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Improving no show rates in a GI Endoscopy outpatient lab

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Executive Summary

Introduction

In many outpatient care settings, high no-show rates are an important metric that can negatively impact patient outcomes as well as physician and nursing daily work. No show rates are defined by procedural cases that are scheduled for a specific date and time, but the patient fails to attend for various reasons. Causes for patient no-shows include: lack of transportation, missed educational opportunities, and sociocultural beliefs. The average range of no-show rates for endoscopy labs have been reported from 12% to 14% and can occur due to a variety of reasons such as illness on the day of the procedure, insufficient procedure preparation, improved symptoms, and transportation issues (Berg et al., 2013). High no-show rates can impact cost, profit margins, and patient satisfaction resulting in delayed patient care. In a study by Berg et al., (2013) daily expected net gain with perfect attendance is \$4,433.32, while the daily loss attributed to the base case no-show rate of 16.36% was between \$472.14 and \$1,019.29.

In addition to significant financial loss, no-show rates can impact patient satisfaction. Individuals who are on time and ready for their appointment can be inconvenienced by last minute time changes required when one or more patients cancel. If a facility chooses to counteract the no-show rates by adopting the overbooking strategy, which involves booking beyond the available space to account for cancelations, patients may experience delayed procedure times if all scheduled procedures do in fact show up (0% cancelation rate) (Alnasser et al., 2020).

Patient follow through on scheduled appointments is a critical step in successful health management. It provides a clear path to patient and physician success by improving early recognition of potential life-threatening conditions including missed cancer diagnosis or prolonged interventional treatments. The purpose of many gastroenterology procedures is

prevention, prevention through the repetition of appointments and procedures. For example, colonoscopies should be scheduled every 10 years after the age of 50 no matter your gender or health, if there are issues found during one of these screenings more in depth or diagnostic procedures may be required to clearly identify disease progression (“Colorectal Cancer Guideline,” 2020).

Appointments are missed for different reasons and can lead to negative healthcare outcomes. Common findings in the literature suggest outpatient care settings are hampered by high no-show rates while patients are challenged to understand the importance of keeping appointments, the knowledge to follow through on appointment prep, and the resources to get to the scheduled appointment are all things that outpatient areas routinely struggle with.

Literature Review

Many studies surrounding no-show rates for endoscopy procedures are attributed to controllable reasons within the patient’s ability, but there are also studies that show patients fail to call and cancel for reasons that are out of their control. Findings from a review of literature suggest multiple strategies to decrease no show rates across organizations, but no specific solution. In 2016 a Canadian study by Chopra & Hookey looked to determine what the reasons were for cancelations by reviewing 2941 scheduled colonoscopies between 2013 and 2014. The researchers concluded the top three reasons for missed colonoscopies were patients being too ill to attend (27%), inability to complete bowel preparation (20%) and lack of transportation post procedure (12%). In addition, apathy and anxiety were noted as common reasons for cancellation and/or non-attendance (Chopra & Hookey, 2016). The authors were able to conclude why patients missed their procedures but were unable to determine why patients did not call to cancel their appointments.

Overbooking and a formal reminder system are the common methods used to decrease no-shows and cancellations. Overbooking is a method where there is an excess number of patients scheduled beyond capacity during a specific period. This excess of patients scheduled is commonly based on a determined no show rate and simply predicts that patients will cancel but those spots will be filled with the patients who were “overbooked.” In a study by Berg et al., (2013) a simulation model was used to not only determine the cost of cancellations in an endoscopy suite but also to look at mitigation methods. The standard capacity for this endoscopy suite was 24 patients per day. The intent of this study was to overbook this by 9 patients per day to avoid a loss in revenue from those cases that were canceled. In the simulation model the no-show intervention strategies were found to reduce the loss attributed to no-shows by 3.8%-10.5% and recoup between 36%-76.9% of financial losses from cancellations and no-shows (Berg et al., 2013). This study provided robust data, but it is still based on simulation and historical data, while overbooking can be a mitigation strategy, many other avenues need to be explored because of the total impact of extra patients and the potential that every patient arrives as scheduled.

A method adopted by many outpatient care settings to address no-show rates is the use of a formalized reminder or “pre-call/pre assessment.” In a controlled study by Childers et al., (2016) at the Oregon Health and Science University, an endoscopy department examined the impact of no-show rates by transitioning from mailed patient reminders to utilizing a full-time nursing team to call patients directly by phone seven days before their scheduled endoscopy procedure. This telephone call was intended to remind the patient of the appointment, review logistics of getting to the appointment as well as a review of their preparation instructions and lastly addressing any questions the patient may have. After 19 weeks into the study, the cancellation rate went from 16.5% to 12.8% using this system (Childers et al., 2016).

Each of these studies concluded with positive results the statistical importance of implementing a proven method to ensure patient arrival for scheduled procedures to improve patient outcomes and to address challenges associated with no-shows in outpatient care settings.

Project Methods

After obtaining institutional review board (IRB) approval, the project was initiated in a nine procedural room Ambulatory Endoscopy Lab with an average daily procedure volume of 45 patients. This setting was chosen due to their high volume of patients and variety of procedures performed. Cancellation rates for this location is defined by the number of cases canceled within a 48-hour period, divided by the total number of procedures. Prior to project implementation the no-show rate for this department ranged from 15 to 18%. A quality improvement initiative was selected to determine if a formal pre call document and nurse scheduler discussion with every patient would improve cancellation rates. The nurse scheduler called every patient to discuss their appointment in depth including procedure preparation, transportation, arrival time as well as providing the patient with an opportunity to ask any questions. This conversation with the patient was dictated by using the developed pre-assessment form. The pre-call was performed no less than three weeks prior to the patient's scheduled procedure time with the purpose of providing the patient enough time to prepare or cancel with adequate notice. The objectives for this project included providing a streamlined documentation process to schedule each patient while also providing the patient an opportunity to clarify or discuss any questions or hurdles they may experience while preparing for their procedure. Both the stakeholders and staff were involved in the implementation and development of this project to better serve the community.

Evaluation

An Excel spreadsheet was utilized to track no show rates and cancellations over the course of a year in order to organize pre and post implementation data more strategically. Data

tracked included total number of patients scheduled, total number of patients that canceled, including those that canceled within 48 hours of procedure, and lastly the reasons behind the cancelation or no show. Data was collected on the first of every month for the previous month and reviewed for opportunities, implementation impact, and outcomes. The monthly scheduled patient average from January 2021 to December 2021 was 1084.25. The average monthly cancelation rate for the same time period was 227.25 and of that cancelation average, 168 patients canceled within 48 hours or less, leaving minimal time to reschedule another patient into that spot.

The pre-assessment form and dedicated call to every patient being scheduled for a GI procedure was implemented in July of 2021. At that time the average cancelation/no show rate was between 15% - 18% each month. Post project implementation data revealed that for the month of July there was a 2% decrease in cancelations/no shows bringing the new rate to 13%. Results were similar for the month of August (14%), but the project investigator did see a slight increase in the months of September (15%) and October (15%) of 2021.

A limitation during the post implementation phase, specifically during the months of November and December of 2021 was the impact of increased cancelations related to the pandemic and the omicron variant. The organization saw an increase in cancelations, specifically short notice cancelations, due to patients being symptomatic or testing positive for COVID. Another limitation of this project was the lack of resources related to organizational vaccine mandates that created gaps in staffing. This may have contributed to consistency issues and time spent going through pre assessment forms with patients.

Impact on Practice

The clinical site made decreasing cancelation and no-show rates a primary focus for improvement in the outpatient care areas. Gastroenterology stakeholders verbalized the need to increase volume without impacting environment and staffing to meet these organizational goals. In order to do this the identification of cancelation and no-show reasons were tracked and reviewed, thereby identifying the need to implement a pre-assessment form and a required conversation with every patient by no less than an RN level scheduler. The long-term impact is a 1-2% decrease in cancelation and no-show rates for this specific site and location. Patients are now getting clear and direct information, time to discuss any concerns or questions regarding their procedure or preparation as well as a thorough health assessment to decrease any instances of an unknown comorbidity or health state that may inhibit a successful procedure.

For on-going implementation, the pre-assessment form is now implemented into the schedule departments patient schedule process and is required to be a part of the patients chart as well as a source of truth for physician and RN knowledge during patient pre-op the day of their procedure. This project has opened the doors to more avenues of decreasing cancelation and no-show rates. Overbooking, the process of scheduling patients over the allotted amount with the expectation that some will cancel, is now being explored as well as a re-designed pre procedure call that will start seven days from the patient's procedure instead of 48 hours prior to the patient's procedure. This will ensure the patient is provided adequate time to prepare and, in some cases, adequate time to call and cancel, allowing the schedulers to fill those scheduling gaps with other patients.

Conclusion

The project implementation demonstrated the successful use of a pre-assessment form and a direct conversation between RN scheduler and patient. The pre-assessment form covers the majority of reasons a procedure would be canceled (hold orders for anticoagulants, prep

instructions and scheduled transportation) as well as direct time with a scheduling expert to answer any and all questions related to procedures, ensuring the patient has all the tools needed for procedure completion. The incidence of patients canceling and failing to show for their procedure highlighted the need for some changes that not only supported the patient but supported the GI endoscopy service line's productivity and financial goals. Cancellations and no-show rates can cause significant issues to workflow and budgets in any outpatients clinical setting. By implementing this project, the department was able to lower cancelation and no-show rates, but more importantly it has provided a road map for other departments and further discussion around other projects that can significantly impact positive outcomes in patient care.