MEMORANDUM

TO: Donna K. Sollenberger, MA
Executive Vice President and CEO, UTMB Health System

Todd A. Leach
Vice President and Chief Information Officer, Information Services

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

DATE: October 8, 2013

SUBJECT: utmbConnect Post Implementation Review
Audit Control Number 2013-029

Attached is the final audit report regarding the Post Implementation Review of utmbconnect project. This audit will be presented at the next Institutional Audit Committee meeting.

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.

Attachment

c: Rex M. McCallum, MD
Mark S. Kirschbaum, RN, PhD
George H. Gaddie
The University of Texas Medical Branch
Audit Services

Audit Report
utmbConnect Post Implementation Review
Audit Control Number 2013-029
October 2013
Background
In 2008, the University of Texas Medical Branch (UTMB Health) completed implementation of the Epic electronic medical record (EMR) system to improve quality of patient care, patient safety, and operational efficiency. In April 2013, implementation of the Epic Patient Access and Revenue Cycle application modules, commonly referred to as utmbConnect, further extended UTMB Health’s goal of better and safer patient care, a single electronic medical record containing all information about a patient’s care, and a single patient billing statement that includes all hospital, clinic, and provider charges.

Patient access and revenue cycle management solutions address shifting industry practices in response to major trends in consumer driven healthcare, real-time processing, and changes in regulations and reimbursement structures. The utmbConnect project had numerous goals comprised of improving patient access and satisfaction, replacing the legacy revenue cycle information systems having separate scheduling, registration, and billing systems, improving operational efficiencies, and laying a foundation for the International Classification of Diseases tenth revision (ICD-10) diagnosis coding and medical billing initiative. The utmbConnect project benefits include improving UTMB Health’s ability to serve its patients efficiently and effectively, while also ensuring the financial health of the institution and its compliance with ICD-10 regulations.

Audit Objectives
The primary audit objective is to assess the achievement of established project goals and objectives for the implementation of the new Epic scheduling, registration, and billing application modules.

Scope of Work and Methodology
Our scope of work included an assessment of project success, in particular, the extent to which it met its objectives, delivered planned levels of benefit, and addressed the specific requirements as originally defined. Additionally, the scope included identifying lessons learned from this project to improve future system implementations.

The audit methodology included documentation reviews of the business requirements, project charter, project plans and governance, project structure and organization, and system design. We also reviewed project logs, meeting agendas, minutes and related project communications, status reports and independent assessments, authorizations and approvals, education and training documents, policy and practice standards, and applicable guidance provided by governing organizations. Additionally, we conducted interviews with a broad group of key stakeholders, including UTMB Health business operations and technical support, and external implementation partners.

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.

Audit Results
Regulatory Compliance
A number of regulatory and oversight organizations have requirements to be considered in planning, selecting, funding, controlling, evaluating, and implementing major information technology (IT) initiatives. The Texas Administrative Code 216 (TAC 216) Project Management
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Practices requires, at a minimum, institutions of higher education approve and publish operating procedures identifying project components and the general use of project management practices. Based on our review, UTMB Health project management practices are in alignment with TAC 216 specifications.

The Texas Department of Information Resources publishes the Texas Project Delivery Framework Handbook (Framework) to provide the state with a consistent statewide methodology for project selection, control, and evaluation based on alignment with business goals and objectives. UTMB Health generally complies with the spirit of the Framework and its supporting documents. Additionally, The University of Texas System (UT System) developed Policy UTS 140 Enhancing Major Software Projects, which cites the inclusion of various project planning and implementation core elements. While the UTMB Health Project Management Practice Standard and IT Governance Process collectively include these core elements, recent revisions to UTS 140 encourage sharing of best practices and major software systems decisions with UT System through its Information Systems Improvement Program (ISIP). To provide UT System with a better understanding of its institutional investment in information systems, an evaluation of applicable ISIP guidance is in progress and revisions to the UTMB Health IT Governance process will occur accordingly.

Strategic Alignment
All IT projects are essentially business projects and should have a business rationale from inception; therefore, contribution to the achievement of the strategic business plan influences project success. The UTMB Health IT Governance process design advances an IT proposal from initial conceptualization through needs assessment and concept review, alignment with institutional strategic plans, available funding sources, and ultimately executive approval. Available utmbConnect documentation substantiated a structured formal approach to system implementation, indicated proper project reviews and approvals, and confirmed corresponding priority within the IT Governance process. As demonstrated through project documentation, the utmbConnect project sufficiently aligned IT investments with institutional needs, priorities, and resources, as determined by leadership.

Project Quality
Continuous project assessment increases the likelihood that a project will implement a quality solution meeting the schedule, cost, and scope commitments provided to leadership. Available utmbConnect documentation substantiates numerous readiness assessments and independent evaluations occurred during the course of the project to ensure its success. The utmbConnect project, with the exception of the ICD-10 initiative component, occurred on time and within budget. As the project team progressed with the utmbConnect implementation, the Department of Health and Human Services extended the implementation deadline for transition to ICD-10 from October 1, 2013 to October 1, 2014. UTMB Health decided to place the ICD-10 initiative on hold due to the change in federal requirements and focus resources solely on implementation of the new Epic application modules. Presently, an ICD-10 project manager is hired and a project plan outlined. While UTMB Health is potentially at risk to effectively complete all required work in order to achieve the new deadline for implementation of ICD-10 published by the Centers for Medicare and Medicaid Services, key stakeholders anticipate compliance with the mandated 2014 transition date. Specific decisions regarding timelines, resources, and budgets for training, system changes, and testing require finalizing and the maturing of the coordinated action plan with operations and technical support.
**Service Performance**

Information Technology projects initiated by the institution must ultimately have a positive impact on business outcomes. Business goals and objectives initially outlined in the project proposal, and as stated within project communications and project scope, were as follows:

- Replacement of the legacy revenue cycle system with an integrated revenue cycle/clinical documentation system (Epic)
- Improvement to patient access and satisfaction through the use of Epic's scheduling, registration, and patient portal
- Improvement of scheduling and workflow efficiencies
- Preparing for changes required to support the ICD-10 initiative

Subsequent to implementation, Epic conducted two separate surveys to assess process efficiencies and overall user satisfaction. These surveys engaged over 400 end users representing numerous areas and disciplines throughout the institution. When the survey results are compared with existing Epic baselines, UTMB Health consistently scored higher than average related to operational efficiency and overall user satisfaction. Additionally, there was more than an 8% increase in overall average scores between the two UTMB Health post-implementation surveys. Interviews with key stakeholders representing both technical and operational involvement in the project and external implementation partners validated these survey results. Based on cross-functional institutional feedback, the project has made a positive impact on business outcomes, and for its size and complexity, was considered a well-run project.

**Lessons Learned**

To continuously improve processes and increase IT investment success rates, any post implementation review should include a summary of major lessons learned. A careful review of these successes and improvement opportunities allows the institution to benefit from innovations, enhancements, corrections, or hindrances occurring during the project. Additionally, the review can provide valuable information for decreasing costs and risks in future projects. Lessons learned specifically identified during this project review include:

**Areas of Success or Project Strengths:**
- Excellent independent external reviews, considered a critical project success factor
- Broad steering committee representation, support and involvement of Executive Sponsors
- Champions of Change as departmental points of contact ensuring the project served provider and patient needs
- Good collaboration between operations and technical support and levels of experience

**Areas of Opportunity or Improvement:**
- Project implementation readiness (what to expect/anticipate) should be performed earlier in the project
- Assessment and review of needed reports should be conducted earlier in the project
- Ensure level of training is sufficient and consistent with application as it is implemented

The utmbConnect project utilized the current IT Governance process to review, approve, and prioritize project activities. As this process continues to mature, many of the opportunities...
identified above will be addressed, including the timing of implementation readiness assessments, obtaining the desired level of review, and training strategies for future projects.

**Conclusion**
UTMB Health implemented a new Patient Access and Revenue Cycle system, known as the utmbConnect project, replacing the previous legacy systems, streamlining processes, and increasing efficiency. Additionally, project management practices through which institutional knowledge, skills, tools, and techniques are documented and repeatable generally satisfy applicable project management requirements. Overall, the project has made a positive impact on business outcomes and end users are satisfied with the new version of the Patient Access and Revenue Cycle system.

We greatly appreciate the assistance provided by staff within the various business operational areas and Information Services and hope that the information presented in our report is beneficial.

_Signed_  
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Associate Vice President, Audit Services

_Signed_  
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IT Audit Services Manager