

# Implementation of a Transition in Care Protocol to Avoid Delays in Care for Male Patients Experiencing Acute Urinary Retention

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## PROBLEM STATEMENT

1:10 men age 70 and older, and 1:3 men age 80 and older will experience acute urinary retention (AUR) (Billet & Windsor, 2019).

AUR leads to:

- Prolonged catheter use
- Urinary tract infections
- Pain in the suprapubic region
- Increased ED utilization
- Increased cost

The predicted one-year mortality rate in men age 85 and older experiencing AUR is 32.8% higher than the general population.

## PROJECT PURPOSE

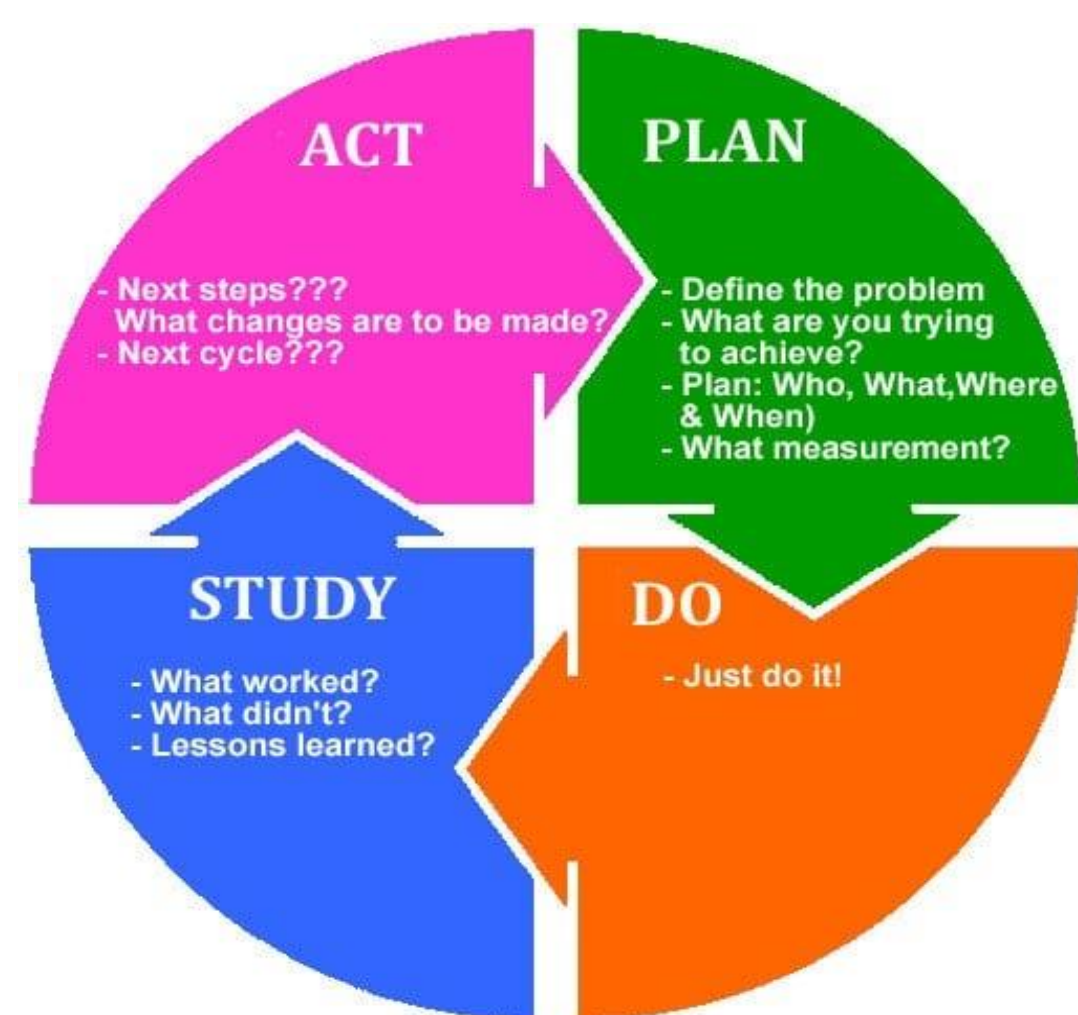
Improve process efficiencies to optimize the quality of care for men age  $\geq 65$  experiencing AUR.

**Aim:** Decrease the number of return ED visits by 25% for men  $\geq 65$  years who experience AUR within 60 days following implementation of a urologic transition in care protocol.

Does implementation of a hospital to office urologic transition in care protocol, for male patients over the age of 65 with acute urinary retention, reduce the rate of ED return by 25% within 60 days compared to usual practice?

## MODEL/NURSING THEORY

The Model for Improvement from the (Institute for Healthcare Improvement, n.d.) served as the framework for this quality improvement (QI) project



Mary D Naylor's (2008) Transitional care model was integrated into the framework of this QI project:

- Effective evidence-based solutions improved health outcomes
- Creation of a "bridge across the chasm" improves care transitions
- Poor communication and lack of access inhibit desired health outcomes

## METHODS

### Subjects:

Males, age 65 and older with a diagnosis of:

- AUR
- Benign prostatic hyperplasia(BPH) with or without lower urinary tract symptoms (LUTS)
- Bladder outlet obstruction (BOO)

### Exclusion Criteria:

- Non-ambulatory patients
- Significant neurologic causes of AUR (e.g., autonomic or peripheral nerve lesions; brain or spinal cord lesions)
- $< 65$  years old
- Enrollment in end-of-life care

### Setting:

A large outpatient urologic clinic and a 1,705-bed-faith-based non-profit, tertiary, research and academic medical center located in Central Florida.

### Tools:

An evidence-based pre-appointment 4-question checklist

	Yes	No
1. Are you ambulating frequently?		
1. Are you taking any medications that contribute to urinary retention? (pseudoephedrine, terbutaline, amitriptyline, oxybutynin, dicyclomine, prochlorperazine, haloperidol, diphenhydramine, hydroxyzine, nifedipine, diazepam, cyclobenzaprine, narcotics)		
1. Are you having regular bowel movements?		
1. Are you taking Flomax daily?		

### Intervention and Data Collection:

To establish a baseline, de-identified data (from patients referred to the practice who met inclusion criteria 60-days preceding the project) was collected and analyzed to determine 30-day ED return rate from an index admission.

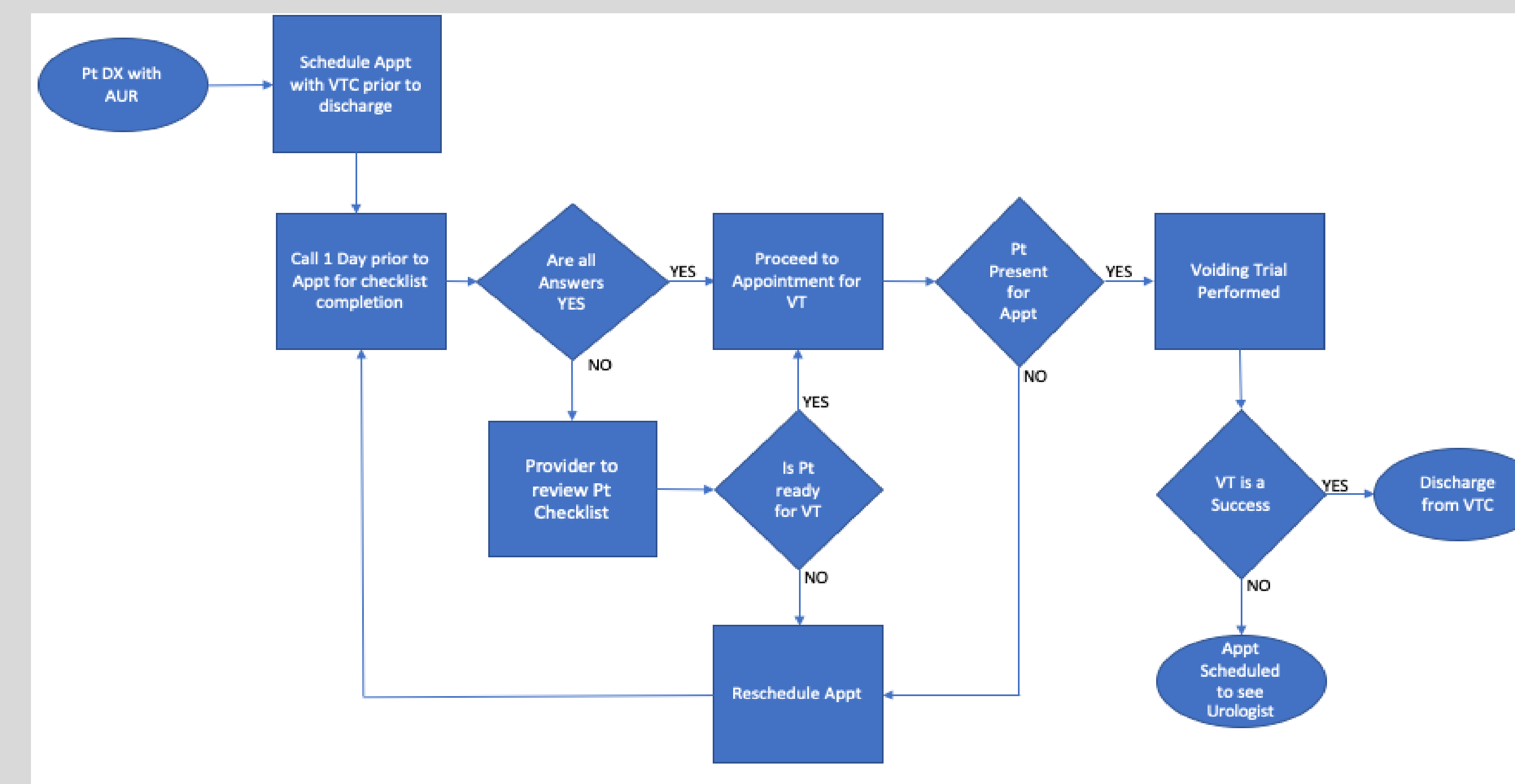
Hospital nurse educators, care navigators, and staff were trained in the new urologic transition in care protocol including the pre-appointment checklist.

Post-intervention de-identified data was collected for qualifying patients, who presented to the voiding trial clinic, to determine 30-day ED utilization.

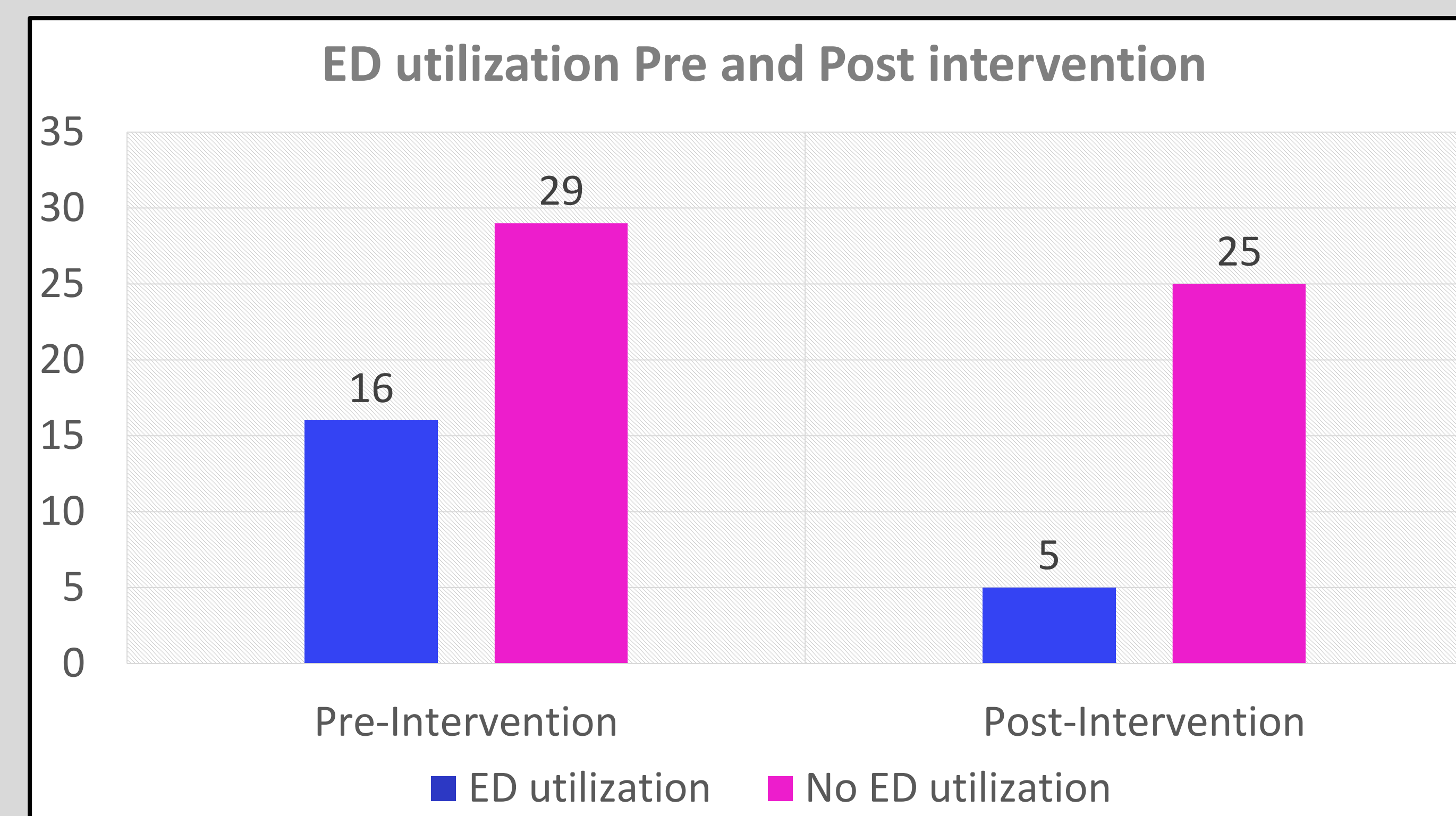
### Data Analysis:

- A chi-square test was utilized to compare pre- and post-intervention 30-day ED utilization

## Workflow Process



## RESULTS



Approximately 35% of the pre-intervention patients and 16% of the post-intervention patients returned to the ED within 30-days (19% decrease). Although fewer pts in the post-intervention group utilized the ED within 30 days, the difference did not meet statistical significance. ( $\chi^2 [1, N = 75] = 3.19, p < .07$ ).

### Unanticipated Findings:

- Number of patients failing a trial of void that require further urologic follow-up in the outpatient urologic clinic was higher than anticipated (N=8).
- Patient care navigator feedback: process was "so much easier," "easier scheduling," and "faster appointment times."

## DISCUSSION

The development of a urologic transition in care model shows promise in decreasing ED utilization by patients with AUR.

- A clinically significant (nearly statistically significant) reduction in number of men utilizing the ED, within 30-days following implementation of the urologic transition in care protocol, was noted.
- Despite falling short of the 25% reduction goal, progress was made with a 19% decrease in ED utilization.
- Work-flow changes were well received by care navigators and staff.
- Fiscal impact: decreased cost to patients and the healthcare system due to reduction in ED utilization and iatrogenic infections.

### Limitations:

- Use of aggregate data with a small sample size limits rigor given a 60-day project period.
- Implementation during a pandemic in which people were reluctant to utilize the ED.
- Challenging electronic health record data capture and interoperability.

## IMPLICATIONS FOR ADVANCE PRACTICE NURSING

- DNP prepared nurses can lead QI initiatives to positively impact urologic patient care and reduce unnecessary costs.
- Given the paucity of current evidence, interventions to reduce preventable ED utilization in this population are needed. This project lays meaningful groundwork to inspire future exploration of this topic.

## SUSTAINABILITY

- A second PDSA cycle over 3-months is recommended; if outcomes and feedback remain positive, it can then be spread as a model for other urologic practices.
- Transition to a new EHR that better supports data acquisition and extraction to track the full impact of this project within the next year.
- Further exploration of contributors to voiding trial failures is recommended.

## REFERENCES



Implementation of a urologic transition in care protocol supports a decrease in ED utilization for men with AUR