utmb Health

MEMORANDUM

TO: David Marshall, RN, JD
System Chief Nursing & Patient Care Services Executive

FROM: Kimberly K. Hagara, CPA, CIA, CISA, CRMA
Vice President, Audit Services

DATE: October 26, 2018

SUBJECT: Operating Room Scheduling Process Audit
Engagement Number 2018-013

Attached is the final report regarding the Operating Room Scheduling Process Audit. This audit will be presented at the next Institutional Audit Committee meeting.

Additionally, please find attached Audit Services audit recommendation follow up policy. Each of the recommendations is classified by type at the end of its identifying number: System Priority (SP), Risk Mitigation (R), or Process Improvement (P). As you will note in the policy, the classification of the recommendation determines the frequency of our follow up. All follow up results are reported quarterly to the Institutional Audit Committee.

Thank you for your cooperation and assistance during the course of this review. If you have any questions or comments regarding the audit or the follow-up process, please feel free to contact me at (409) 747-3277.

Attachments

c: Donna K. Sollenberger
Amy Lussier

The University of Texas Medical Branch
Audit Services

Audit Report

Operating Room Scheduling Audit

Engagement Number 2018-013

October 2018

The University of Texas Medical Branch
Audit Services
301 University Boulevard, Suite 4.100
Galveston, Texas 77555-0150

Operating Room Scheduling Audit
Engagement Number: 2018-013

Background

During fiscal year (FY) 2017, more than 24,000 surgical cases were performed at the University of Texas Medical Branch's (UTMB Health) three campuses. While UTMB Health physicians perform most cases, community based physicians also perform cases, particularly at the Angleton Danbury campus (ADC).

A leadership team comprised of representative from the Health System and Academic Enterprise govern the Operating Room (OR) operations. Representatives include the Interim Chief Operating Officer, Surgical Director, OR Medical Director, Director of Perioperative Services, and Surgical Department and Division Chairs. Perioperative Services prepares and distributes monthly reports on the performance and productivity of the physicians to leadership, allowing them to make data driven operational decisions.

Case scheduling is a multi-step process requiring communication between various departments. The scheduling process begins with the entering of case details into a Case Request or Case Order posting in Epic OpTime (OpTime). Once the case is created, the OR Scheduling Team places it on the scheduling grid. At the same time, the Revenue Cycle Operations (RCO) Day Surgery Unit (DSU) Pre-Certification team begins the process of obtaining pre-certifications and anticipated payment details.

Failure to schedule a surgical case accurately and timely can result in patient dissatisfaction, loss of revenue, and increased costs due to inefficient/ineffective use of resources including physician and staff time, facilities (operating rooms), and supplies.

Audit Objectives

The primary objective of this audit was to assess the effectiveness of the scheduling process for the operating rooms at UTMB Health's three campuses.

Scope of Work and Methodology

Audit Services reviewed current operational activities and FY18 OR data through May for the Galveston (GC), League City (LCC), and Angleton Danbury (ADC) campuses. Our scope did not include Correctional Managed Care cases. Audit procedures included interviewing departmental personnel; attending committee meetings; reviewing policies, procedures, and related documentation; and data analysis.

The audit was conducted in accordance with the *International Standards for the Professional Practice of Internal Auditing* as promulgated by the Institute of Internal Auditors.

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Audit Results

Operating Room Governance

An established organizational structure provides the basic framework for authority, supervision, and reporting relationships within an organization. Clearly defining and aligning roles, responsibilities, and functions will improve organizational performance management and accountability. Discussions with OR leadership representatives indicated an absence of clearly defined leadership roles, responsibilities, and reporting lines to Health System and Academic Enterprise executive leadership of the various governance groups. Additionally, the meeting minutes for one committee indicated a lack of accountability for addressing physician performance issues such as block time utilization.

The current organizational structure for OR governance essentially includes three oversight/governance groups. Each group has varying levels of leadership and scope of authority. Two groups are formalized as committees, the OR Governance Committee (ORGC) and the Block Management Committee, while the third is a standing meeting of OR leadership functioning as a governance committee. Over time, modifications have been made to the governance model including changing levels of authority, frequency of meetings, committee responsibilities, and structure. Our review of available committee charters indicated that one of the three committees did not have a charter nor did it have a formal committee name. While two committees did have charters, the contents of their respective charters were not updated to reflect modifications to their current role and responsibilities.

Recommendation 2018-013-01 RH:
The EVP/Health System CEO should formalize the OR oversight/governance committees structure, including establishing committee names and reporting structure.

Management's Response:

- A charter for the Perioperative Services Executive Committee (formerly known as OR Leadership) will be drafted for approval by the EVP/Health System CEO. The draft will be presented at the November 18, 2018 meeting of the group.
- The charters for the Operating Room Governance Committee and the Block Management Committee will be revised for approval by the EVP/Health System CEO. The drafts will be presented at the November 18, 2018 meeting of the Perioperative Services Executive Committee.

Implementation Date: December 1, 2018

Recommendation 2018-013-02 RH:
The EVP/Health System CEO should ensure the OR governance structure includes the appropriate documentation of committee charters with clear articulation of roles and responsibilities and the reporting lines to Executive Leadership. Additionally, policies and procedures supporting committee operations should be developed, implemented, and communicated to all affected parties.

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Management's Response:

- A charter for the Perioperative Services Executive Committee (formerly known as OR Leadership) will be drafted for approval by the EVP/Health System CEO. The draft will be presented at the November 18, 2018 meeting of the group.
- The charters for the Operating Room Governance Committee and the Block Management Committee will be revised for approval by the EVP/Health System CEO. The drafts will be presented at the November 18, 2018 meeting of the Perioperative Services Executive Committee.
- The Operating Room Block Time Policy will be revised for approval by the EVP/Health System CEO. The draft will be presented at the November 18, 2018 Perioperative Services Executive Committee.

Implementation Date: December 1, 2018

OR Performance Metrics Data Integrity

System Data Reconciliations

To assist in decision making and assessing the achievement of established goals and objectives, key performance indicators (KPIs) are regularly monitored by the ORGC via reporting packets prepared by Perioperative Administration Services. The reliability and integrity of the operational information presented in the reports is imperative. Audit Services' review of the reporting process noted that some KPIs are obtained from the manual and subjective completion of a Debriefing Report within the Operating Room Control (ORC) software application and manual selections made during the case creation process in Epic. These KPIs are not fully reconciled to system data. Audit Services noted a variance of over 400 cases between the Epic report and the ORC report totals. Leadership indicated that the variance between Epic and ORC reports is not considered a flaw with the data. When the required debrief is conducted and "procedures that do not match" are identified, the circulating RN in the case is to correct Epic to ensure proper billing. This process does result in a variance as the debrief rate is not at 100%.

Recommendation 2018-013-03 RM:
The Director of Perioperative Services should establish policies and procedures for utilizing Epic data and reports when possible for reporting key performance indicators. Additionally, guidelines should be established for the completion and reconciling of external source data KPIs back to system data.

Management's Response:

- The Director of Perioperative Services, surgeons, anesthesiologists and operating room mangers are working with Decision Support on the build of the next phase of the UTMB Discover Surgical Services Explorer app.
- Until the work on the next phase of the UTMB Discover Surgical Services Explorer app is complete, a dictionary/directory of data sources will be developed for clarity.

Implementation Date: January 1, 2019

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User Developed Applications

The Institute of Internal Auditors defines user-developed applications (UDAs) as spreadsheets (and other reporting tools) created and used by end users to extract, sort, calculate, and compile organizational data to analyze trends, make business decisions, or summarize operations data and reporting results in a non-controlled IT environment. Audit Services reviewed the reports prepared by Perioperative Administration Services and noted several instances of errors in the data including hidden columns and differences in source totals from reported totals. For example, in the July ORGC report package, the case volume totals in the Debrief Report Pages for Galveston and League City did not agree to their respective Executive Perioperative Dashboard totals presented in the same packet. These errors create a loss of data integrity resulting in service line decisions being made with the inaccurate information reported out.

Recommendation 2018-013-04 RM:
The Director of Perioperative Services should consider utilizing the UTMB Discover analytics enterprise applications for data extraction and compilation. Where this is not possible, the Director should work with the Business Intelligence and Data Administration team to develop these reports in UTMB Discover. For those instances where UDAs are necessary, the Director should ensure there are version controls, formal documentation of design and functionality of the reports, and structured manual balancing controls to validate the report outputs within the UDAs.

Management's Response:

- The Director of Perioperative Services, surgeons, anesthesiologists and operating room mangers are working with Decision Support on the build of the next phase of the UTMB Discover Surgical Services Explorer app.
- Until the work on the next phase of the UTMB Discover Surgical Services Explorer app is complete, a dictionary/directory of data sources will be developed for clarity.

Implementation Date: January 1, 2019

Policies and Procedures

Perioperative Services has three departmental policies and procedures applicable to the Galveston and League City campus ORs. Interviews with key personnel at ADC indicated they are in the process of developing and finalizing perioperative policies for their campus. Audit Services reviewed and tested elements of the policies for GC and LCC and identified opportunities to improve the policies and related processes.

Key Term Definitions

Audit Services review of the Perioperative Services policies identified an opportunity to improve the defining of key terms and guidelines to ensure alignment with departmental expectations and standards. The policies did not include a definition for add-on procedures and there is no indication of the preferable lead-time within the definition of Level 5 cases.

Block Time

The *Operating Room Block Time Policy and Procedure* articulates that those that do not meet utilization criteria will receive a notification that details the month's utilization, reasons why

their utilization was low, and what can be done to increase their utilization. Audit Services review of email notifications sent documented the month's utilization; however, there was no indication of why the utilization was low and what could be done to increase utilization. The policy also states utilization data will be posted in the OR and emailed to the faculty surgeons. While the data is being emailed out, it was not being posted in the OR.

Confirmation Emails
Audit Services reviewed a sample selection of confirmation emails sent by scheduling to faculty surgeons noting that 25% of the emails tested were not sent in the appropriate amount of time pursuant to the policy guidelines.

Case Cancellation Notifications
When cancelling a future case, the *Operating Room Scheduling Policy and Procedure* instructs the scheduler to email the OR posting office and lists distribution emails address for GC and LCC. The use of distribution emails ensures continuity during personnel changes and absences. Based on key personnel interviews and walkthroughs, future case cancellations are being emailed to the schedulers directly, called in to the schedulers, or communicated in person at the schedulers' desk. Additionally, an employee no longer with the department was still listed as the distribution list owner.

Case Rescheduling
Policy guidelines state cases will not be rescheduled and a new surgical request will need to be submitted. Our review of case documentation, in addition to interviews of key personnel, indicated that new surgical requests are only being created for cases after the schedule is finalized. Prior to the finalization of the schedule, cases are being rescheduled without the creation of a new surgical request.

Recommendation 2018-013-05 PM:
The OR Leadership Team should review and update perioperative policies and procedures to ensure they reflect preferred and current practices. Once updated, policies and procedures should be communicated to affected parties. Additionally, an oversight and monitoring process should be implemented to ensure compliance with established guidance.

Management's Response:
- The Director of Perioperative Services will review and revise the *Operating Room Scheduling Policy and Procedure* for approval by the Perioperative Services Executive Committee. Draft revisions will be circulated to the Perioperative Services Executive Committee by email prior to their December 15, 2018 meeting for approval at the meeting.
  - *Add-on procedure* will be defined.
  - *Level 5 cases* are currently defined as "*Performed >5 days from submission.*
- The Director of Perioperative Services will review and revise the *Operating Room Block Time Policy and Procedure* for approval by the Perioperative Services Executive Committee. Draft revisions will be circulated to the Perioperative Services Executive Committee by email prior to their December 15, 2018 meeting for approval at the meeting.

  - Revisions will include removal of *why the utilization was low and what could be done to increase utilization* and *utilization data will be posted in the OR and emailed to the faculty surgeons.*
- The Perioperative Services Executive Committee will review the *Confirmation Email* process. The Director of Perioperative Services will provide education on the *Confirmation Email* process. The Perioperative Services Executive Committee will monitor the *Confirmation Email* process.
- The Director of Perioperative Services will review the *Case Cancellation Notification* policy and current practice and be accountable for ensuring that key personnel follow the policy as intended.

Implementation Date: January 1, 2019

Epic OpTime Scheduling

Some physicians perform surgical cases at more than one campus. Each campus has a lag-time programmed in the Epic OpTime system that calculates from procedure start time to procedure end time. Audit Services noted the system allows multiple cases for a physician to be scheduled at the same time at different facilities without factoring in travel time between campuses. While the system provides a warning when there is not an appropriate amount of lag-time between the cases, it does not create a hard stop preventing the overbooking.

Recommendation 2018-013-06 PL:

The OR Leadership Team should work with Information Services (IS) to determine the feasibility of making the OpTime warning more prominent or making a second warning before scheduling outside of the programmed lag-times.

Management's Response:

The recent Operating Room Optimization project resulted in the addition of the multiple campus alert warning currently in use. Since the multiple campus alert was implemented the problem has decreased. Monitoring for an additional 90 days should provide the evidence necessary to determine whether additional alerts/stops are necessary. The 90-day data will be reviewed with the Perioperative Services Executive Committee at its February 2019 meeting to determine whether additional alerts/stops are necessary.

Implementation Date: Review 90-day data on multiple campus conflicts at the February 2019 meeting of the Perioperative Services Executive Committee.

Revenue Cycle Operations (RCO)

Master Daily Schedule

The RCO pre-certification team uses the Epic Master Daily Schedule (MDS) to manage the pre-certification process. This tool only identifies cases once they are placed on the scheduling grid, therefore, if the case had been created, but not scheduled, it is excluded from the MDS. As a result, the pre-certification team has to constantly check the scheduling depot for added cases that had not yet been scheduled, giving priority to those cases with the shortest lead time. Additionally, the MDS lacks the ability to indicate if a case modification, such as a change in the scheduled case date, has occurred which could potentially void the pre-certification obtained.

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The RCO Registration Manager has initiated a project request to complete the buildout of a work queue within Epic. This work queue will resolve these issues by bringing in all cases once they have been created, regardless of scheduling status, as well as include real-time updated case details.

Pre-Certification Payer Calls

During walkthroughs and interviews with key personnel, Audit Services noted the health care payer verification and pre-certification process is primarily manual. The DSU Pre-Certification team pre-certified cases by calling the insurance carriers (payers) to initiate the process and then conduct follow up calls on subsequent days to check the pre-certification status, often with long call hold times. This continues until the pre-certification process is completed by the payer. This labor intensive process results in inefficiencies and the inability for a team member to effectively work multiple cases. RCO leadership indicated future optimization of the Epic work queue functionality should help streamline this process; however, a timeframe for development and implementation has not been established.

Recommendation 2018-013-07 PM:
The Vice President, Revenue Cycle Operations, should work with the Epic development team to formally establish a timeline for the development and implementation of an Epic work queue to facilitate/streamline the pre-certification process.

Management's Response:
RCO is working in conjunction with IT to get the Day Surgery pre-service functions on work queues, rather than working off the daily schedules. RCO will provide training on use of payer websites to increase efficiencies, where they can be gained.

Implementation Date: 12/31/18

Training

Audit Services tested a sample of training records for 25 Perioperative Services employees responsible for creating cases, noting 6 of the 25 (24%) employees did not have documentation indicating they received appropriate training. One person took an IS instructed class, however, at that time, case creation was not part of that class's curriculum. For the other five employees, case creation training was provided through departmental onboarding. Evidence of this training during onboarding was not available due to personnel changes within the Perioperative Services department.

Recommendation 2018-013-08 PL:
The Director of Perioperative Services should work with the Associate Director of Information Services – IS Training to reassign Perioperative employee required training on case creation to IS taught classes.

Management's Response:

- The Director of Perioperative Services has contacted IS Training to review the existing class for modifications and re-educating the staff on the case creation process through IS taught classes.

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Conclusion

Overall, UTMB Health's operating room scheduling process appears effective. Audit Services noted specific opportunities to enhance the OR scheduling processes including updating the OR governance structure and documenting a group charter with delineation of roles and responsibilities. Additional opportunities identified to improve scheduling include ensuring data integrity, reviewing policies and procedures, reviewing system scheduling warning capabilities, automating processes for the pre-certification process, and reassigning the case creation training to IS Training.

We greatly appreciate the assistance provided by OR Leadership, Perioperative Services staff, and Revenue Cycle Operations staff and hope that the information presented in our report is beneficial.

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