Title:

Quality Improvement in an Academic Organization: A Lean Approach

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Session Title:

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Slot:

LE 04: Saturday, September 27, 2014: 10:15 AM-11:00 AM

Scheduled Time:

10:15 AM

Kevwords:

Lean, quality improvement and teaching assistant orientation

References:

1 Toyota Motor Manufacturing, Kentucky, Inc. (2013). The Toyota production system. Retrieved from: http://www.toyotageorgetown.com/tps1.asp 2 Miller, D., Womack, J.P., Byrne, A.P., Fiume, O.J., Kaplan, G.S., & Toussaint, J. (2005). Going Lean in health care. (Institute for Health Care Improvement Calls to Action, No.7). Cambridge, MA: Institute for Healthcare Improvement. Retrieved from http://www.entnet.org/Practice/upload/GoingLeaninHealthCareWhitePaper.pdf. 3 Young, P. L., & Olsen, L. Roundtable on Evidence-Based Medicine; Institute of Medicine(2010). The healthcare imperative: Lowering costs and improving outcomes: Workshop series summary. Washington, DC: National Academies Press. Retrieved from http://www.ncbi.nlm.nih.gov/books/NBK53920/pdf/TOC.pdf. 4 Hayward, L. M. (2011). How applicable is Lean in mental health? A critical appraisal, International Journal of Clinical Leadership, 17(3), 166-173. 5 Snyder, K. D., McDermott, M. (2009). A rural hospital takes on Lean. Journal of Healthcare Quality: Promoting Excellence in Healthcare, 31(3), 23-28. 6 Ching, J. M., Long, C., Williams, B. L., Blackmore, C. C. (2013). Using Lean to improve medication administration safety: In search of the "perfect dose." Joint Commission Journal on Quality and Patient Safety, 39(5), 195-204. 7 American Association of Colleges of Nursing. (2014). AACN finds slow enrollment growth at schools of nursing. Retrieved from http://www.aacn.nche.edu/news/articles/2014/slowenrollment. LEAN IN ACADEMIC ORGANIZATIONS 14 8 National Research Council. (2000). To err is human: Building a safer health system. Washington, DC: National Academies Press.

Learning Activity:

LEARN NG OBJEC VES	CONTE	TIME ALLOT TED	FACULTY/SPE AKER	TEACHING/LEA RNING METHOD	EVALUATION/FE EDBACK
Example	e Example	Example	Example	Example	Example

Critique selected definition of the term, "curriculu m"	Definitio ns of "curricul um" Course of study Arrange ments of instructio nal materials The subject matter that is taught Cultural "training" Planned engagem ent of learners	20 minutes	Name, Credentials	Lecture PowerPoint presentation Participant feedback	Group discussion: What does cultural training mean to you?
Describe steps in the Lean project that led to an improved teaching assistant orientation	Define Lean. Describe steps used in the Lean project (Define, Measure, Analyze, Improve and Control)	5 minutes	Becky Walters, MSN, FNP-BC, CWCN	Lecture PowerPoint presentation Participant feedback	Group discussion of A3
Identify Lean tools used to improve the teaching assistant	Describe Lean tools used in the project such as	10 minutes	Becky Walters, MSN, FNP-BC, CWCN	Lecture PowerPoint presentation Participant feedback	Group discussion of A3

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Abstract Text:

Background: Lean is a type of quality improvement philosophy/methodology developed originally by the Toyota Production System as a means of improving the automotive assembly process. More recently Lean principles have been adapted for use in health care settings. Similar to manufacturing processes, health care organizations must rely on multiple, complex processes to deliver a product (care) and provide value to customers (health care consumers). Waste in both systems decreases value. Within an educational organization, the orientation of TAs becomes important at a micro level (student instruction) and macro level (mission of the organization). As educational leaders, we describe a Lean approach to strengthening TA orientation and reducing waste and inconsistency.

Problem: In educational organizations, TAs are frequently used to supplement faculty teaching efforts as well as provide financial support to graduate students. Over 1,500 graduate students at a large, research-intensive, Midwestern public university are currently estimated to be teaching undergraduate classes. Newly hired TAs come to an organization with varying levels of experience in and exposure to academic institutions, and also differ in terms of employment experience and professional development. The policy/process for TA orientation had not been clearly delineated and a number of TAs were not engaged in an orientation process.

Purpose: Lean principles are successfully being applied to both the manufacturing industry and healthcare delivery systems. The Lean methods are also relevant as a leadership approach to quality improvement in the academic setting. The purpose of this project was to redesign the process of TA orientation at a large, Midwestern public university school of nursing using Lean principles to improve flow and reduce waste. This project focused on the time period from when the TA has been accepted as a graduate student through being matched with and starting as a teaching assistant in a course.

Methods: Early in the project group discussions, it was unclear whether insufficient TA orientation was due to a knowledge deficit regarding the required commitment, a lack of the school's expectations, or simply a lack of obligation from the TA regarding the role itself. To collect more data from the TAs, an online, anonymous survey using Qualtrics™ software was generated to solicit information. Questions related to previous TA experiences included whether they could identify the communication chain of command within the organization, student issues (grading and incident reporting), motivation to become a TA (future career in nursing education, tuition and fee remittance, and so forth), and whether orientation activities had been attended. Although data reflected feedback from a relatively small number of TAs, faculty members who had experience working with TAs validated the information obtained. The group was satisfied that the "voice of the customer" had been heard. The outcomes of the survey revealed that there were inconsistencies between the university, school, and individual course orientation processes. Therefore, the overall strategy of this educational leadership project was to apply the principles of Lean methods by looking at the current state flow map and comparing it to the target state. A root cause of unclear expectations from the School of Nursing related to TA orientation was discovered through a "5 Whys" analysis. A committee of faculty who had completed Lean training implemented this project.

Results: Discussion centered on the optimal communication mode to deliver the orientation information and around the expectations of the school. A more accessible and standardized orientation process for TAs was developed using Lean principles. The solution implemented involved development of tools that could be used by newly hired TAs, including: a TA handbook, a checklist of items to complete prior to beginning the semester, an acceptance of responsibility contract signed by all newly hired TAs, and an updated and improved TA job description. All documents were stored on a secured portal that can be accessed by new TAs and faculty when needed. After completing the online orientation, the TA would then meet with key members of the teaching team, including the course coordinator and faculty mentor, and the undergraduate program director to clarify course expectations, build team relationships, and address any further questions.

Developing a process such as this could be useful not only in this school of nursing, but in many academic settings that rely on TAs for teaching support. While this project focused on TAs, there are a number of other processes that educational leaders can apply the Lean approach, including clinical evaluation of students and peer-review of teaching, with the overall goal of achieving academic and operational excellence.

Conclusion: Optimum orientation of teaching assistants, facilitated by educational leaders, is vitally important for the school's mission to educate students and ultimately, assure patient quality and safety.

- Lean method can be used in the academic setting to improve processes and reduce waste.
- Lean tools, such as current and target state maps, are useful in identifying how to achieve an organization's academic mission.