PERFORMANCE IMPROVEMENT

Using Lean to Rapidly and Sustainably Transform a Behavioral Health Crisis Program: Impact on Throughput and Safety

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Background: Lean has been increasingly applied in health care to reduce waste and improve quality, particularly in fast-paced and high-acuity clinical settings such as emergency departments. In addition, Lean’s focus on engagement of frontline staff in problem solving can be a catalyst for organizational change. In this study, ConnectionsAZ demonstrates how they applied Lean principles to rapidly and sustainably transform clinical operations in a behavioral health crisis facility.

Methods: A multidisciplinary team of management and frontline staff defined values-based outcome measures, mapped the current and ideal processes, and developed new processes to achieve the ideal. Phase I was implemented within three months of assuming management of the facility and involved a redesign of flow, space utilization, and clinical protocols. Phase II was implemented three months later and improved the provider staffing model. Organizational changes such as the development of shift leads and daily huddles were implemented to sustain change and create an environment supportive of future improvements.

Results: Post-Phase I, there were significant decreases (pre vs. post and one-year post) in median door-to-door dwell time (343 min vs. 118 and 99), calls to security for behavioral emergencies (13.5 per month vs. 4.3 and 4.8), and staff injuries (3.3 per month vs. 1.2 and 1.2). Post-Phase II, there were decreases in median door-to-doctor time (8.2 hours vs. 1.6 and 1.4) and hours on diversion (90% vs. 17% and 34%).

Conclusions: Lean methods can positively affect safety and throughput and are complementary to patient-centered clinical goals in a behavioral health setting.

Lean is an organizational philosophy developed to translate the successes of the Toyota Production System to auto manufacturing in the United States and has since been adapted to a wide variety of industries. Lean has been increasingly applied to health care settings to achieve quality goals. An important focus of Lean is the reduction of waste, which is defined as anything that is “non-value added” to the customer, such as time spent waiting. This is naturally appealing to fast-paced health care settings, and thus many implementations of Lean methods have been in emergency departments (EDs) and operating rooms.

In addition to the impact on quality outcomes, Lean can be a catalyst for broader organizational culture change in health care organizations. Fundamental principles of Lean include the challenge of continuous improvement and respect for the teams of people performing the work. This leads to an approach different from that found in traditional top-down management structures; rather, frontline staff are empowered to engage in improvement of the processes in which they work, with support from and collaboration with leadership. In Lean organizations, management functions to support the staff in problem solving, and shifts from asking “Why didn’t staff do their job?” to “Why couldn’t staff do their job?” Although Lean employs many tools for data analysis and outcome measurement, it differs from traditional research methods in that the focus is on continuous improvement rather than proving a hypothesis. Improvement efforts are rapid and iterative, and methods change quickly and often as outcomes are continually monitored and new problems are identified and addressed.

The purpose of the study reported in this article is to (1) demonstrate how Lean principles can be applied to achieve rapid transformation of clinical operations, (2) describe strategies for sustaining change and promoting ongoing improvements, and (3) identify special considerations for behavioral health settings.

METHODS

Study Setting and Population

This work was performed at the Crisis Response Center (CRC), a freestanding behavioral health facility providing crisis services and emergency psychiatric care to adults and children in Pima County, Arizona. The CRC was created...