



**SIU** SCHOOL *of* MEDICINE

**SIU GME Quality Improvement  
Poster Competition and  
Symposium**

**May 3, 2023**

Memorial Learning Center

RM 1A – 5:00pm-6:30pm

## INTRODUCTION

Breastfeeding provides numerous benefits to the infant and mother by reducing maternal and infant risks for a number of diseases, encouraging maternal-infant bonding and lowering healthcare costs. In Sangamon County, breastfeeding initiation rates for the Women, Infant and Children (WIC) population were 15.7% in 2020, which is significantly lower than the Healthy People 2020 goal of 81.9% for “ever breastfed infants”. The SIU Department of Ob/Gyn partnered with the Illinois Public Health Institute (IPHI) to educate our staff and provide standardized educational materials to our patients. Our aim was to assess whether the implementation of these materials improved breastfeeding initiation rates in our patient population.

## METHODS

### PLAN:

Rates of “ever breastfeeding” were assessed with retrospective chart review of all SIU Ob/Gyn prenatal clinic patients who delivered at HSHS St. John’s Hospital and Springfield Memorial Hospital January 1, 2022 through March 31, 2022.

### DO:

Faculty, residents and staff attended an educational webinar presented by IPHI. For 3 months, all patients scheduled for a prenatal appointment received standardized educational materials created by IPHI.

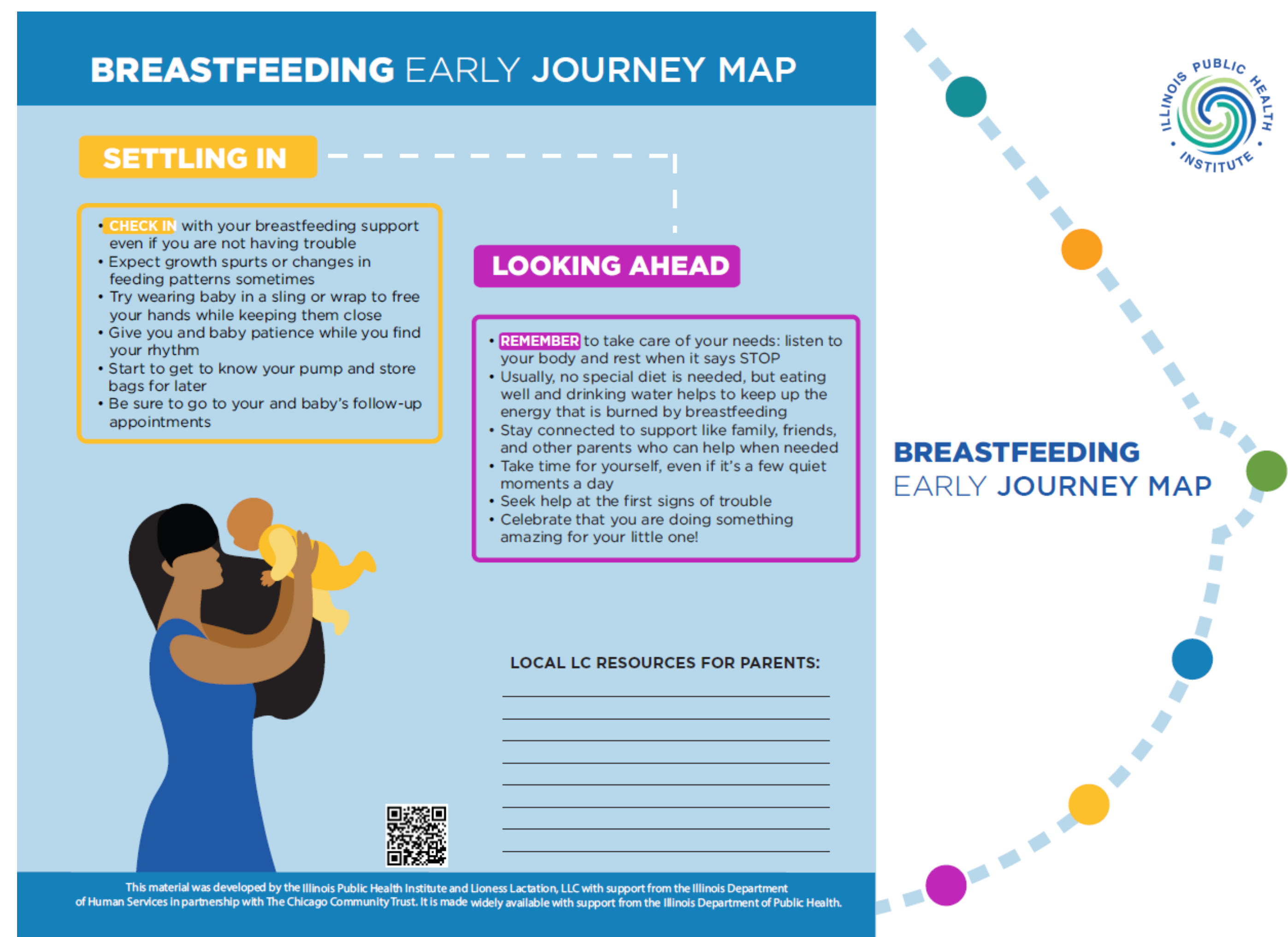
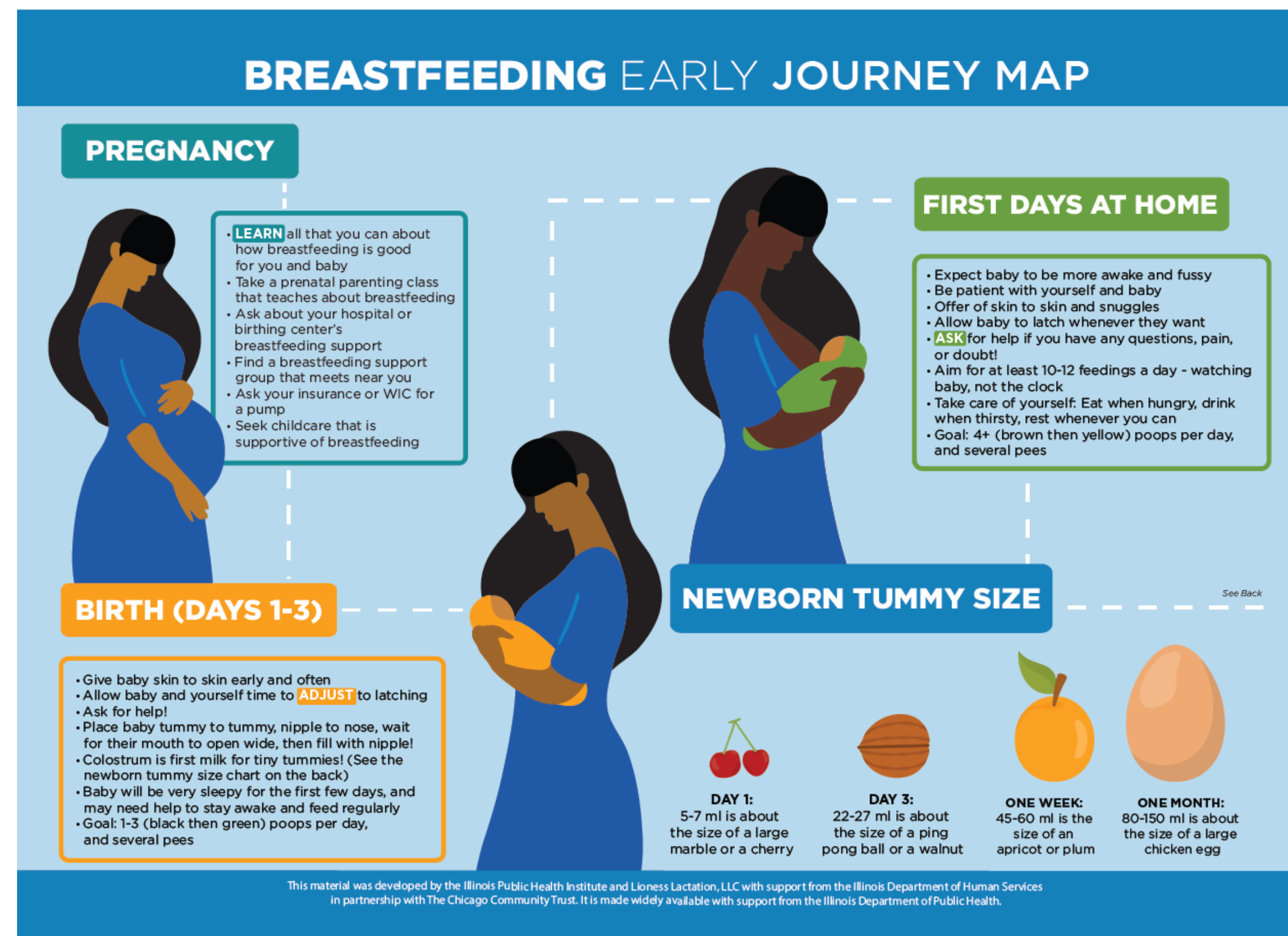
### STUDY:

“Ever breastfed” rates before and after the intervention were compared using Chi-square tests. Our patient demographics were: 55.9% White; 31.8% Black/African American; 95.7% non-Hispanic. 93.4% utilized Medicaid services for insurance. The mean age of our patients was 26.8 ± 6.1.

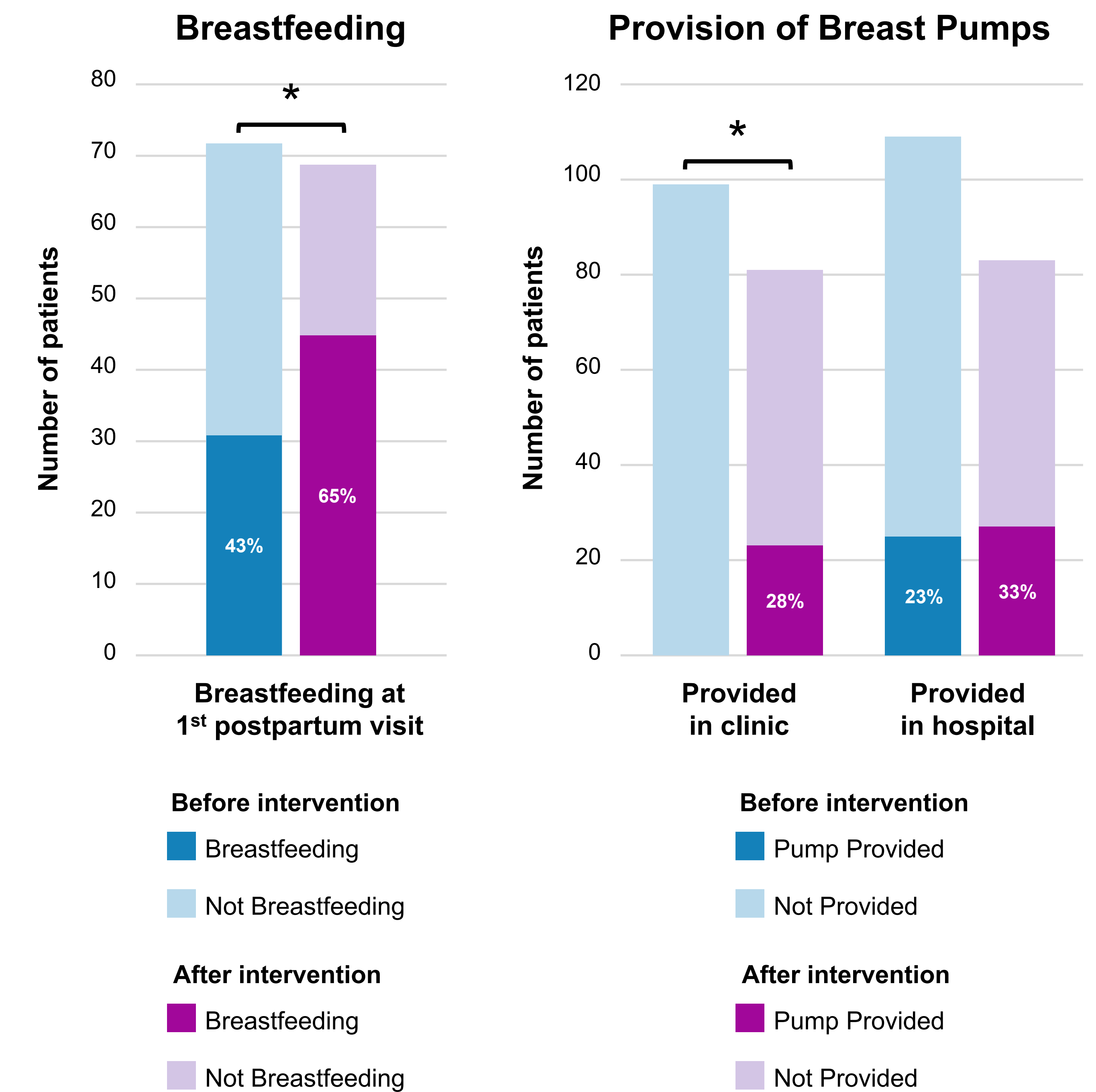
### ACT:

Based on our results we have planned to permanently incorporate the educational materials into our practice.

## INTERVENTION



## RESULTS



## DISCUSSION

Our intervention was successful in significantly improving breastfeeding initiation rates in our patient population (65% vs. 43%; p=0.008). We have created a protocol to include the IPHI Breastfeeding Early Journey Map in our patient education packet for all prenatal patients in the 3<sup>rd</sup> trimester.

We acknowledge that our breastfeeding rate is still below the Healthy People 2020 goal of 81.9%. We aim to continue to develop strategies to better assist our patients with breastfeeding initiation.

While our study surveyed “ever breastfeed” infants in line with measures for the Healthy People Initiative, the American Academy of Pediatrics recommends breastfeeding until at least 6 months of age. Future studies to evaluate the longevity of breastfeeding along with implementations of clinical interventions would also be helpful.

Figure 1: Patient educational materials

# Promoting Vaginal Birth

Emma James, MD, MPH<sup>1</sup>; Terah Holland, MD<sup>1</sup>; Jessica Gonko, MSN, RN<sup>2</sup>

<sup>1</sup>Southern Illinois University Dept. Of Obstetrics and Gynecology; <sup>2</sup>HSHS St. John's Women and Infants Center

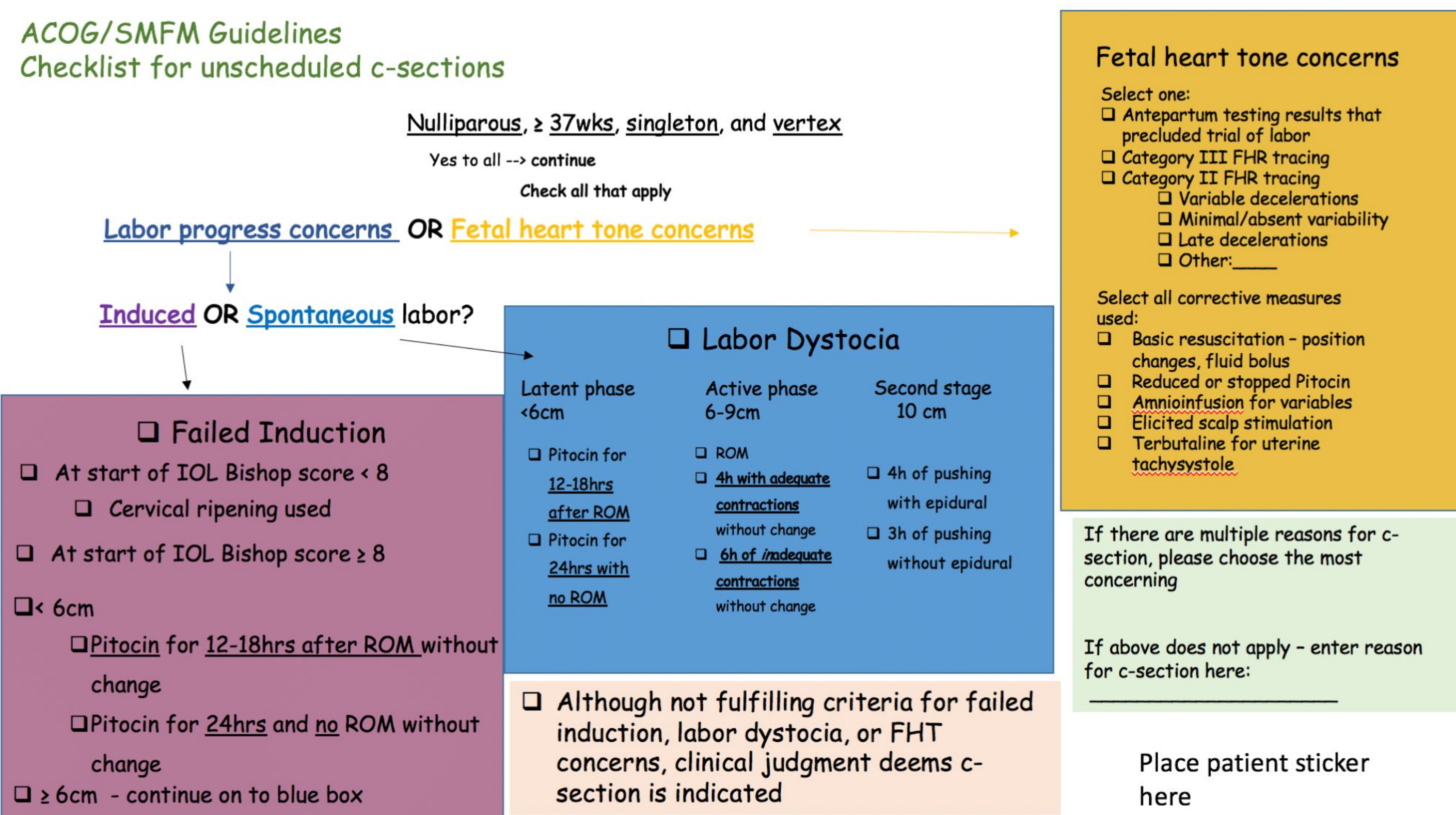
## Introduction

This project was introduced with the Illinois Perinatal Quality Collaborative, a statewide maternal and neonatal health quality improvement network. St. John's Perinatal Center was chosen as a pilot location for this project.

- ❖ 60% increase in national c-section from 1996-2011, without a corresponding improvement in outcomes
- ❖ Goal: reduce the primary nulliparous, term, singleton vertex (NTSV) c-section rate
  - ❖ Healthy People goal of 23.6% cesarean delivery in that population
  - ❖ Plan to increase the percent of primary NTSV c-sections that met the American College of Obstetrics and Gynecology (ACOG) criteria for indicated cesarean due to labor dystocia or fetal distress, and educating all members of the healthcare team about these criteria and labor management strategies.
  - ❖ The AIM was to have our center at or below the Healthy People NTSV cesarean rate by December 31, 2022.

## Methods

We applied a PDSA cycle methodology. We gathered our center's baseline NTSV cesarean rate (from January to April 2021) and developed a flowsheet tool to guide a preoperative multidisciplinary huddle to review the reason for cesarean section and assess if the c-section met ACOG criteria. We tracked the reason for NTSV cesarean and our center's NTSV c-section rate through collection of the huddle flowsheet and documentation in the EMR operative reports.

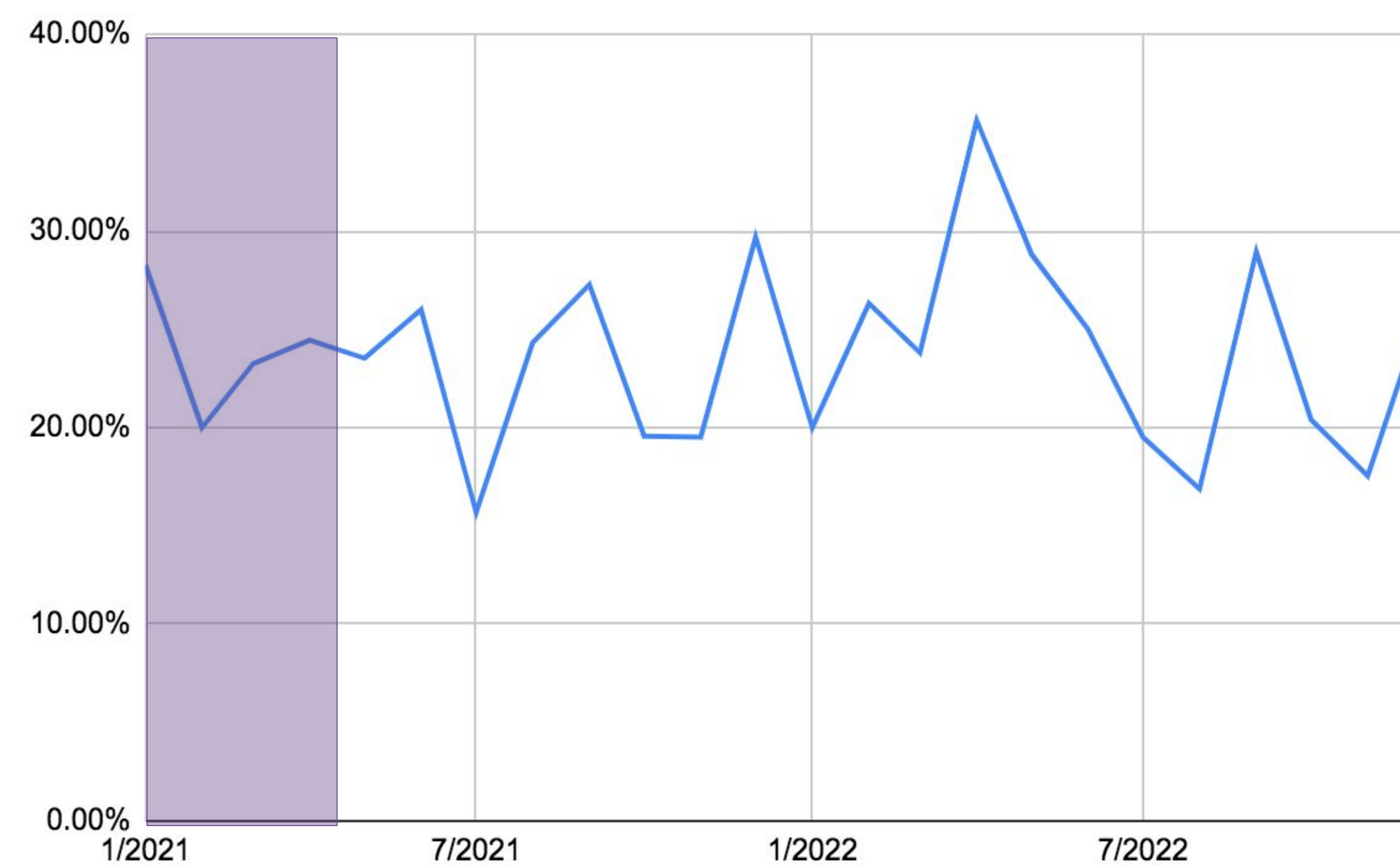


**Figure 1.**  
Huddle flowsheet tool

## Results

After implementation of our intervention, we were able to meet the Healthy People 2030 NTSV c-section goal, with an overall NTSV cesarean section rate of **23.6%** at our institution. Our baseline rate was 24.1%

We were also able to educate nurses, residents, and other providers about the initiative and the ACOG criteria for cesarean delivery, as well as intervention to reduce primary cesarean delivery.



**Figure 2.**  
NTSV c-section rate at baseline (1/2021-4/2021, shaded area on graph) and during intervention (5/2021-12/2022)

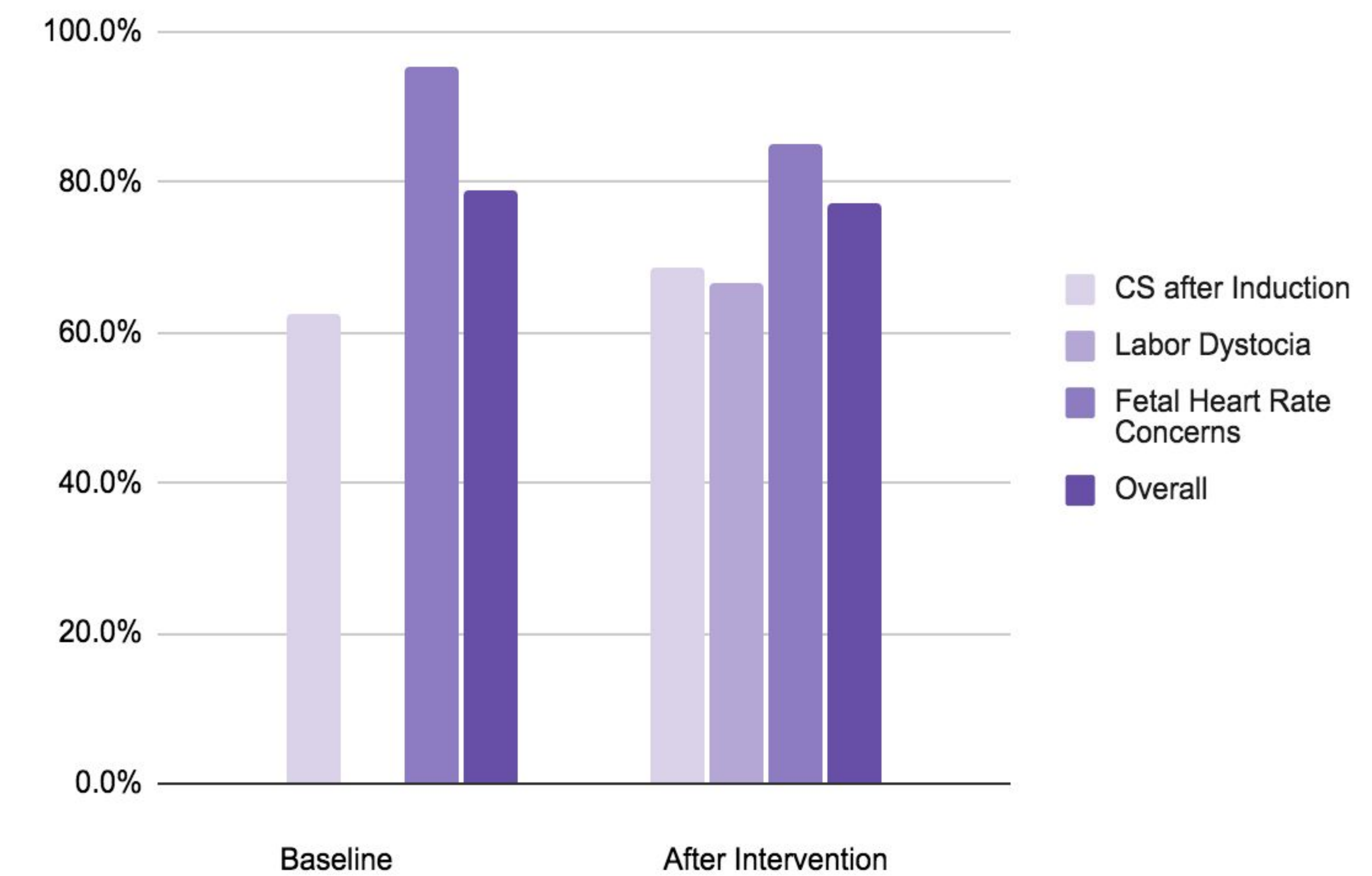
Our secondary goal was for at least 80% of NTSV c-sections to meet ACOG criteria for an indicated c-section. C-sections were divided into three broad indications:

- ❖ C-section after induction of labor
- ❖ Labor dystocia during spontaneous labor
- ❖ Fetal heart rate concerns

Compliance to ACOG guidelines for indicated c-section were tracked using completed huddle forms and review of operative reports in the electronic medical record.

We were not at goal of >80% of c-sections meeting ACOG criteria either at baseline (78.9%) or after our intervention (77.3%).

## Results



**Figure 3.**  
Percent of NTSV c-sections meeting ACOG criteria for indicated c-section, before and after intervention

## Discussion

Our intervention elicited buy-in from community and academic attendings, residents, nurses, and other support staff. Our intervention educated providers about the ACOG criteria for labor management and cesarean delivery, thereby decreasing the number of cesarean deliveries that do not meet this criteria. A multidisciplinary group discussion can facilitate best practices and increase patient safety. Future efforts can be directed at continuing to improve our rate of c-sections meeting ACOG indicated c-section criteria.

## References

1. Promoting Vaginal Birth. Illinois Perinatal Quality Collaborative: <https://ilpqc.org/initiatives/promoting-vaginal-birth-initiative/>
2. Healthy People 2030: Reduce cesarean births among low-risk women with no prior births. <https://health.gov/healthypeople/objectives-and-data/browse-objectives/pregnancy-and-childbirth/reduce-cesarean-births-among-low-risk-women-no-prior-births-mich-06/data-met-hodology>

# Increasing RVU's by Billing for Depression Screening

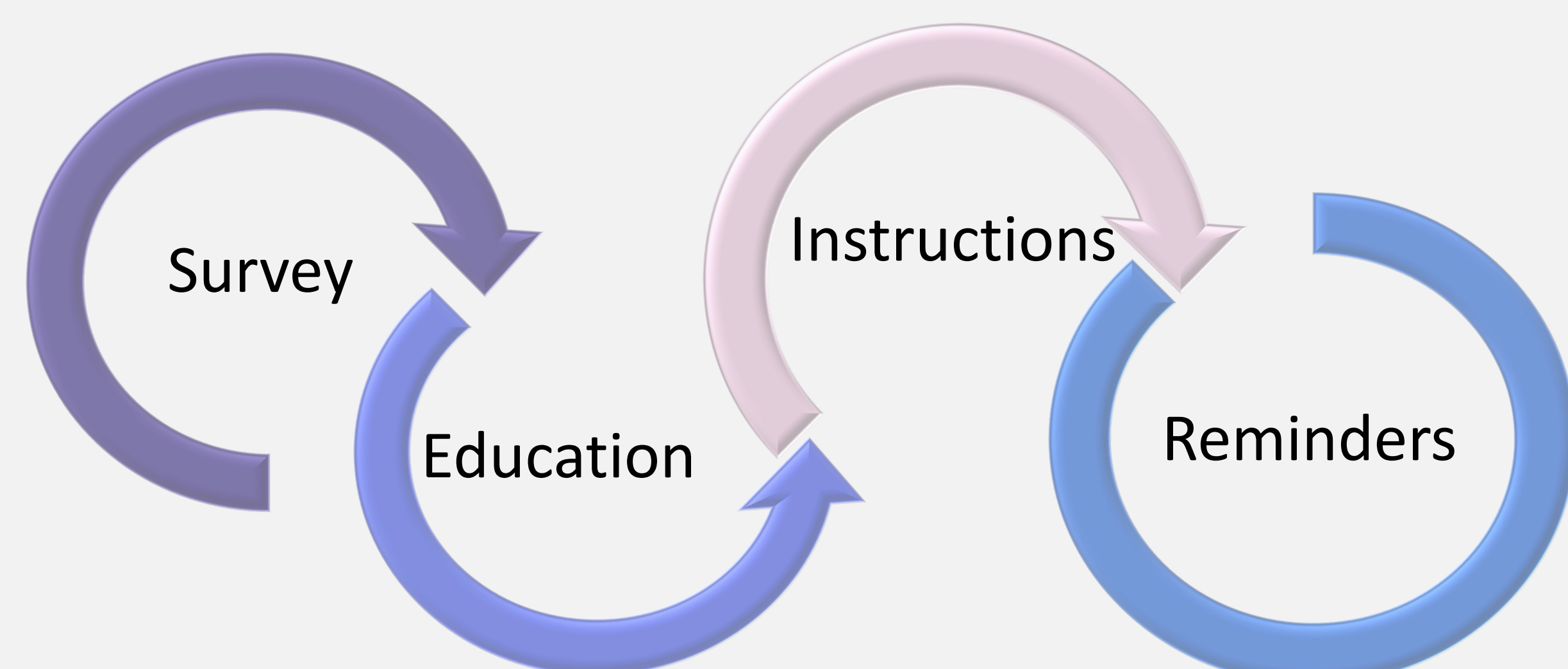
Abhijeet Joshi MD, Justin Parker MD, Johnny Tenegra MD  
SIU Decatur Family Medicine Residency Program

## Introduction

Depression is one of the most common psychiatric disorders seen in primary care. It is estimated that only 50 percent of the patients with major depression are identified in the absence of screening<sup>1</sup>. United States Preventative Services Task Force recommends screening for depression in adults  $\geq 18$  years of age<sup>2</sup>. PHQ-9 is one of the screening tools employed to screen for depression (sensitivity 88%; specificity 85%)<sup>1</sup>. A preliminary survey conducted at SIU Decatur shows that 100% of the residents use PHQ-9 for depression screening; however, only 20% of them bill for it. The goal of this study is to increase awareness about billing for PHQ-9 screening.

## Methods

1. Anonymous survey was done prior to starting the project to establish a baseline of residents who bill for PHQ-9 assessment
2. An educational intervention was delivered to FCM Decatur residents. The intervention included a presentation on how to add a billing code for the PHQ-9 assessment.
3. A copy of "how to bill" was given to each resident
4. Residents received bi-weekly reminders to bill
5. Pre-intervention time period was from 1/1/21 – 6/30/21. Post-intervention time period was from 1/1/22 – 6/30/22.



## Results

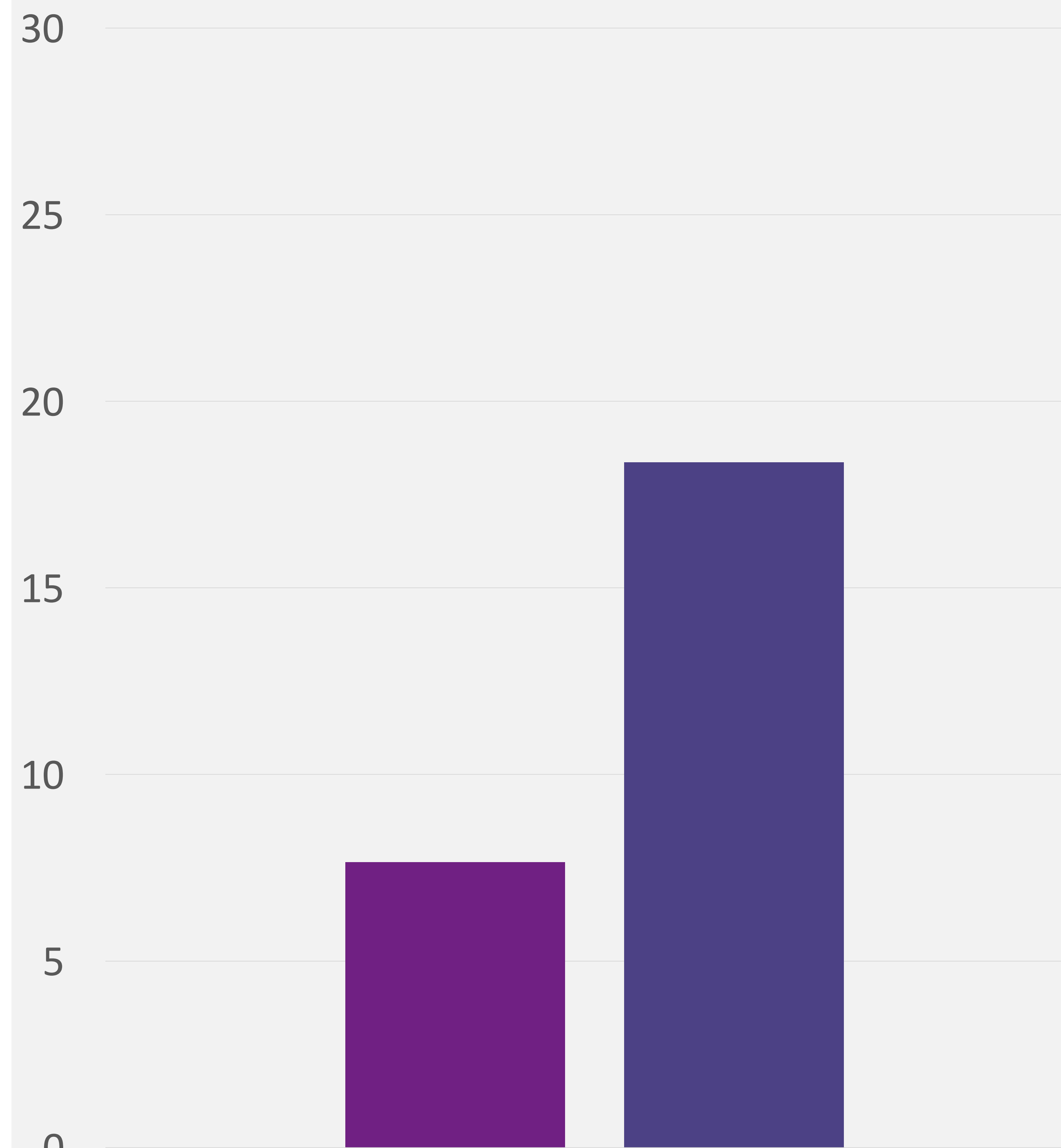


Figure 1. Percent PHQ-9 billed by encounters  
■ Pre-intervention ■ Post-intervention

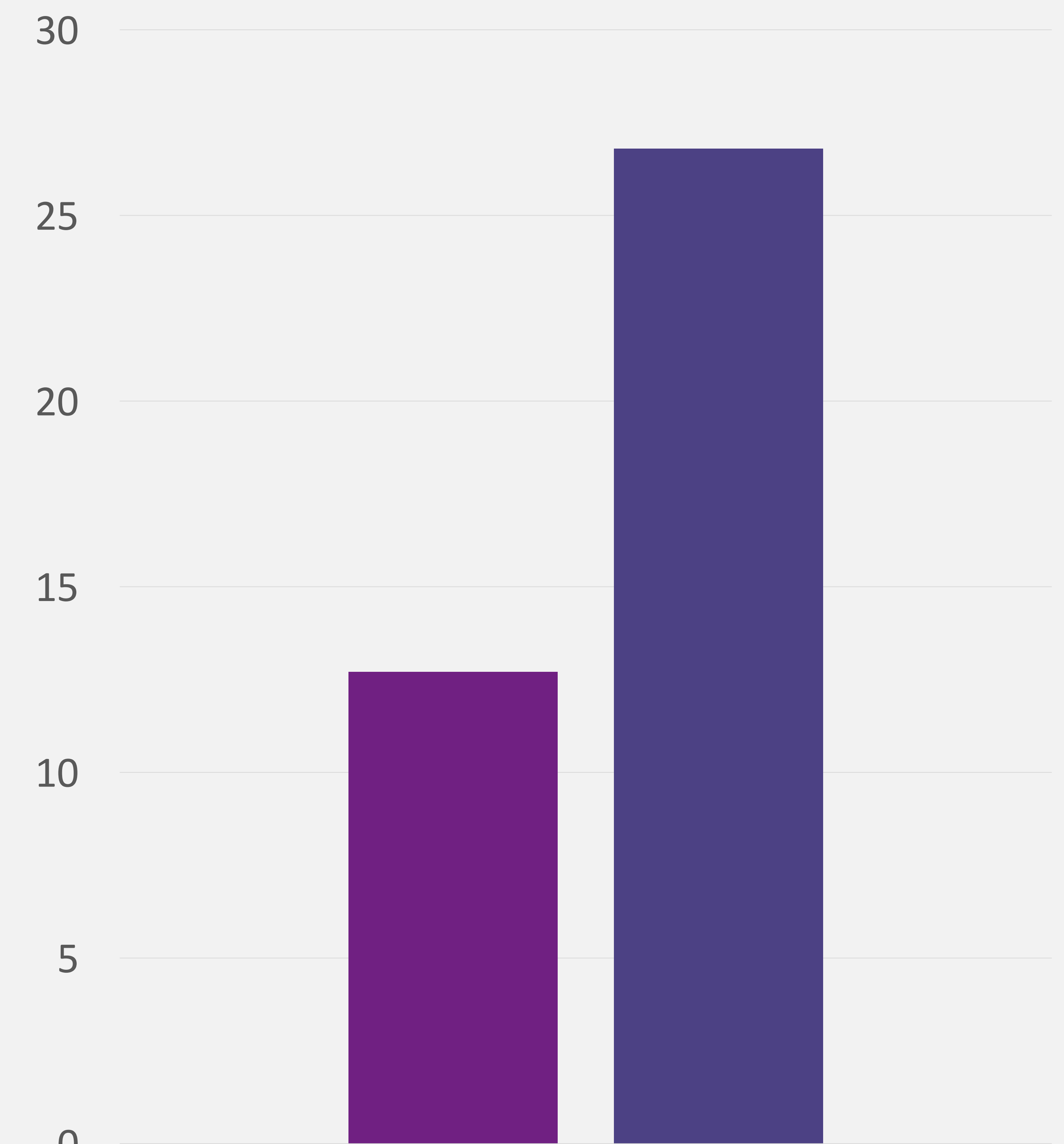


Figure 2. Percent PHQ-9 billed by unique patients  
■ Pre-intervention ■ Post-intervention

## Discussion

Figure 1 represents the total number of visits allowing for multiple visits per patients with the ICD code F32 or F33. It shows a 10.71% increase in billing. Figure 2 demonstrates the number of unique patients seen only for the ICD code F32 or F33. It shows a 14.1% increase in billing. CPT code 96127 was used for billing which corresponds to 0.14 RVU. This depicts the importance of educating residents on billing during their training. This will not only bring additional revenue for the practice but will also improve documentation. Billing requires the PHQ-9 to be completed in the EHR. Hence, it allows for an easier comparison of PHQ-9 scores on follow-up visits. This study is confounding by including patients seen by all providers at our clinic as it was complex to filter out patients seen only by the residents.

## Discussion (cont.)

However, faculty was also present during my presentation on billing. Furthermore, this study's pre-intervention period was impacted by the COVID-19 pandemic which saw fewer patients compared to the post-intervention period.

## References

1. Williams, MD, & Nieuwsma, PhD. (2022, February). *Screening for depression in adults*. UpToDate.
2. US Preventative Task Force. (2016). *Screening for depression in Adults*.

# Improving Blood Pressure Compliance in the Outpatient Setting

Authors: Dr. Amna Karim MD, Dr. Johnny Tenegra MD, Dr. Justin Parker MD

Affiliations: SIU Family Medicine Decatur Residency



## Introduction

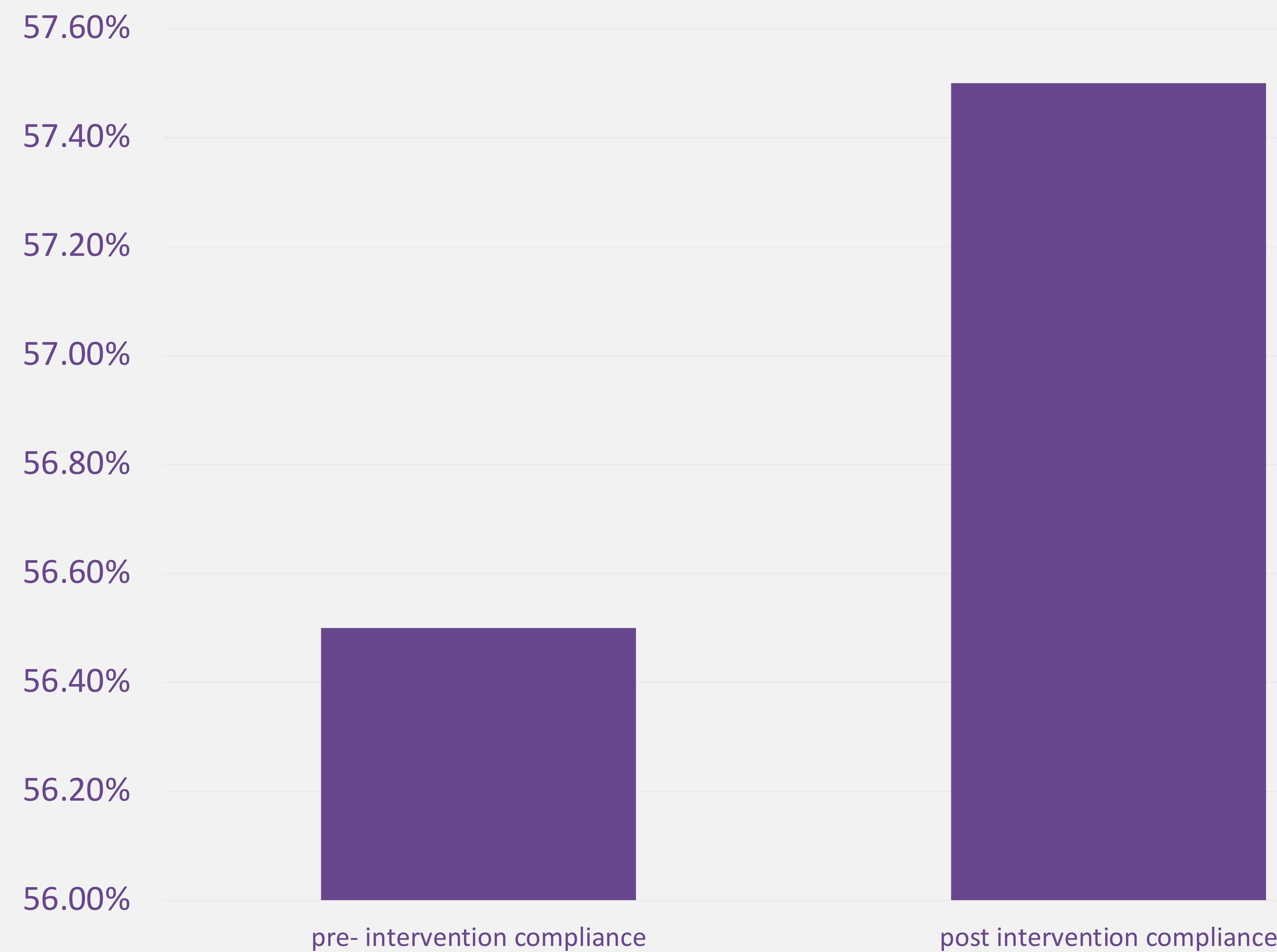
Hypertension (HTN) is a serious medical condition that can increase the risk of heart, brain, kidney and other diseases. According to WHO, it is a major cause of premature death worldwide, with upwards of 1 in 4 men and 1 in 5 women - over a billion people- have the condition. The burden of HTN is felt disproportionately in low- and middle-income countries. Considering The Center of Family Medicine - Decatur is a Federally Qualified Health Center (FQHC) so our population too consists of low- and middle-income individuals. As such, it becomes increasingly important to screen for HTN in this population prior to the development of serious complications. Uniform Data System (UDS) measures are a reliable method of tracking trends related to HTN monitoring in the outpatient setting. Currently, the UDS measures have a benchmark of 60% compliance for HTN screening while our clinic is below this benchmark at 55%. The objective of this quality improvement project is to improve this rate by educating providers on rechecking elevated blood pressures and correctly documenting them into the EMR. I aim to increase compliance by 10% in a 1-year period after my intervention

## Methods

I used the PDSA cycle. My goal was to increase HTN compliance by 10% post intervention. My target population was adults aged 18-85 years of age. Currently, at our clinic, nurses will check vitals including blood pressure upon rooming the patient. Nurses will then input this information into the EMR in the vitals section for providers to review prior to beginning the visit. If a blood pressure is elevated ie >140/90, providers/nurses are required to do a recheck. The UDS uses the last recorded blood pressure in the vitals section when reporting compliance. Hence, if repeat blood pressures are not being documented in the vitals section, our clinic may be reporting falsely elevated blood pressures; ultimately indicating poor HTN compliance My intervention was to educate providers in our clinic to recheck elevated BP and correctly document it in EMR. I did this through a presentation given to faculty and residents in March 2022. I then collected data from 1 year prior to my intervention and collected data from 1 year after my intervention and compared compliance before and after my intervention. By comparing these two values I was able to see if my intervention made a difference.

## Results

HTN compliance pre and post Intervention



The study statistically compared the percent compliance of HTN before and after educating providers at the FQHC office to recheck an elevated initial blood pressure and then properly document it

I found that my preintervention HTN compliance was 56.5% and my postintervention HTN compliance was 57.5%, which means my intervention led to a 1% increase in compliance.

## Discussion

The idea behind my intervention was that often, patients come to clinic under stress from transportation or even just the physical act of walking from the waiting room to clinic. This leads to an initial elevated blood pressure reading which often decreases after a few minutes of rest. Without reporting this second reading, we report a falsely low HTN compliance. My intervention was aimed to reduce this as the cause of poor HTN compliance in our clinic.

My intervention led to an increase in HTN compliance by 1% which did not meet my goal. I believe this could have been improved if I had done more presentations through out the year to continue to remind providers about my intervention. Additionally new providers joined our clinic and were not present for the initial presentation which could have significantly affected results.

## Discussion

Considering our clinic is a learning facility, I could have also requested that attendings ask residents to recheck and correctly document an initial elevated BP reading if noted during precepting. The fact that my intervention didn't lead to much change could also mean that patients in our practice have poor HTN compliance regardless of rechecking and documenting initial elevated BP appropriately. Although this is good practice and I still encourage it, I will need to look at alternate methods to improve HTN compliance in our community which could mean more frequent office visits if uncontrolled HTN is identified

## References: 45pt

1. [https://www.who.int/health-topics/hypertension#tab=tab\\_1](https://www.who.int/health-topics/hypertension#tab=tab_1)

# Readmission Rate after Implementation of Clinic First

Marjorie Williams, M.D., Katherine Hartstern, M.D., Adnan Khan, M.D., Hossain Mesbah, M.D., Henna Bhatti, M.D., Allyson Munch, D.O., Jacqueline Vardaros, Pharm.D.

## Introduction

The balance between outpatient clinic and inpatient hospital service is a challenge for most primary care residency programs, given the broad scope of the specialty. In 2019, the Association of American Medical Colleges (AAMC) released a collaborative design initiated by four family medicine residency programs called the "Clinic First" model<sup>1</sup>. This model prioritizes outpatient clinical experience over inpatient rotations by way of scheduling 14-day blocks. The goal was to reduce resident burnout by reducing the tension between competing patient care responsibilities in multiple settings, while maintaining accreditation requirements. As an anticipated benefit, we hypothesized that heightened focus on outpatient care would result in reduced rehospitalization rates. When compared to faculty, resident providers had lower rates of timely post-discharge follow up appointments and higher rates of hospital readmission<sup>2</sup>. In 2015, the national 30-day hospital readmission rate was 13.1% for nontargeted conditions at CMS hospitals<sup>3</sup>. Our 2021 readmission rate was 20.1%.

This study identifies the impact of implementing hospital follow up visits within the "Clinic First" model at Southern Illinois University (SIU) Family Medicine Residency to capture its' effect on readmission rates at Blessing Hospital.

## Methods

### Steps:

- Met with key players (reception/nursing/admin) to coordinate interventions to improve communication and scheduling
- Data was generated from electronic health record (EHR) of all hospital admissions to SIU
- Discharge orders were individually assessed for discharge plan and follow-up appointment to verify inclusion and exclusion criteria were met.
- 30-day hospital readmission rates were provided by Blessing Hospital Chief Quality and Safety Officer
- Outpatient EHR was evaluated to confirm patient was seen at Hospital Follow-up, Established(HFE), Hospital Follow up, New (HFN) in clinic preferably within 1 week but up to 30 days post-discharge
- 30 day hospital readmission rates were compared pre and post implementation of Clinic First Model, which started July 1, 2022

### Inclusion criteria:

- SIU established patients seen in Family Medicine clinic in Quincy, IL.
- Hospitalized patients with an SIU provider, who plan to establish care at SIU FCM clinic

### Exclusion criteria:

- Nursing Home residents
- L&D and obstetric admissions
- Admissions to in-hospital Rehabilitation unit or readmissions to the floor directly from Rehab (readmission following discharge home from Rehab was included)
- Patients with follow-up at SIU-affiliated satellite clinics outside Quincy, IL
- Patients with follow-up with an outside primary care provider (PCP), whether new or established
- Patients who left against medical advice (AMA), with or without attempts to arrange a follow-up appointment

## Results

### Primary outcome: Hospital 30-day Readmission Rate

April 2022	21%
May 2022	21%
June 2022	14%
July 2022	14%
August 2022	15%
September 2022	17%
October 2022	10%
November 2022	8%
December 2022	19%
January 2023	13%

Figure 1. SIU 30-day hospital readmission rates

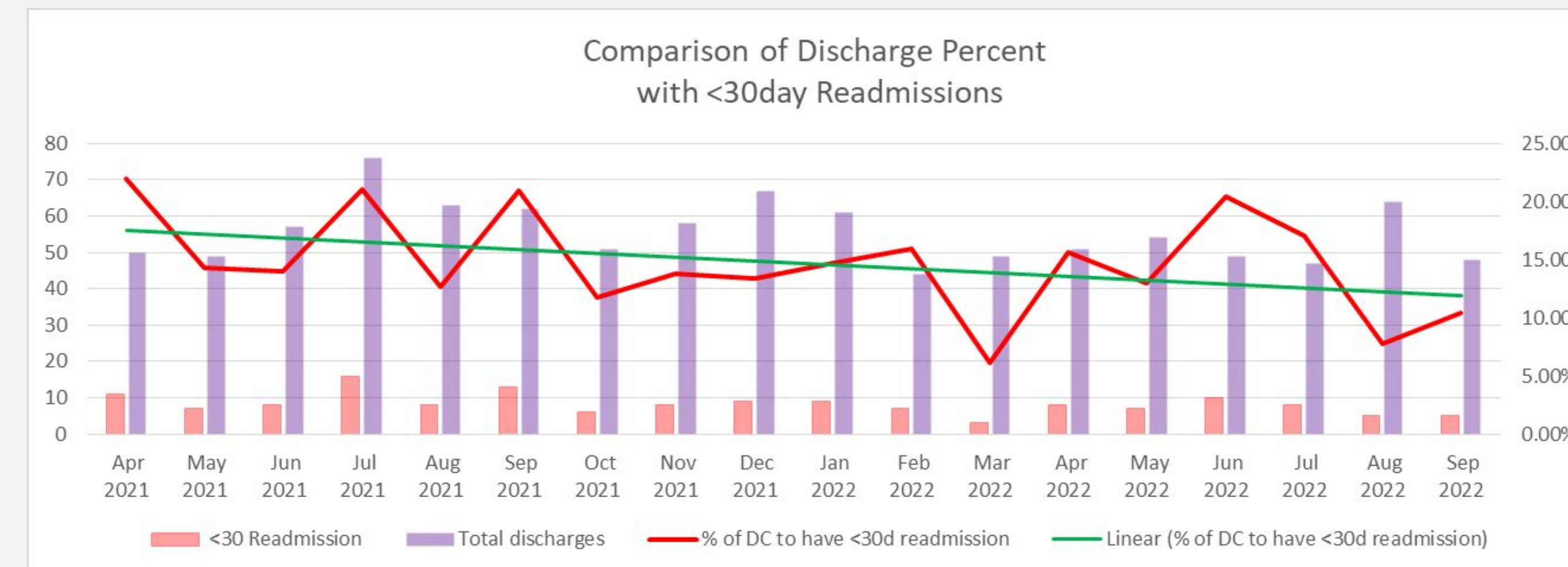


Figure 2. SIU 30-day hospital readmission rates from April 2021 - Sept 2022 (Transition to CFM began July 2022)

### Exclusion criteria

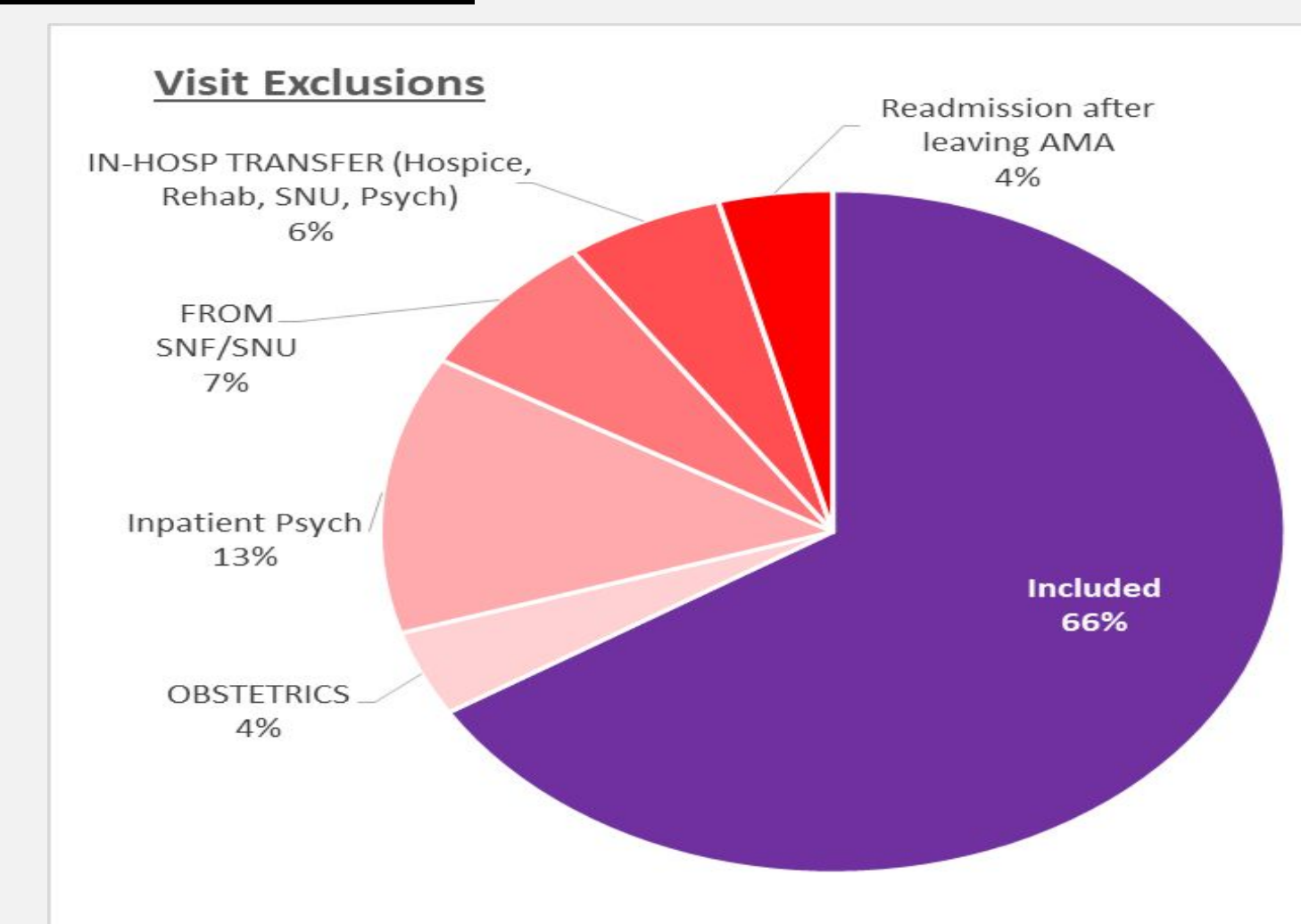


Figure 3. Percentages of patients excluded based on criteria

### DEMOGRAPHICS:

1007 visits included

- 66% of all admissions were included; 34% excluded
- M 44%, F 56%
- Average age 58.7
- Exclusions: OB 4%, Psych 13%, SNU/SNF 7%, AMA 4%, Transfers 7%

### Secondary outcome: HFE/ HFN Visits

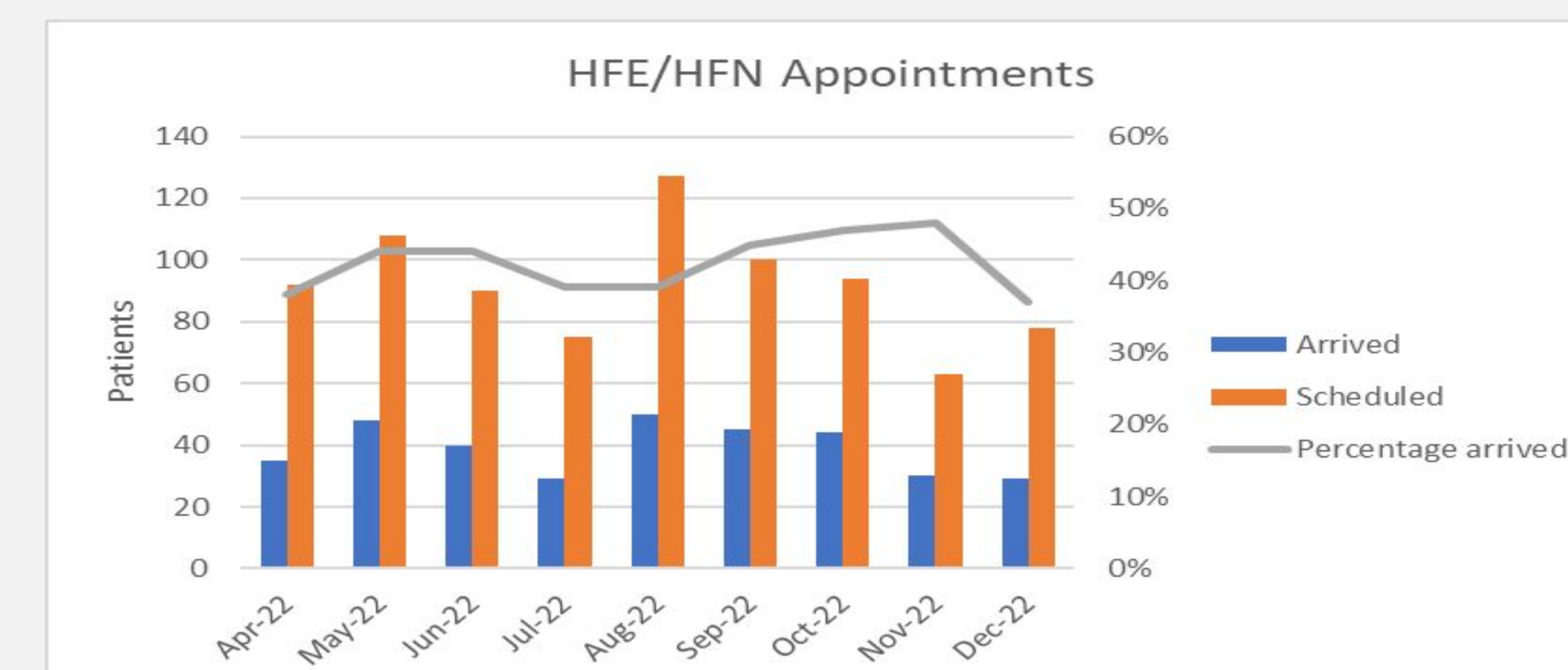


Figure 4. Number of scheduled HFE/ HFN Appointments (blue) compared to number of arrived HFE/ HFN Appointments (orange) for April 2022- July 2022

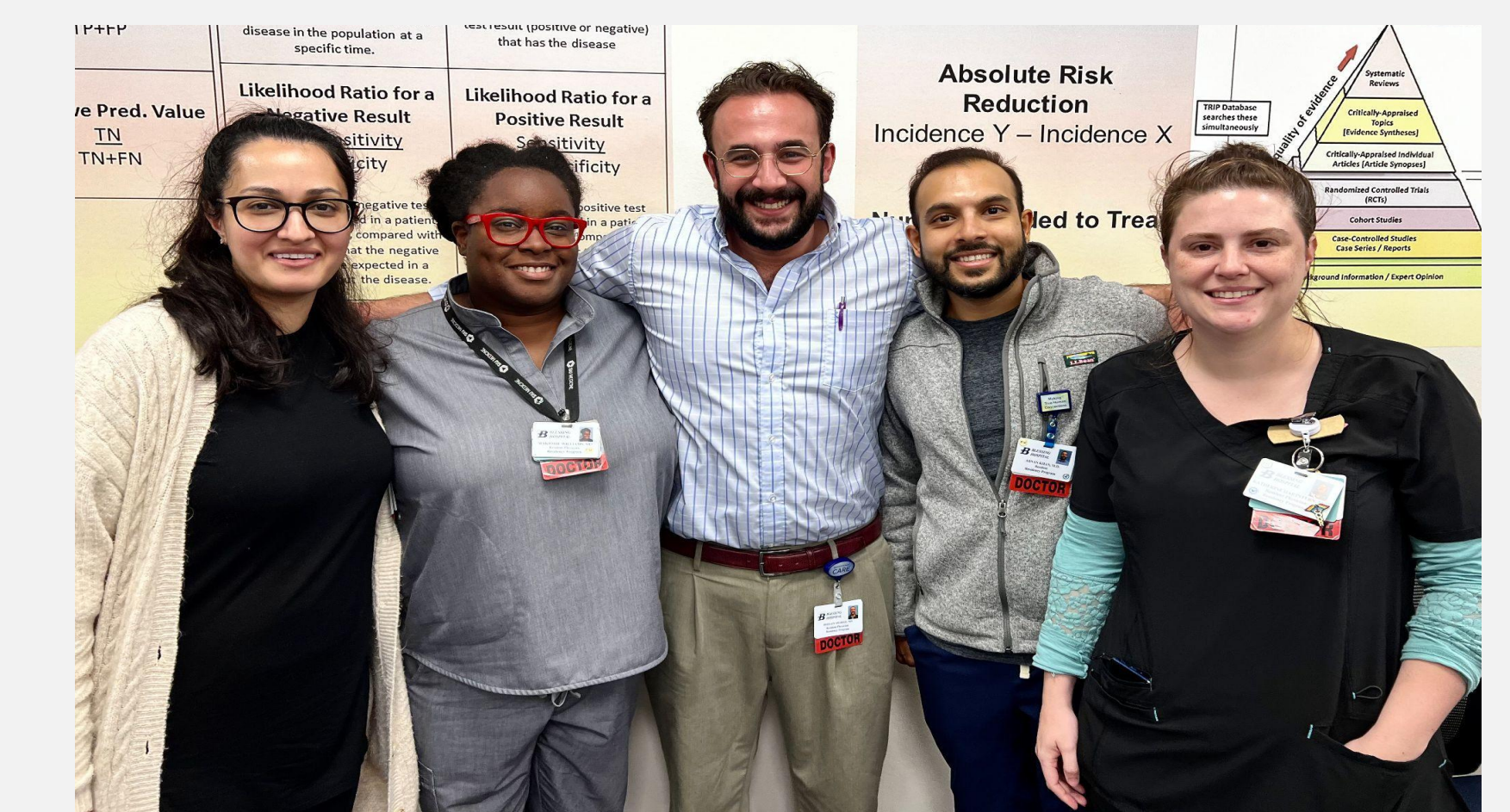
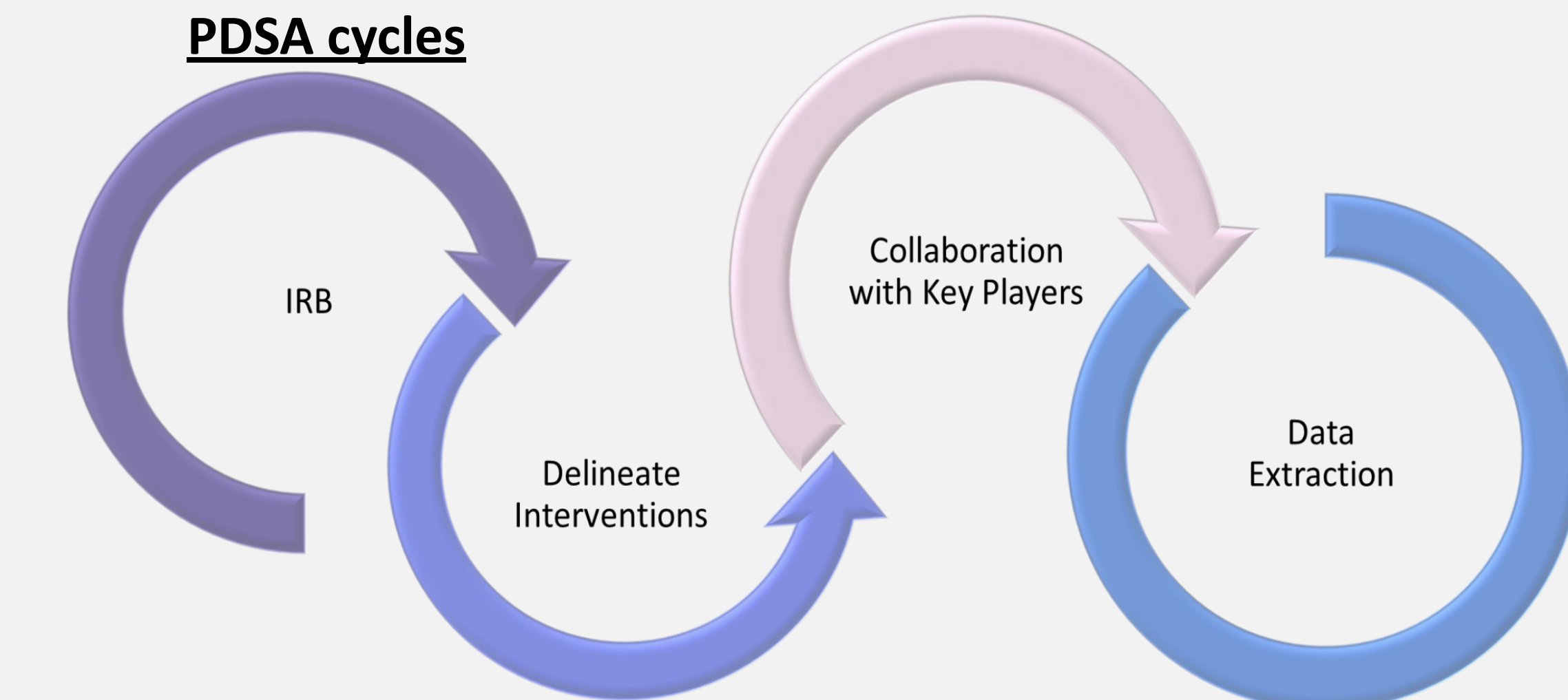


## Discussion

Although the effect of implementing hospital follow up visits (HFEs/ HFNs) within the Clinic First model is in the preliminary stages of development, we do anticipate that with this intervention hospitalization readmission rates will decrease. 30-Day Readmission rates from the initiation of Clinic First in July will be reflected in August 2022. The intervention allows more succinct transitions of care between inpatient and outpatient physicians within SIU FMR.

Patients who are seen at the clinic specifically for hospital discharge related visits can receive supportive therapies, care coordination, nursing staff with the intention of preventing a readmission. Within the clinic first model, the resident evaluating a hospital follow up is solely in the outpatient setting and has the unique capability to focus primarily on acquiring these necessary resources.

### PDSA cycles



## Limitations

- Excluded patient groups were exempt from post-hospital discharge follow-up in the clinic, circumventing an aspect of the CFM
- Varying HFE appointment slot times (15 vs. 30 minute) and appointment time constraints
- Impact of COVID-19, if any
- Failure of discharge summaries to be completed before HFE/HFN appointments possibly limited the information available in the outpatient setting
- When comparing SIU's rate to other groups within the area, we serve a higher rate of underserved, lower health literacy & socioeconomic status
- July effect
- Possible incorrect PCP listed in EHR

## Future Directions

- Collect one to three year(s) of data for effect of Clinic First Model
- Obtain Resident/Faculty/Staff satisfaction post Clinic First implementation surveys
- Compare hospital follow-up appointments between PGY-1/2/3 resident classes, faculty, patients' hospital providers or their primary care providers and their readmission rate
- Evaluate excluded populations such as nursing home patients, satellite clinic patients and obstetrics

## References:

1. Adam P, Hersch D, Peek CJ. Implementing Clinic First Guiding Actions Across 4 Family Medicine Residency Clinics. Acad Med. 2022;97(2):233-238.
2. Doctoroff L, McNally D, Vanka A, Nall R, Mukamal KJ. Inpatient-outpatient transitions for patients with resident primary care physicians: access and readmission. Am J Med. 2014;127(9):886.e15-886.e8.86E20.
3. Zuckerman RB, Sheingold SH, Orav EJ, Ruhter J, Epstein AM. Readmissions, Observation, and the Hospital Readmissions Reduction Program. N Engl J Med. 2016;374(16):1543-1551.

## Introduction

### What is current practice?

- Not all healthcare workers receive dedicated training with the Camino intracranial pressure (ICP) monitoring system
- Nurses are introduced to equipment for bedside procedures as the opportunity presents, but placement of ICP monitor is usually done in a fast-paced situation in which time is critical

### Why is this project important?

- It is important for all members involved in patient care to feel confident in their ability to complete tasks in a timely fashion

### What does literature say about informational videos for healthcare personnel?

- Mobile-based video learning is associated with higher confidence in skill practice compared to conventional methods (Lee et al., 2016)
- Clinical procedure information delivered via portable video media is associated with better knowledge retention for surgical staff compared to standard verbal communication (Kim, Ainsworth, Handmer, Louie-Johnson, & Winter, 2016)
- Demonstration of skills delivered via smartphone was not associated with improved nursing student confidence, but a statistically significant increased knowledge and technical skills (Chuang, Lai, Chang & Wan, 2018)

## Purpose

PICO: Does an information video on Camino ICP Monitoring System improve confidence in healthcare workers?

## Camino ICP Monitoring & Setup

### RESIDENT SUPPLIES

- 1) Sterile gloves
- 2) IV analgesia/anesthesia
- 3) Cranial access kit (Fig. 1)
- 4) ICP monitoring kit, such as:
  - Intraparenchymal bolt (Fig. 2)
  - Ventricular bolt (Fig. 3)

Figure 1. Cranial access kit.

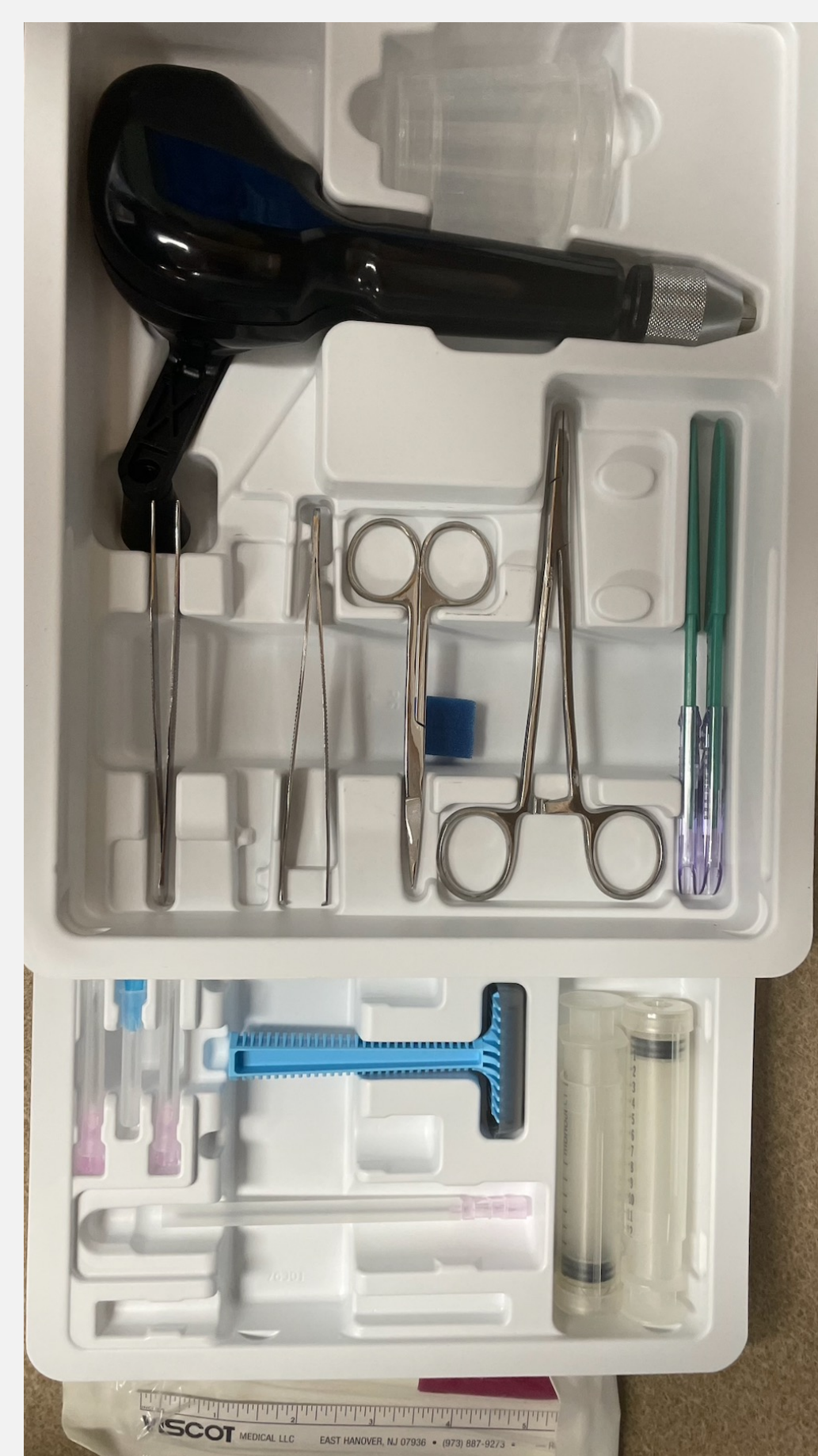


Figure 2. Intraparenchymal monitor.

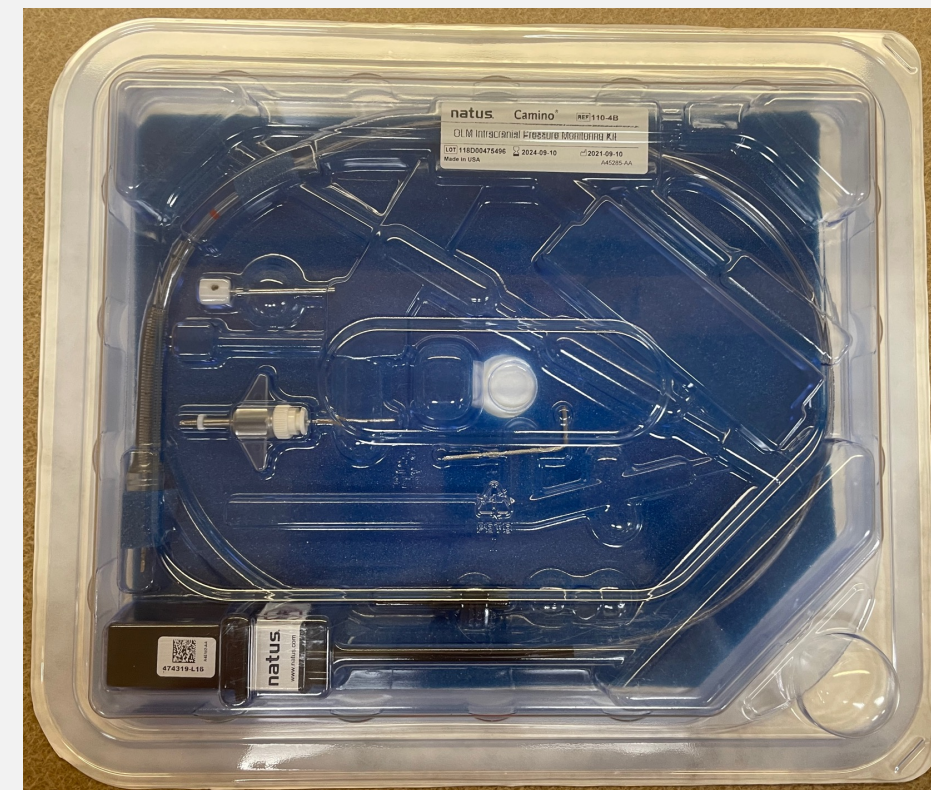


Figure 3. Ventricular monitor.



### NURSING SUPPLIES

- 1) Drager Quad Hemo or HemoPod (Fig. 4, Red)
- 2) Camino ICP monitor (Fig. 4, Blue)
- 3) ICP Cable (Fig. 4, Brown)

Figure 4. Nursing supplies for Camino ICP monitoring. Drager Quad Hemo or HemoPod (Red); Camino ICP monitor (Blue); ICP Cable (Brown)



## Methods

- CINAHL, Pubmed, and Google Scholar utilized in a literature review to find supportive evidence on using instructional video to improve confidence in healthcare workers
- Intervention - educational video (QR code below) on Camino ICP monitoring was created at the Memorial Center for Learning
  - Highlights include indications for ICP monitoring in severe TBI patients, necessary equipment for setup (see Fig.1-Fig.4), and simulated procedure
  - Perspectives are given from a neurosurgery resident as well as a critical care nurse, allowing the viewer to understand the specific roles for each team member
- Pre- and post-intervention survey was created to measure nursing confidence with bedside Camino ICP monitoring system before and after instructional video, respectively
  - 9 questions each measured with 5-point Likert scale
  - Distributed as online survey using SurveyMonkey
  - One-time data collection

## Results

Table 1. Pre-intervention and post-intervention means measured with 5-point Likert scale.

SURVEY QUESTIONS	PRE-MEAN	POST-MEAN
How confident are you in your ability to know what nursing supplies to gather for bedside Camino ICP monitoring?	2.2	4
How confident are you in your ability to know what supplies the neurosurgery resident may ask for when placing a Camino ICP monitor?	2.2	3.9
How confident are you in your ability to setup the Camino ICP monitor equipment while the bedside procedure is being done?	2.2	4.1
How confident are you with the connections between the Camino ICP bolt, Camino ICP monitor, and HemoPod system for active monitoring of ICPs?	2.1	4.1
How confident are you in your understanding of which TBI patients may be candidates to have invasive ICP monitoring?	2.4	4.3
How confident are you in your understanding of how the Camino ICP monitor works and your ability to explain it to family members?	2.5	4.3
How confident are you in your understanding of ICP parameters in severe TBI patients, and at what point should you be concerned and notify the on-call neurosurgery resident?	3.3	4.5
How confident are you in knowing the resources available when attempting to troubleshoot the Camino ICP monitoring system?	1.6	4

	Overall Pre-Mean	Overall Post-Mean	Difference
Total (N = 10)	2.3	4.1	+1.8

## Discussion

After watching informational video regarding Camino ICP monitoring and setup, perceived confidence was increased for each survey question. This increased amount of knowledge and skill by interdisciplinary teams helps provide efficient patient care.

### Limitations:

- Small sample size
- Sample bias - respondents all from neurocritical care, thus lacking generalizability

### Future Directions:

- Test for statistical significance with larger sample size and greater generalizability
- Assign as a module on Health Stream for all new personnel directly involved in patient care
- Add similar videos for instruction and reference

### Video Link

YouTube



VuMedi



# Improving Records of Colorectal Cancer Screening

Authors: Moomal Shaikh, MD; Justin Parker, MD; Johnny Tenegra, MD

Affiliations: none

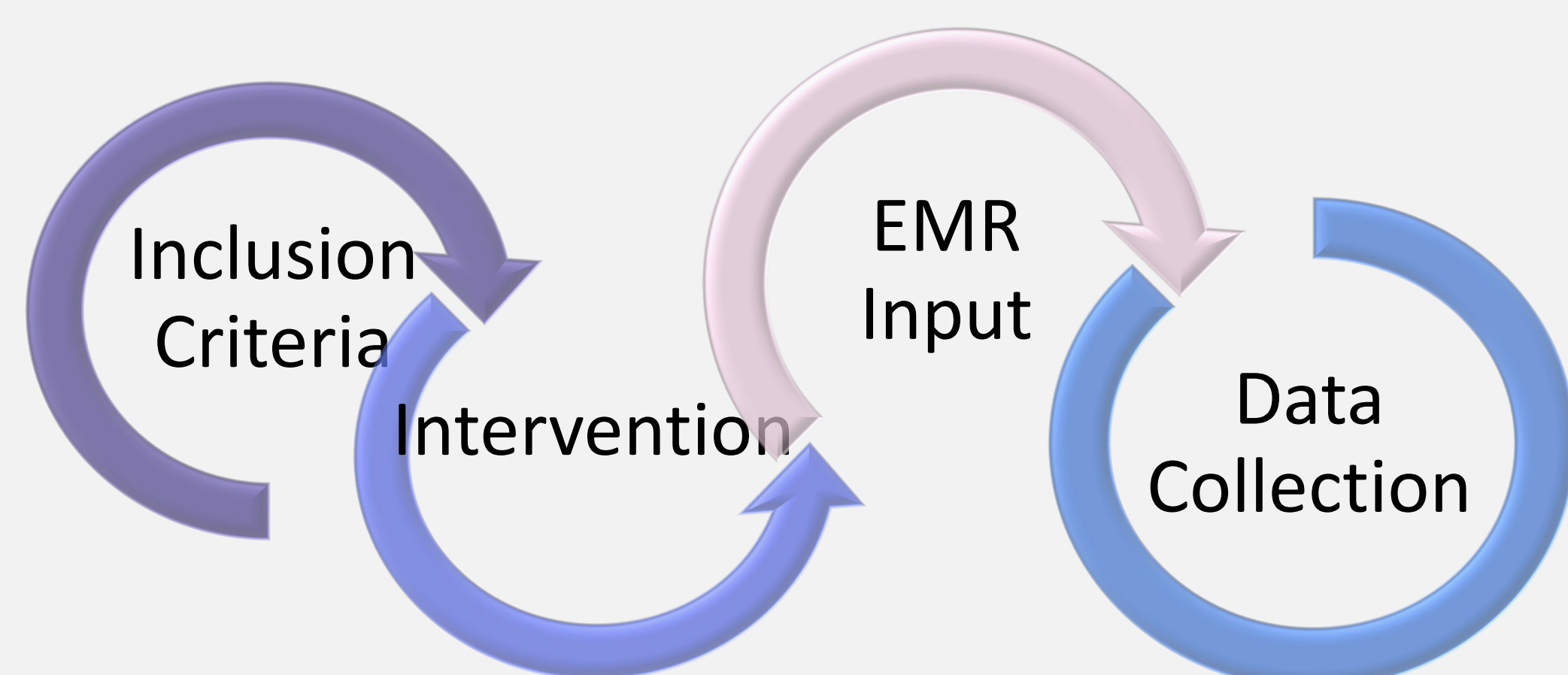


## Introduction

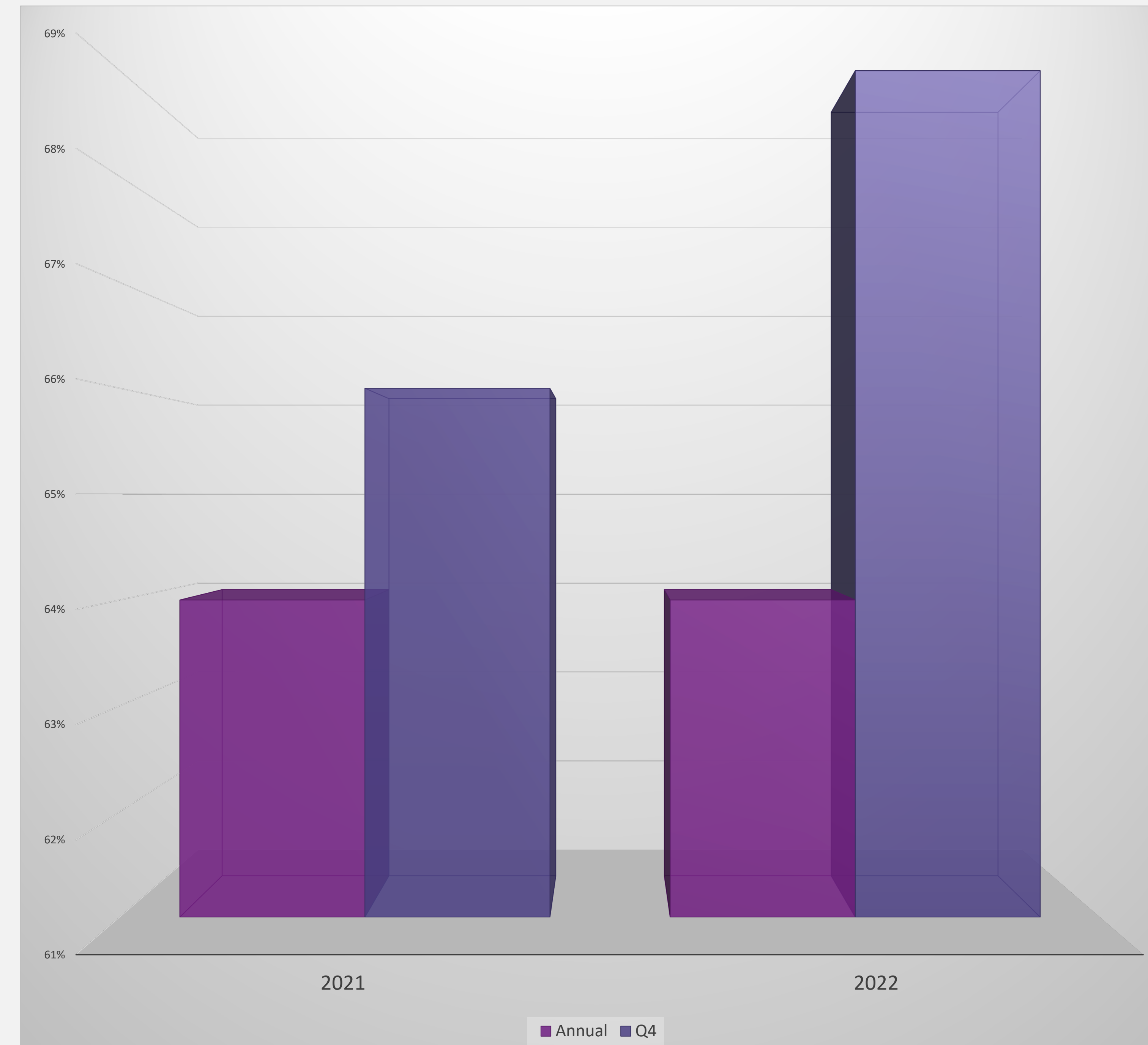
In 2022, 52,580 people are expected to lose their lives to colorectal cancer in the US. If caught early in the localized stage, the 5-year survival rate is 91%, compared to the 14% in the distant stage of colorectal cancer. However, despite this dramatic difference in 5-year survival rate, the screening rates of CRC in the US remain subpar. In 2018, only 69% of adults between the ages of 50 and 75 were up-to-date with CRC screening. The screening rate for SIU Center for Family Medicine – Decatur is significantly lower than this. The aim of my project is to improve the records of CRC screening for our patients in order to ultimately improve overall screening rates and follow-up at SIU FCMD.

## Methods

The PDSA cycle model was used to conduct a pre-post quality improvement project to improve documentation of CRC screening at CFM-Decatur. This was done through an educational intervention for providers and staff. Providers and staff were advised during a didactic/conference session on the steps needed to document CRC screening results and due-date for follow-up screening into the TouchWorks Preventative Care Flowsheet.



## Results



	Pre-intervention (2021)	Post-intervention (2022)
Annual Screening %	64%	64%
Q4 Screening %	66%	69%

## Discussion

- Noting that there was an increase in records of CRC screening on the Preventative Care flowsheet, shows that the intervention, which was the informational teaching session of how to record this information, was effective. The ultimate goal of increasing the recording of this information into TouchWorks, is that with more accurate and up-to-date information readily and easily available in patient records, providers can improve the overall follow up for patients on their CRC screenings and thus improve overall screening rates.

## References

1. <https://www.cdc.gov/cancer/colorectal/statistics/index.htm>



# Pediatric Obesity Counseling Rate

Authors: Dr. Nikhil Vatti MD, Dr. Johnny Tenegra MD, Dr. Justin Parker MD

Affiliations: SIU Family Medicine Decatur Residency



## Introduction

I started this project because of the dramatic increase of obesity in the pediatric population during the last decade. And the need to counsel parents about a healthy diet and proper exercise.

In 2016, the estimated worldwide number of children /adolescents between the ages of 5-19 was 340 million. The percentage of obese children/adolescents rose from 4% in 1975 to just over 18% in 2016. As a Federally qualified health center, it would be helpful to have data on not only the obesity rates in children as UDS measure but also the number of physicians that counsel and provide Education to pediatric patients who are obese.

AIM statement- the obesity counseling rates should improve by at least 10% in children who have a documented BMI% with in 1 year. (Obesity counseling includes nutrition and physical activity counseling).

## Methods

I used the PDSA cycle, my goal was to set the improvement goal to increase the obesity counseling rate to at least 10%. This may be difficult due to the number of acute visits for acute illnesses that dominate Pediatric Visits. This will be done using the SIU Decatur FM Pediatric population of 2-17 years old. Every child whose BMI is recorded should be counseled on proper diet and exercise.

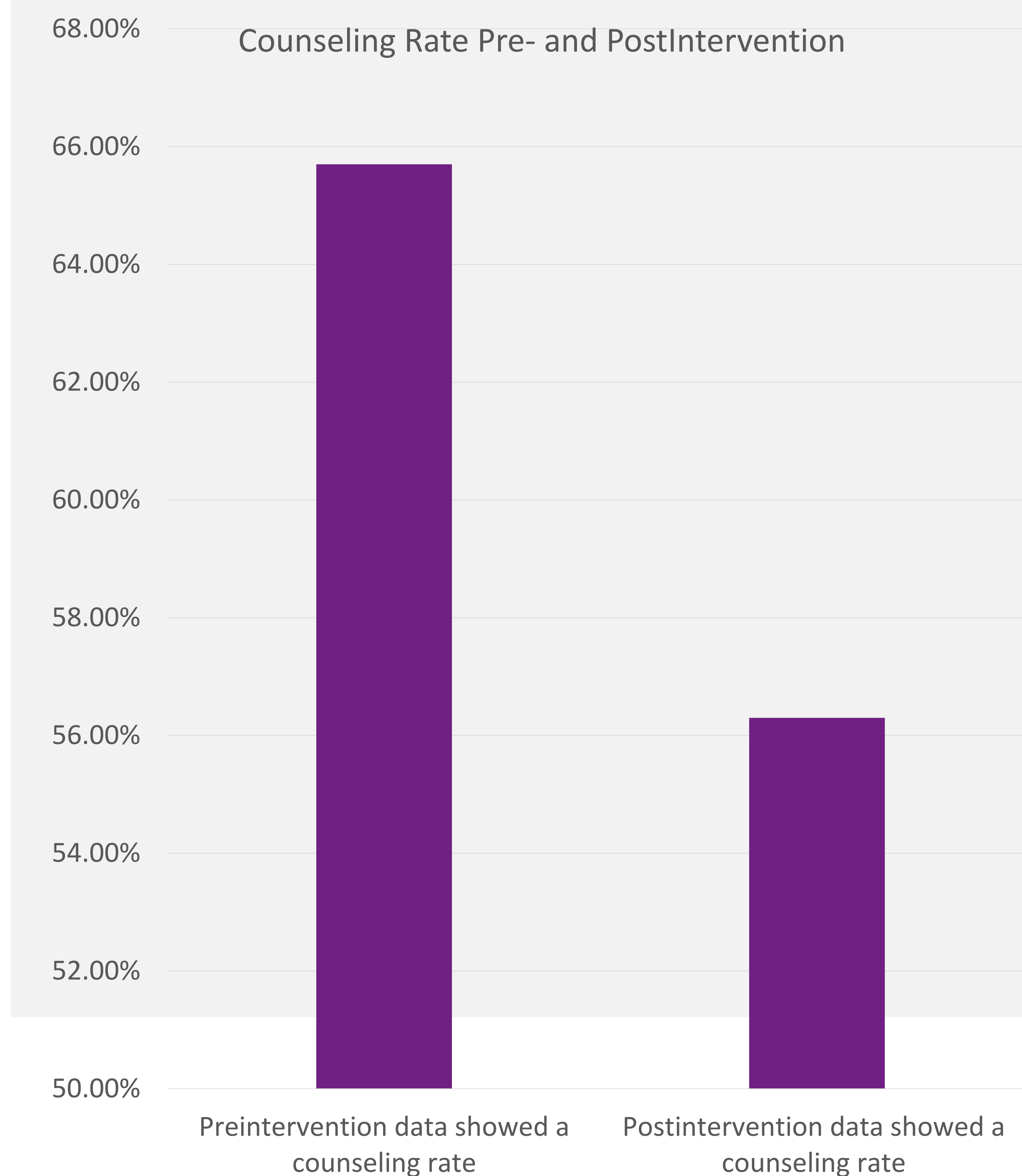
My intervention was to educate the residents and faculty during conference time and to have them do obesity counseling for all pediatric patients who have a BMI recorded during a clinical encounter. I provided background information on how obesity in children has increased recently.

I am analyzing the data from the total pediatric encounter in certain months in 2021 and using these as my preintervention data (April 2021-June 2021 and October 2021-December 2021), and I am seeing how many encounters included Obesity Counseling with patients with a recorded BMI.

Calculations were done with Pediatric Obesity counseling in encounters/Total Pediatric Encounters.

I am analyzing the data from the total pediatric encounter in certain months in 2022 and using these as my postintervention data (April 2022-June 2022 and October 2022-December 2022), and I am seeing how many encounters included Obesity Counseling with patients with a recorded BMI.

## Results



### Results

- Calculations were done with Pediatric Obesity counseling in encounters/Total Pediatric Encounters.
- Problems with this data gathering were whether these encounters were acute visits, shortage of staffing in the office leading to missing of BMI recordings, and other important issues dominating the encounter times.
- Preintervention data showed a counseling rate of  $1083/1649=65.7\%$
- Postintervention data showed a counseling rate of  $1035/1840=56.3\%$
- I found that the Obesity counseling rates in Pediatric patients from the time periods from 2021 to the time periods in 2022 decreased by 9.4% This was unanticipated, but this year many of the pediatric clinic visits were for acute illnesses such as flu, RSV, Covid, Strep throat, viral gastroenteritis.

## Discussion

**These results show that in daily practice for physicians and healthcare providers, it can be difficult to address Pediatric preventative healthcare issues such as obesity counseling, especially when many of the pediatric encounters in the clinic are for acute issues. This is reflected by the data in this project showing a decrease in Pediatric Obesity Counseling % by a decrease of 9.4% from 2021 to 2022. This can have detrimental effects on children when they become adults as obesity in childhood is linked to DM, HTN, and HLD in adulthood.**

## Discussion (cont.)

I learned that even if a patient is here for an acute issue, it will be beneficial to give Counseling on proper diet and exercise to pediatric patients and their parents. Primary Prevention is the best way to mitigate healthcare burdens for children when they become adults. Handouts will also help educate the population as well.

## References: 45pt

1)WorldHealthOrganization."Obesity and Overweight."WHO, WorldHealthOrganization, 9 June 2021, <https://www.who.int/news-room/fact-sheets/detail/obesity-and-overweight>

# Intern Procedure Supervision and Competency Evaluation

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## Introduction

As an intern, I knew that we were supposed to have specific procedures "signed-off" by our older co-residents. However, amidst a busy call shift, I rarely had the physical paper to complete and was also very intimidated to ask to be "signed-off" by a more senior resident in case I didn't meet expectations. This resulted in a lack of appropriate documentation of being officially "signed-off" to perform these procedures alone by the time I reached my PGY-2 year. This was a common theme as my co-resident and all years prior failed to complete this documentation in time. Having an official procedure sign-off documentation is important to ensure there has been a formal evaluation process to allow new physician trainees to independently perform these procedures. This is critical in providing confidence to our patient's and healthcare staff when these procedures are being performed independently by junior residents. My goal was to implement a system for this formal evaluation process that was more accessible at all times, easy to complete, and could be performed every time the junior resident performed a procedure to create the habit of the evaluation process regardless of whether they were proficient in performing this independent or not. This also eliminates the intimidation factor from the intern as it would be up to the more senior resident's discretion to mark as "proficient" whenever they were supervising a procedure. My aim was to have a 100% completion rate of procedure sign offs by the transition of the interns to their PGY-2 year.

### Facial Laceration

- Displays awareness of relevant anatomy, pertinent landmarks & what to be concerned for (parotid duct injury, facial nerve branch injury, lacrimal duct injury, etc)
- Proper physical examination to assess for associated injuries
- Displays knowledge of when/why a patient would need to go to the operating room for certain injuries
- Identification of all tools needed for execution of the procedure prior to starting
- Has headlight, portable light, or overhead procedure light for adequate visualization
- Performs proper nerve blocks & local anesthesia
- Obtains all appropriate suture for execution of repair (chromic, fast, monocryl, permanent)
- Proper prepping of defect with dilute betadine (mixed 50:50 with sterile water)
- Performs adequate sterile field setup
- Adequate irrigation of the laceration
- Trims all skin edges to create surgically sterile edges
- Realigns skin well with appropriate sutures
- Dresses with bacitracin, ophthalmic bacitracin if laceration nears orbit
- Discusses with patient the importance of returning for suture removal in 5-7 days (if permanent suture used)

Proficient

## Methods

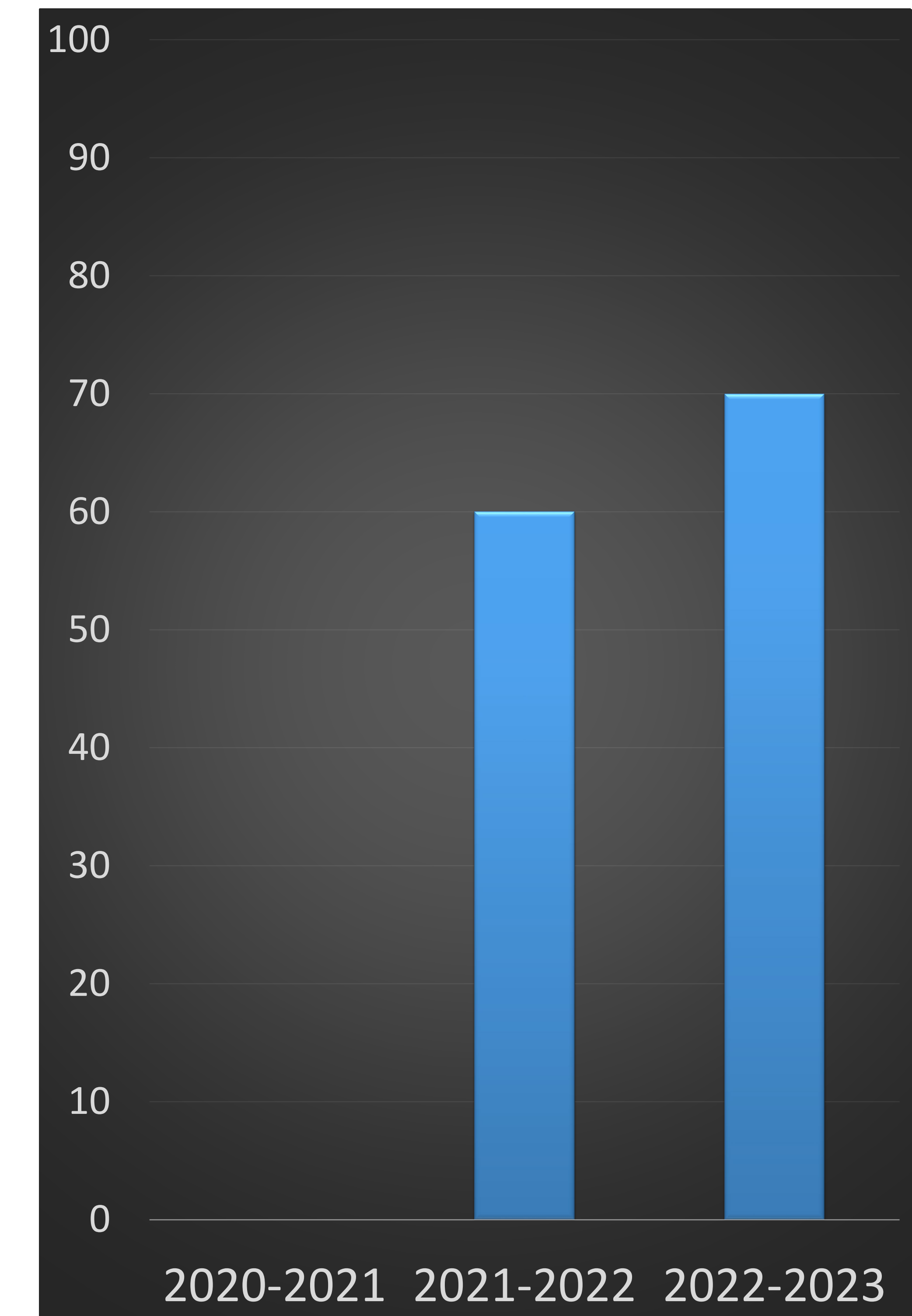
Barriers for completion of the standard sign off procedure was analyzed to identify areas that could be targeted to improve compliance. The standard "paper" sign off form was converted into electronic an Google Form that was easily accessible anywhere, any time. All plastic surgery residents were given access to this Google Form. No PHI was collected. A shortened bit.ly URL was created that was easily memorable for submission of a new form, easily accessible from any smart phone. The form was formatted with easy multiple choice answers that would guide to the appropriate next question. It takes less than 30 seconds to complete this largely multiple choice guided form. Verification of observation is confirmed by entering date and initials of the more senior resident observing the intern. All plastic surgery residents were given access to complete this form via their personal G-mail account. The completion rates at time of transition from intern year to PGY-2 year were compared pre- and post implementation of this new competency evaluation methodology.

## Results

Prior to implementing the new intern procedure competency evaluation process, the completion rate at the designated time point (transition from intern year to PGY-2 year) was 0% for the remote preceding years. After the first year of implementation, completion rates at the designated time point were 60%. For this academic year (2022-2023) interns, the current completion rate is 70%, despite being a few months shy of the designated time point. All potential supervising residents participated in the evaluation process.

Table 1

Annual intern procedural sign off completion rates



## Conclusions

Transitioning to a more accessible electronic version of the procedural sign off process resulted in a significant increase in compliance and participation. With a steady increase in completion rate since implementation, it is suspected that completion rate will reach 100% by the designated time point in the coming years. A 100% completion rate can instill confidence in faculty, staff, and patients that procedures are being carried out safely at bedside by a proficiently trained resident. Advocating for completion of the form intern each time a procedure is performed rather than just at time to be signed off for proficiency creates a habit, making it more likely for this to be completed. It also allows retrospective completion from recall from a remote location in that it is deferred at time of the procedure. The shared responsibility allows initiative to be taken by both the intern and/or supervising resident. In addition to increased accessibility and ease of use of the evaluation tool, setting expectations, intermittent monitoring of progress, and having a lead role invested in success of this initiative were also contributing attributes to the improved results.

# Breast Cancer Screening

Adrine Markosyan, MD; Justin Parker, MD; Johnny Tenegra, MD

SIU Decatur Family Medicine Residency Program

## Introduction

According to World Health Organization, in 2020 there were 2.3 million women diagnosed with breast cancer and 685,000 deaths globally. At the end of 2020, there were 7.8 million women alive who were diagnosed with breast cancer in the past 5 years, making it the most prevalent cancer in the world. Additionally, according to the American Cancer Society, the average risk of a woman in the United States to develop a breast cancer in her life is about 13%, which means there is 1 in 8 chance that she will develop breast cancer. Goal is to be able to screen women and diagnose at an early stage, as breast cancer treatment can be highly effective when the disease is diagnosed early. According to WHO, there is survival probability of 90% or higher when the disease is identified early. Thus, it is crucial to screen patients for breast cancer and follow up with the results appropriately to ensure that patients get the best care possible. Breast Cancer Screening is part of Uniform Data System (UDS) measures in our clinic. Knowing how to enter the results into the system appropriately, is a key component in improving rates of breast cancer screening.

## Methods

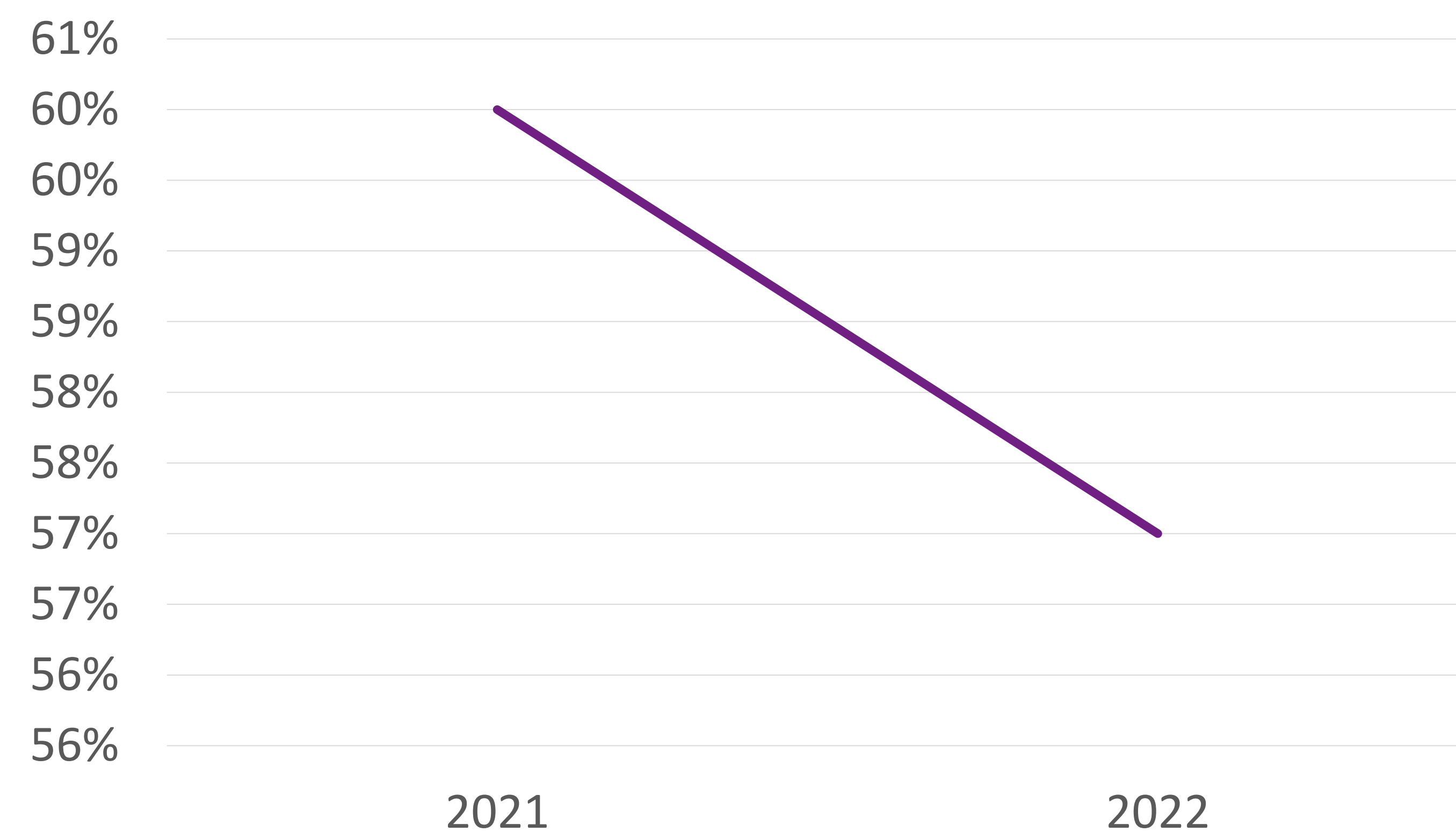
PDSA cycle methodology was used. Most of the time, mammogram results flow through into our Electronic Medical Records (EMR) and are accounted in UDS measures. However, some of our patients follow up with other specialists and get their screening done by outside provider. These results don't automatically get recorded into our EMR and won't be accounted for in our UDS measures.

By training our providers how to appropriately look for and enter results into EMR, we can improve our UDS measures of breast cancer screening. Providers were educated with a presentation of how to appropriately enter screening results into our EMR.

Breast Cancer Screening



Average for the Year



## Results

**Inclusion criteria:** women between the ages of 50 and 74. All patients were current patients at the Center of Family Medicine- Decatur. Data collection was through UDS measures.

Rate of mammogram in the study group was compared between Quarter 1 and Quarter 2 of 2021 and 2022.

Quarter 1 in 2021 showed 59% compliance, quarter 2 2021 had 61% compliance. In comparison quarter 1 2022 showed 55% compliance and 59% compliance for quarter 2 2022. Overall, there was average 60% compliance in 2021 and 57% compliance in 2022. There was 3% decrease in breast cancer screening from 2021 to 2022. I anticipated at least 10% increase in Breast Cancer Screening during 1/1/22-6/30/22 when compared to 1/1/21-6/30/21.

## Discussion

In conclusion, Improved breast cancer screening will allow providers to diagnose breast cancer in early stages and improve survival. Overall, this improved quality of care for our patients. Unfortunately, there was 3% decrease in breast cancer screening between 2021 and 2022. This was likely due patient experiencing COVID-19 inflations and not being able to afford time off from work, additional medical bill and transportation fees.

## References:

World Health Organization, Breast Cancer, <https://www.who.int/news-room/fact-sheets/detail/breast-cancer>