

Increasing Scheduling Efficiency in an Outpatient Urology Clinic

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Introduction

The use of efficient scheduling systems is needed to maximize healthcare outcomes and minimize costs in outpatient, non-emergent settings; however, clear and consistent procedures do not exist. Often patient records are not transferred, patients are unaware of their correct diagnosis, and lack of appointment availability occurs, all contributing to an ineffective scheduling process.

Purpose

The purpose of this quality improvement project was to evaluate the effectiveness of utilizing a nurse navigator to improve scheduling accuracy, efficiency and patient access in an outpatient urology clinic.

Aims

- To increase patient access to care
- To increase clinic efficiency and patient flow
- To increase provider satisfaction scores by 10 percent, measured by pre-post intervention survey

Methods

A pre-post quality improvement project was conducted at a single site, located in the Mid-Atlantic region of the United States.

Measures

The primary outcomes measures were:

- Number of patients scheduled with the wrong specialist based on diagnosis and/or visit type
- Number of patients identified as low risk and eligible for follow up by phone or discharge to primary care (PCP)
- Number of patients missing records at clinic visit
- Number of patient with incomplete imaging and/or laboratory tests required for completeness of clinic visit
- Number of patients requiring follow up to complete their plan of care

- These measures were recorded as total number of patients per clinic date.
- The average number of patients per day was used to compare pre-intervention and post-intervention to determine if significant differences in scheduling inefficiencies existed with utilization of a nurse navigator.

Table 1

Data collection characteristics

Characteristics	Baseline data collection phase May-July, 2018 (#)	Intervention data collection phase September-December, 2018 (#)
Providers involved in the project	2	2
Weeks data collected	12	12
Clinic days	15	15
Patients seen in clinic	218	213
Patients seen by Provider 1	128	138
Patients seen by Provider 2	90	75

A secondary measure was provider satisfaction.

- A 3-question survey was developed to determine provider satisfaction pre- and post-intervention.
- Responses were rated on a 7-point Likert scale with a possible range of 3 to 21, with 21 representing highest level of satisfaction.

Sample

- Two urologists
- Adult urology patients of the two urologists seen on scheduled clinic days at the clinic of interest

Intervention

A new scheduling system was implemented, whereby a nurse navigator, prior to patients' scheduled clinic visits:

- Identified patients scheduled with the wrong specialist based on diagnosis and/or visit type
- Identified patients who were low risk and eligible for either follow up by phone or discharge to PCP
- Identified patients with missing records
- Identified patients with incomplete imaging/tests needed prior to clinic visit

A new procedure for gathering patient health histories was also implemented as part of the intervention to increase clinic flow and provider satisfaction.

- Urology check-in staff were educated pre-intervention to administer a kidney stone specific health history questionnaire to new patients for completion prior to the clinical encounter.

Table 2

Scheduling Inefficiency Indicators: Baseline and Intervention Data Comparison over 12-weeks

Scheduling Inefficiency	Number of Patients at Baseline (N=218) n (%)	Number of Patients at Intervention (N=213) n (%)	p-value
Wrong Provider for Dx/Visit Type	9 (4%)	0 (0%)	<0.05
Eligible for Phone or PCP F/U	27 (12%)	23 (11%)	0.61
Missing Records	21 (10%)	6 (3%)	<0.01
Incomplete Lab/Imaging Tests	30 (14%)	5 (2%)	<0.01
Require F/U for Plan of Care	60 (28%)	33 (15%)	<0.01

Note. Abbreviations: Dx, diagnosis; PCP, primary care provider; F/U, follow up

Results

A chi-squared test was used to assess the effect of implementing a nurse navigator on scheduling inefficiency measures.

Table 2 shows comparing the proportion of patients pre-intervention and post-intervention, utilizing a nurse navigator resulted in a significant reduction of patients:

- Scheduled with the wrong specialist based on diagnosis and/or visit type
- Missing records
- With incomplete tests and/or imaging
- Requiring follow up to complete their plan of care

Baseline median satisfaction score for both providers was 10.5 points out of 21 total points. When both providers were surveyed again post-intervention, the median satisfaction score increased by two points, to 12.5 out of 21 total points.

Limitations

The fixed sample size of two urologists did not allow for statistical analysis.

Summary

- Utilization of a nurse navigator in an outpatient urology clinic reduced the frequency of scheduling inefficiencies compared to baseline.
- No significant effect was observed for patients identified as low-risk and eligible for follow up by phone or with their PCP.
- Patient and provider preferences, as well as clinic characteristics are potential explanations for this finding.
- Currently, scheduling processes must be designed based on the specific conditions of each organization.
- Future research should focus on discovering a streamlined process that organizations can utilize despite variations in clinic characteristics. Potential areas for research include replicating utilizing a nurse navigator in other settings, performing cost-benefit analyses, measuring patient satisfaction, as well as alternative methods to increasing scheduling efficiency.

Conclusion

Overall, there are many variables that impact the accuracies and efficiencies with patient scheduling. Specialty clinics have unique challenges, due to high physician costs, increasing patient referrals, and the need for timely access to care. While there was improvement of efficiency measures with utilization of a nurse navigator, additional research is needed to find a streamlined approach that can be utilized by diverse settings to create a more efficient scheduling system.



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