

Redesigning Clinical Care using Risk Adjusted Target Based Approach

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Background. Healthcare is moving towards value-based care and there are countless opportunities to improve quality and reduce cost. At Stanford, High Value Care team is dedicated to improving clinical outcomes by redesigning care pathways to reduce practice variability and improve patient experience and safety. We perform a comprehensive analysis to identify the areas of larger impact that aligns with institutional strategic priorities. Respective clinical partners identify opportunities in the area of their expertise and build evidence-based comprehensive clinical care pathways.

Methods. Between September 2016 and December 2017, patient specific evidence-based care pathways, guidelines, and order sets were developed with multidisciplinary clinical teams. The target LOS was calculated using national benchmarks and institutional historical data. The EMR system interface was customized for each patient population. New features such as internal links to new corresponding care pathways, icons, flags and banners as visual cues were incorporated into medical charts to identify patient eligibility, processes to advance the level of care, and patient specific risk-stratified LOS goals. Built-in logic also pre-selected appropriate orders in order sets based on risk categories of each patient. A custom summary page for a service line was created to increase the efficiency in daily clinical evaluation and documentation.

Results. Significant clinical benefits were obtained by optimization of our electronic medical record (EMR) system using clinical decision support tools such as visual cues and patient specific targets, which allowed clinical teams to achieve a better patient care and set a common expectation. Multiple implementations shown positive clinical outcomes and a reduction in postoperative length of stay. The LOS reduction in the projects ranged from 0.3-6.5 days compared to pre-implementation phases between March and October 2017, with an average of 2.5 days, corresponding to a projected annual reduction of 1,328 patient bed days.

Conclusion. Consensus and engagement among all clinical stakeholders was a key for success. Frequent communication among multidisciplinary teams in these development processes helped to reduce variation among providers, service lines, and nursing units. An automated interactive analytic dashboard played an essential role for sustaining this value improvement initiative. Optimizing the EMR system, with embedded clinical care pathways, aligned custom order sets, and clinical decision support tools as visual cues, allowed clinical teams to achieve a better patient care and experience.

