Improving Emergency Department Admission with Utilization Management

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INTRODUCTION

Topic

Utilization Management (UM) is a designated financial department within Vanderbilt University Medical Center (VUMC) with the purpose of ensuring that each patient has the correct hospital status for each patient. Admissions may be designated as either inpatient or observation based on acuity, treatment, and payor guidelines. Implementing the use of UM to assist in patient hospital status has shown to increase compliance with criteria attainment and decrease hospital revenue loss and patient financial burden. (Bledsoe et al, 2013, Cohen et al., 2013, Desai et al., 2017, Fulchiero et al., 2020, Guterman et al., (2016), Kralewski et al., 2013, Lindor et al., 2020, Nuckols et al., 2017, Rathlev et al., 2013, and Shareif et al.,2013). Each year, millions of dollars in medical claims are denied by insurance payers and could be prevented (AHA,2022). VUMC has established UM as part of the Revenue Cycle to improve the hospital compliance with Center for Medicare and Medicaid Services standards, reimbursement amongst public and private payers, and reduce patient financial burden by determining correct patient status. In 2022, there were over 70,000 adult Emergency Department (ED) visits to VUMC with a 38% admission rate. Hospital admissions are assigned to Inpatient or Observation status based on guideline criteria provided by payers. UM nurses are specifically trained with clinical guideline knowledge to recommend appropriate "inpatient" or "observation" designation. The absence of these reviews and recommendations creates gaps resulting in lost revenue, inappropriate use of resources, and increased patient financial burden from claims denials (Fulchiero et al,2020 and Rathlev, et.al 2014).

Problem:
- In July 2022, only 48% of adult hospital admissions from the VUMC Emergency Department were reviewed by Utilization Management.
- The VUMC admission workflow does not require UM review during the admission process.
- Practitioners incorporating the " Intend to review" button, initiate the UM review process.
- Without payer guideline criteria knowledge, the incorrect status designation may result in inappropriate use of resources, loss of revenue, and potential financial burden to patients from claim denials.

PICOT

Will implementation of the UM/ED Admission Education module improve admitting practitioner use of the UM "intend to admit button use" from 48% to 90%?
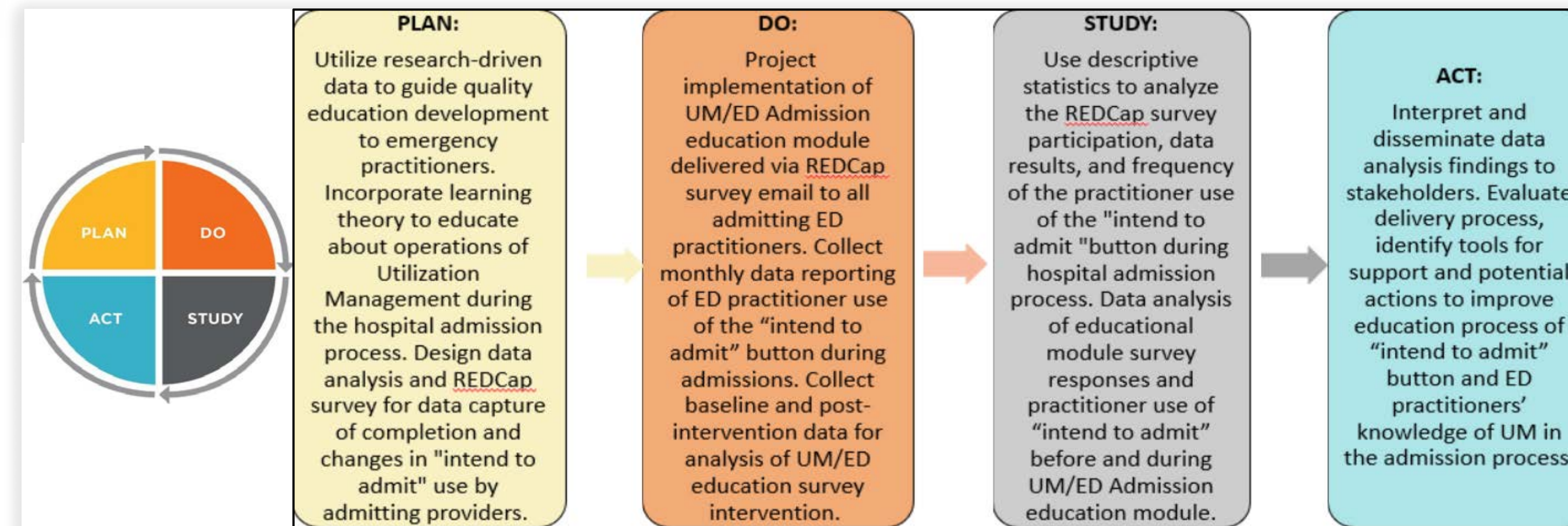
AIM

To improve Emergency Department admitting practitioner use of the " intend to admit " button for UM review by 42% and thereby improve correct admission status to VUMC through the online evidence-based guided module designed to improve admitting practitioner knowledge of Utilization Management role and purpose in the admission process.

Objectives:
- Develop workflow and educational tools to support process change guided by evidence-based practice teaching for emergency practitioners (Natesan et al., 2020).
- Gather baseline ED practitioner knowledge of UM and VUMC processes.
- Distribute the developed UM Educational Module through a REDCap survey with weekly reminders to ED admitting practitioners over a 6-week period.
- Analyze the survey results with dissemination to interested parties.

METHODS

PLAN: Utilize research-driven data to guide quality education development to emergency practitioners. Incorporate learning theory to educate about operations of Utilization Management during the hospital admission process. Design data analysis and REDCap survey for data capture of completion and changes in "intend to admit" use by admitting providers.

DO: Project implementation of UM/ED Admission education module delivered via REDCap survey email to all admitting ED practitioners. Collect monthly data reporting of ED practitioner use of the "intend to admit" button during admissions. Collect baseline and post-intervention data for analysis of UM/ED education survey intervention.

STUDY: Use descriptive statistics to analyze the REDCap survey participation, data results, and frequency of the practitioner use of the "intend to admit "button during hospital admission process. Data analysis of educational module survey responses and practitioner use of "intend to admit" before and during UM/ED Admission education module.

ACT: Interpret and disseminate data analysis findings to stakeholders. Evaluate delivery process, identify tools for support and potential actions to improve education process of "intend to admit" button and ED practitioners' knowledge of UM in the admission process.

SCAN THE QR CODE FOR THE LINK TO: *UM/ED Admissions Education Module* for Vanderbilt University Medical Center Adult Admitting Practitioners and Survey Questions

Setting:
- This project will be implemented at Vanderbilt University Medical Center Adult Emergency Department.
- VUMC Adult Hospital is an established not-for-profit academic institution located in Nashville, Tennessee, and licensed for 1,175 beds.
- VUMC is a Level 1 Trauma, Burn, and Stroke Center with over 70,000 visits annually to the adult ED.

Participants:
- Inclusion Criteria: Full-time VUMC ED Adult Admitting Practitioners, all shifts, Attendings, Nurse Practitioners, Physician Assistants, Residents (all years).
- Exclusion Criteria: Part-time or PRN admitting practitioners

Implementation:
- Created an ED admissions monthly data reporting tool to capture "Intend to admit" use during the admission process.
- VUMC ED practitioner email list for 126 practitioners meeting inclusion criteria was obtained with approval.
- Education module based on emergency medicine provider learning theory was designed.
- UM/ED Admissions education module for purpose and use of "Intend to admit" with a voice-recorded PowerPoint and recommended workflow was developed.
- REDCap survey with embedded UM/ED Admission Education questions to capture practitioner prior knowledge of UM and "Intend to admit".
- REDCap survey delivered through email with reminders over a 6-week period.

EMERGENCY DEPARTMENT PRACTITIONER COMPLIANCE USING "INTEND TO ADMIT " BUTTON DURING ADMISSION PROCESS

RESULTS

Results:
Data analysis completed using descriptive statistics reporting averages and counts of survey and ED admission practitioner use of "intend to admit" during the admission process.
- N=126 full-time admitting ED practitioners received an education module survey. Surveys were completed voluntarily by 64.0% (80 completed), including 3 surveys that were returned with one unanswered survey question in a 6-week period.
- 70 (87.5%) of the responding practitioners reported having prior knowledge of the "intend to admit" button, and 10 (12.5%) respondents were unaware of the button.
- In response to prior knowledge of Utilization Management, 77.9% (60) were aware, with 22.1% (17) unaware of Utilization Management.
- Initial data analysis completed showed that in July 2022, 48% of adult ED admissions included the "intend to admit" button for admissions.
- Weekly data analysis was completed during the 6-week survey module intervention. During Week 1 of the intervention, 54% (305) of all admissions Week 1 included the use of the "Intend to Admit button. The highest compliance rate of use was during Week 5 when 61% (331) of all hospital admissions during Week 5 included the use of the "Intend to admit button.
- The UM/ED Education tool did not increase the use of the "intend to admit" button for UM review from 48% (n=1368, July 2022) to meet the goal of 90%. The education module showed an increase in use to a weekly average high of 61% (331)during Week 5.

Discussion:
The intervention did not meet the AIM goal of increasing admitting practitioner use of "intend to admit" during the admission process from 48% to 90%. The weekly data analysis during the UM/ED Admissions Education module delivery reached a 5-week high of 61% use of "Intend to admit". The education module alone was not enough to influence the increased use.

IMPLICATIONS FOR PRACTICE

- Education modules may be assessed as mandatory training for all ED admitting practitioners to increase UM knowledge, purpose and workflow in the admission process. Having consistent ED UM staff presence to reenforce "intend to admit" use, UM review and recommendations are necessary to improve correct admission status to VUMC through the online evidence-based guided module designed to improve admitting practitioner knowledge of Utilization Management role and purpose in the admission process. Engaging ED Educators to improve education delivery may be needed to improve compliance.
- Visual reminders may be developed and placed on work-stations as reminders.
- In person formal practitioner teaching may be more effective than module.

SCAN THE QR CODE FOR LINK TO REFERENCES