

THE Value Initiative

Members in Action: Redesigning the Delivery System

University of Tennessee Medical Center – Knoxville, Tenn. *Standardization Results in Enhanced Value and Improved Outcomes*

The AHA's Members in Action series highlights how hospitals and health systems are implementing new value-based strategies to improve health care affordability. This includes work to redesign the delivery system, manage risk and new payment models, improve quality and outcomes, and implement operational solutions.

Overview

The University of Tennessee Medical Center's journey toward clinical standardization has been a key component in creating value and improving health outcomes for patients. The goal of the work, which began in 2008, is to transform the delivery system to disease-specific, evidence-based, patient-centric plans that span entire episodes of care.

Wrapping around these clinical pathways are chronic illness management programs that engage directly with patients to provide education and assistance related to their illnesses. Interactions are documented in the electronic medical record (EMR) and are available to other clinicians caring for that patient.



Impact

UTMC tracks improvement on five measures: compliance with the pathways, mortality, complications, readmissions and lengths of stay. Approximately 500 pathways and order sets were developed covering 95% of inpatients.

External post-acute providers also are required to comply with the pathways when a patient is transferred, which has resulted in improved quality and reduced readmissions, from 13.1% to 8.9% and length of stay, from 28.5 days to 20.1 days. This, in turn, has improved quality and reduced cost. UTMC also has gone from being the highest cost provider per member per month in the region to being the lowest cost provider on a per-member, per-month basis.

Because all the pathways are incorporated into the EMR, UTMC can view outcomes data at the organization level or drill down on specific pathways to assess the efficacy of care pertaining, for example, to heart failure, sepsis or respiratory ailments.

The medication management system also has resulted in less expensive, higher quality care for patients.

UTMC began the process by focusing on inpatient care. Lean methodology experts guide multidisciplinary teams comprising physicians, nurses, pharmacists, respiratory therapists and others to create evidence-based plans of care throughout any episode of care, from outpatient settings to emergency department care to inpatient admissions through post-acute and home care.



End-of-life consults also are incorporated into the pathways to educate patients and families about options so that they may make informed decisions about goals of care. The standardization process includes assessing both the workflow of the clinical teams and value stream maps from the patient's perspective with an aim toward eliminating all nonvalue-added steps to increase efficiency.

Teams review the clinical pathways every three years to ensure adherence with the most current research studies and treatment data.

UTMC recently added a polypharmacy program, which applies a multidisciplinary approach to medication management. Patients receiving nine or more medications benefit from a comprehensive medication analysis by a pharmacist. A medication review process identifies medications that should be discontinued, negative drug interactions, lower cost alternatives, opioid alternatives and other medications that may benefit the patient that have not been prescribed.

Lessons Learned

UTMC officials cite strong physician alignment, an interoperable EMR system and a culture of continuous improvement as key drivers of success of the standardization process.

"This whole journey has helped us put a very good infrastructure in place, so that performance improvement comes naturally to us," said James Shamiyeh, M.D., senior vice president and chief quality officer.

Future Goals

The next evolution of the UTMC transformation is to engage patients in the care process by converting the pathways into comprehensive patient education materials that will be available electronically to educate and engage patients in the care process. UTMC also plans to expand pathways into physician practices, focusing initially on primary care.

"This journey is going to go on for a long time, where we learn a lot as we look at the data that's driven by the performance of this vision," said Joe Landsman, president and chief executive officer.

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