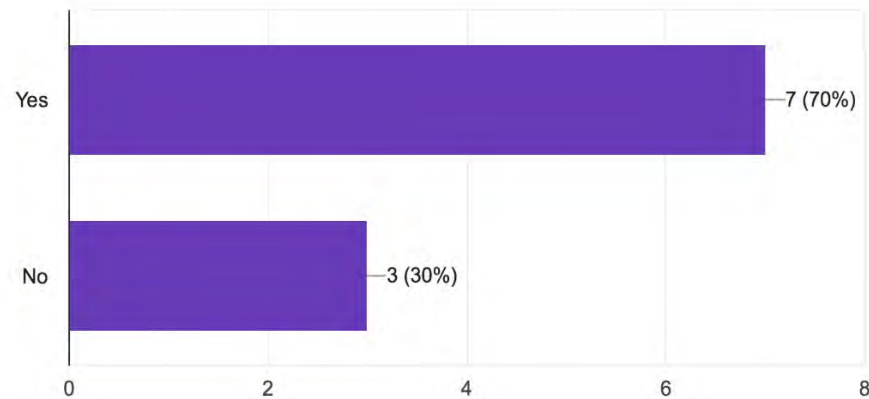


- a. I don't know how to make an online reservation
- b. Today's visit was an emergency
- c. I prefer to register with a live person
- d. There were no available times
- e. The available times were not convenient for me
- f. I do not have access to a computer or smartphone

# Survey Assessing Barriers to Utilization of Online Scheduling System for Walk-in Patients

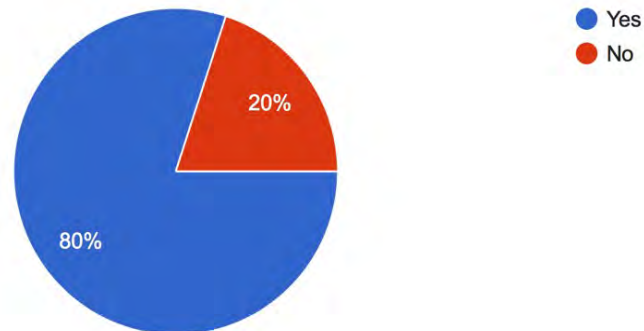
5. I am comfortable with navigating the website on my computer or smartphone to make an online appointment in this clinic.

10 responses



6. I plan to register online for future visits.

10 responses



# Results

- ▶ Total survey response (10)
- ▶ Most 80% (n=8) plan to schedule online in the future
- ▶ 681 patients exposed to VMT, 459 walk-ins

# Comparison of online versus walk in registration 2020 to 2021

11% Increase from Previous Year

## Online vs Walk-in Registration (May 3 – 16)

Registration Mode	2020 year (percent of patients)	2021 year (percent of patients)
Online	21%	32%
Walk-in	78.13%	67.4%
Staff-added	0.78%	0.59%

# Discussion

- ▶ Barriers to patient online self-scheduling (38% vs 60%)
  - Awareness
  - “How to” Knowledge
  - Preference
- ▶ 11% increase with VMT

# Results Relationship: Framework, Aims, & Objectives

## ► Framework

- Organized project process, adaptable for future implementations

## ► Aims & Objectives

- Obtained patient-reported barriers
- Created and distributed VMT
- Increase in online-utilization and reported future intent

# Impacts of Results on Future Practice

## Online patient self-scheduling in urgent care setting

### ▶ Stakeholders value

- Awareness and knowledge facilitated by VMT
- Management of arrival pacing with scheduling

### ▶ Future implications

- Increase patient satisfaction
- Decreasing wait times
- Marketing and messaging opportunity

# Project Strengths and Weaknesses

## ► Strengths

- Functional
- Cost effective in implementation & social capital
- Buy-in & engagement
- Ease of distribution
- Exposure to >600 patients  
(n=681)

## ► Weaknesses

- Short implementation period
- Small sample size
- Inconsistent visits



# Lessons Learned

- ▶ Keep communication fluid
- ▶ Collaborate with content experts
- ▶ Detailed planning improves QI implementation
- ▶ Engaging with stakeholders sets process expectations, dialogue feedback, suggestions
- ▶ Adaptation and agility in the process
- ▶ Report to stakeholders succinctly - Future use and implications



## **Conclusion:** Online patient self-scheduling in urgent care setting

- ▶ Opportunity for continuing visual management tool in clinical setting
- ▶ Longer term implementation may be beneficial
- ▶ Patients show willingness to use online scheduling in the future

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