

## Introduction

**Purpose:** The aim of this quality improvement project is to evaluate the effectiveness of telepsychiatry in reducing appointment no-show rate among adult patients with mental health disorders compared with the traditional in-person visits in an outpatient hospital setting in the rural North Jersey

## Objectives:

Establish and evaluate the patient appointment no show rate data prior to the implementation of telepsychiatry.

Establish the patient appointment no show rate data during the use of telepsychiatry.

Compare patient appointment no show rate data prior to telepsychiatry with the appointment no show rate during the use of telepsychiatry services.

Analyze data and evaluate outcome. Present outcome to the Leadership at the hospital level department meeting

## Background and Significance

Lack of access to mental care as evident by patients' appointment no show rate, is a major problem in health care system, particularly in the rural communities where lack of transportation, and distance between clients and providers have significantly limited access to care.

Patient's appointment no-show has negative impacts on patients, the health care systems, and the society. There is a potential of decompensation when patients are not able to show up for scheduled appointments.

Patient's decompensations result in high rate of Hospital Emergency visits and rehospitalization, thus putting more burden on the healthcare system and the society

Telepsychiatry provides: a potential solution to the barriers to mental health access and reduces patients' appointment no-show rate.

Cost and time saving with telemedicine:  
 Estimated 145 miles per visit and 142 minutes per visit

## Needs Assessment

The facility endures Significant no-show rate for scheduled patients' appointments secondary to geographical and logistical problems (distance and transportation problems) encountered by majority of the rural and poor clients.

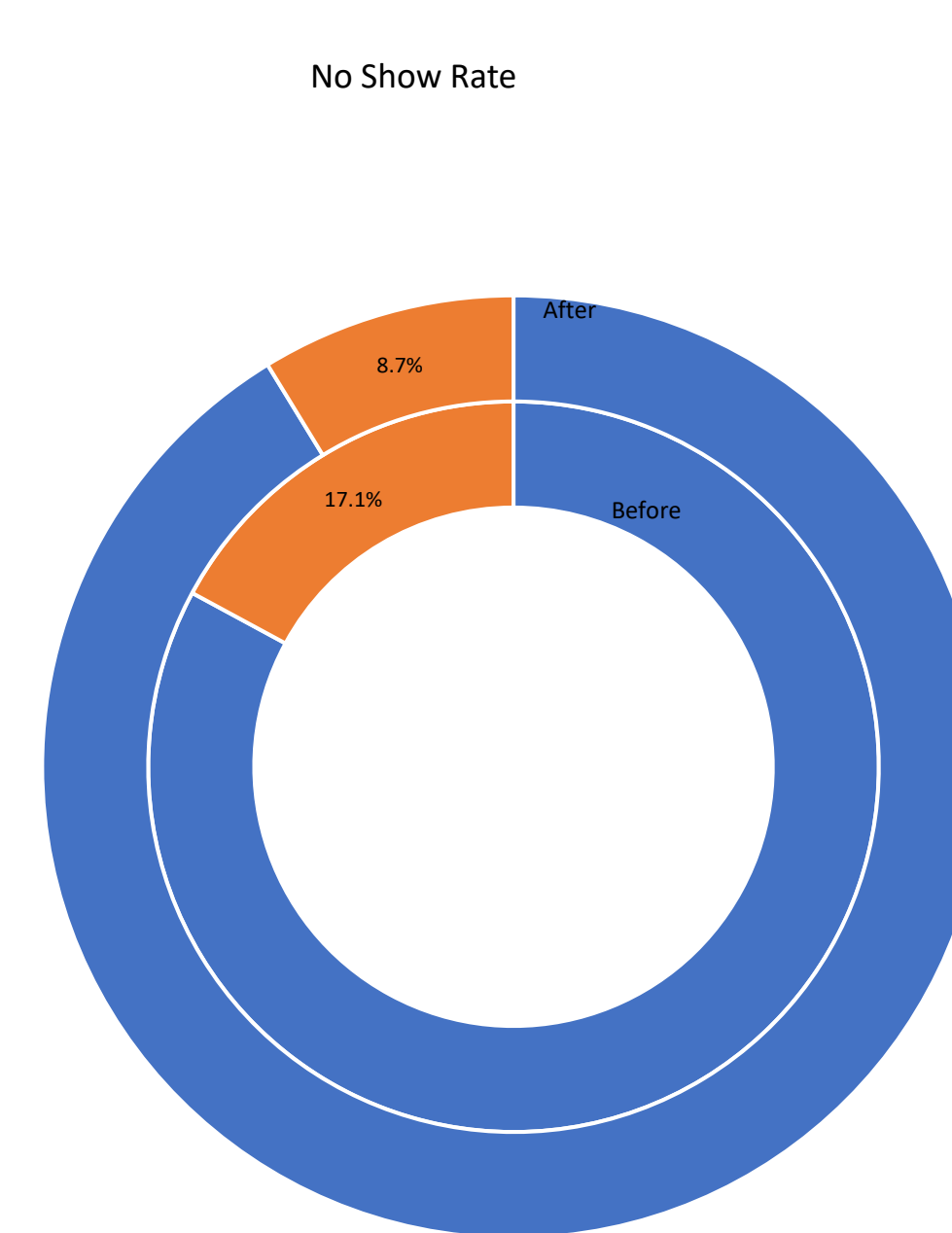
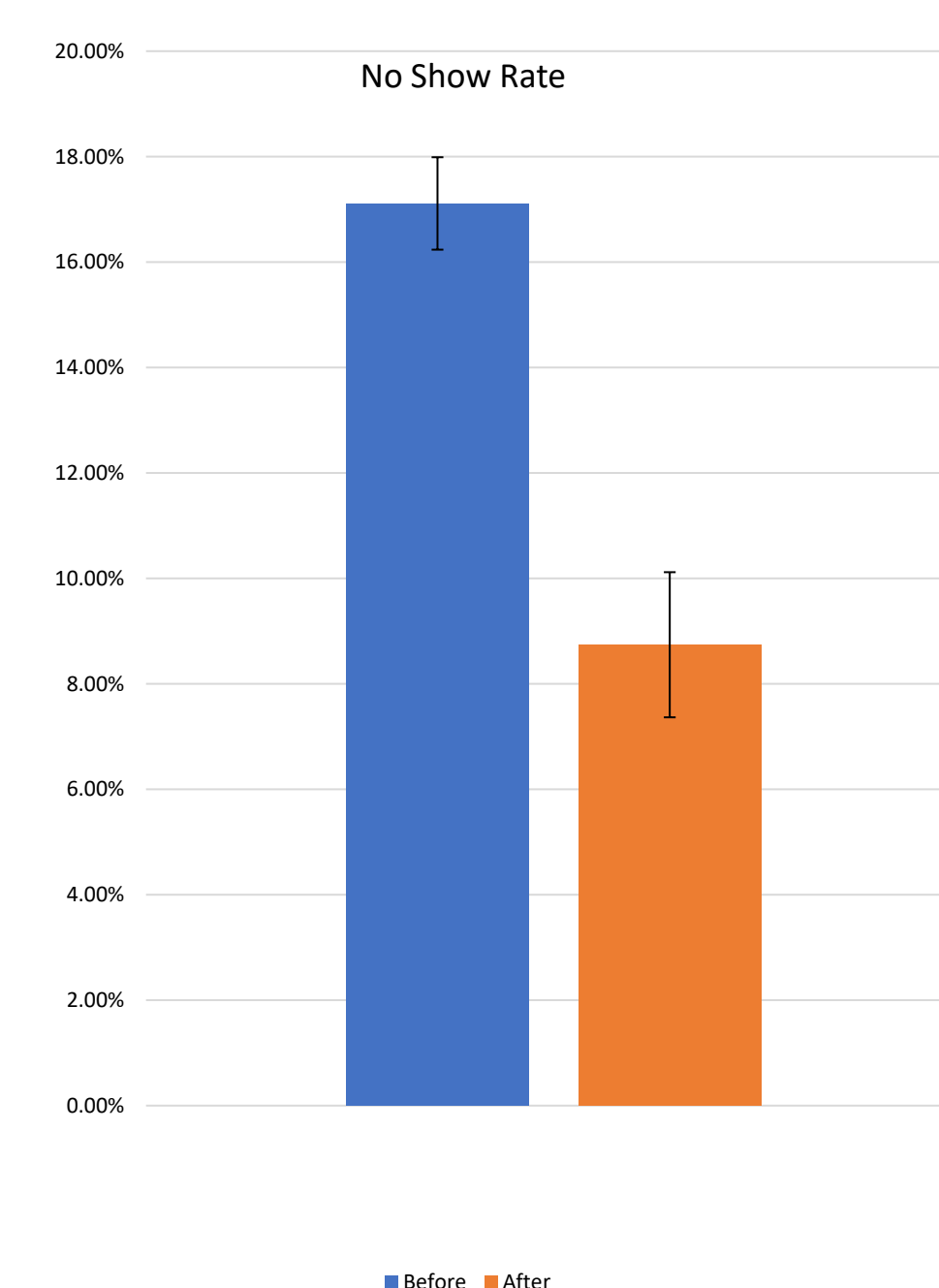
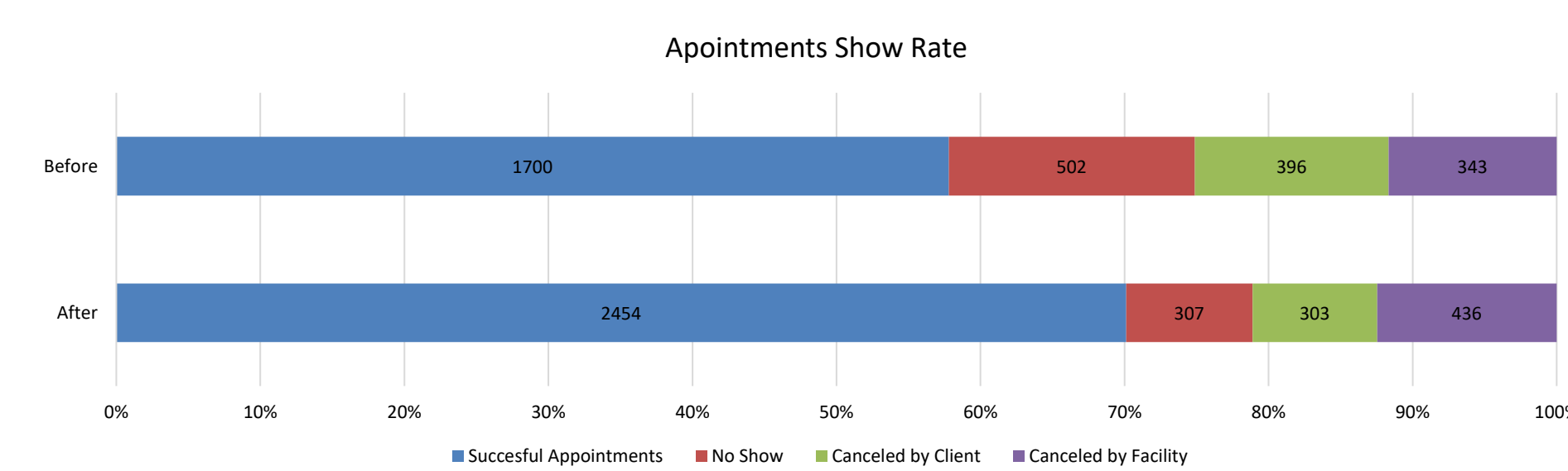
## Problem Statement

The primary aim of this quality improvement project was to evaluate the effectiveness of telepsychiatry in reducing appointment no-show rate among adult patients with mental health disorders compared with the traditional in-person visits, in an outpatient hospital setting in the rural North Jersey.

## Clinical Question

Could the use of telepsychiatry reduce mental health patients' appointment no-show rate compared with the traditional in-person visits in an outpatient hospital setting?

## Outcome



## Methodology

**Study Design:** Retrospective study

**Methods:** Retrospective review of de-identified patient data.

**Instruments/Tool:** The project leader collaborated with the institution staff assigned by the Health System Executive Director, Behavioral Health Services in collecting and analyzing de-identified data.

**Sample Size/ Data Source:** Deidentified data set on 300 patients made available by the Institution staff in a Microsoft Excel format.

The study retrieved deidentified data regarding appointment show rate on 300 patients records 6 months (April-September 2019) prior to telemedicine and during telemedicine (April – September 2020).

**Population:** Adults, ages 18-85 with various psychiatric disorder including anxiety, depression, mood disorder, posttraumatic stress disorder, ADHD, impulse control disorder, schizoaffective disorder, intellectual disability, and psychosis

## Key Findings

Appointment No-show rate decreased significantly from 17.17% during in-person visit to 8.77% via Telepsychiatry ( A decrease by 8.4%)

Appointments canceled by patient were significantly higher: 396 (13.46%) during Traditional in-person visit versus 303 {8.66%}, (A decrease by 4.8 %).

Appointments canceled by the facility were significantly lesser: 343 (11.66%) during Traditional in-person visit versus 436{12.45%} during Telepsychiatry.

T-test analysis was utilized to compare the mean difference of the outcomes.  
 T-test result = 12.554

P-value = 0.00000  
 P-value is below 0.05, significant.

## Discussions

**Implications on Practice: Organizational Policy / Procedural:** The use of telemedicine resulted in significant changes in institutional policies and management procedures.. The organization has made modifications such as hybrid treatment regimen; alternating in-person visit with telepsychiatry; flexible and hybrid providers work schedule.

**Economic:** Organization revenue was notably increased due to the decreased in appointment no show rate as well as increased providers' treatment capacity via telemedicine.

There was a reduction in overall treatment cost such as reduction in the cost of space including heating and cooling energy bills, sanitary maintenance cost and cost of patient reception

**Patient:** Access to mental health care and patient health outcomes were improved by eliminating geographical and logistical barriers such as transportation and distance, thereby reducing patients' appointment no-show rate.

**General:** The institution was able to minimize patient and provider's exposure to Covid-19 via the use of telepsychiatry.

**Study Limitations:** The study duration was limited to project leader's academic duration and curriculum.

## Recommendation for future studies

Future studies should examine the difference in patient outcome with regards to PHQ-9/GAD measures through telepsychiatry versus in-person care.

Future studies should explore the degree of patients and providers' satisfaction with telepsychiatry during the Covid-19 pandemic. Lastly, future study should examine hospital re-admission rate during the use of telepsychiatry compared with the traditional in-person visits.

References: Scan code

