

Lean Methodology Helps Drive A Culture of Accountability, Engagement and Transparency: Case study

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Abstract

The increased competitiveness in the healthcare leads to higher financial and operational pressures. Continuous process improvements are an essential part of current healthcare environment. According to the Institute of Healthcare Improvement (IHI), the sustainability of process improvement efforts depends on how successful the healthcare organization has been in creating a culture of accountability and transparency with engagement among all members of the clinical team [1]. Thus, the leadership team of the department of pediatrics employed lean methodology to develop a consistent culture of accountability and engagement for each division and team member in the department. Previous isolated lean transformation projects conducted within the departments failed to effectively engage all providers towards consistently embracing value centered mindset. We will discuss how lean methodology facilitated engaging physicians and all other frontline team members towards a value-centered culture.

Keywords: Accountability; Health Care Quality; Administrative management

Abbreviations: IHI: Institute of Healthcare Improvement; HPMS: High Performance Management System; APP: Advanced Practice Providers

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Introduction

Aligning clinicians and administrators towards attaining the stated goals of the physicians' organization, (improving access, improving patient satisfaction, timely and accurate documentation and increased focus on establishing and implementing quality metrics) has been accomplished in a top down fashion with little sustainability. Furthermore, engaging providers towards increased transparency and accountability through standard reporting process has been challenging. Lean methodology can lead to successful implementation of standard work. Using this methodology, we aimed to build a culture of accountability and transparency focused on continuous process improvement work in a large academic organization.

Methods

Phase 1

The departmental executive leadership team (Vice Chair for Clinical Affairs, Vice Chair of Administration and Associate vice Chair of Operations) secured the support of a Lean transformation leader and begun developing an A3 analysis process.

The reason for action was identified (box 1):

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The increased competitiveness in the healthcare industry leads to higher financial and operational pressures for the Department of Pediatrics. Thus, there is a need to develop a consistent culture of accountability and engagement for each division and team member in the department.

Aim: Our goal is to design a standard process of continuous improvement work for the entire department with high provider, leader, and team member engagement and accountability.

Phase 2

We assembled a team of leaders within the department (several division chiefs, division administrators, APP representation and a fellow (fresh eyes) and conducted three meetings to complete the A3 process. Below we outline the process developed after the A3 analysis was completed.

Scope: Pediatric clinical and academic mission.

Trigger: The department of pediatrics and Clinical Administration set yearly metrics goals.

Done: Completion of all Department-Division accountability metrics.

Box 2 to 3 attributes: (current and future state)

Current State Attribute identified by the working group were: inconsistent engagement and accountability to quality metrics, inconsistent engagement of providers and leaders in establishing targets, insufficient data analytics to support the work and incomplete understanding of the “why” behind various initiatives.

Future State Attributes were also identified: Standard reporting procedure implemented, effective communication occurs between department, division and providers and team members, easily attainable, readily available and automated data flow, data transparency, leadership and provider engagement, accountability, initiative and fast response time, A3 thinking, visual management

Gap Analysis (box 4)

- What is preventing us from attaining this goal? Knowledge in lean methodology? Lack of commitment, division level accountability and engagement (Table 1)?

Box 5

Possible solutions to close the gap including action plan and assignment of responsibility and accountability (Table 2).

Box 6 and 7

Rapid experiments and implementation plan of the possible solution (Figure 1).

This includes a diagram representing the Accountability Process that has been established. It outlines the Phase 1 vs Phase 2. I also included some detailed boxes at each step to represent the tool that was being used during discussion, who, frequency, etc.

Box 8

Evaluating implementations (Metrics and Results).

Metrics: A standard reporting process outlining all metrics was established (Table 3).

The metrics are tracked monthly at all reoccurring meetings by the department and divisions (Table 4).

- % of leadership meetings where standard reporting is used Includes the following standard reoccurring meetings: Internal Division Reviews (36 = 18 divisions at 2/year), Division Chief Meetings (10 from Mar thru Dec), and Clinical Division Administrator Meetings (10 from Mar thru Dec). If meetings don't occur, they will not count in the denominator.

- Success rate in using A3 thinking during the semi-annual Division reviews

Each internal division review will be graded on their success of using A3 thinking in the preparation of the agenda and the presentation of their metrics and countermeasures

They will score:

2 (YES) if they have demonstrated and successfully used A3 thinking

0 (PARTIAL) if they have partially demonstrated and used A3 thinking

0 (NO) if they have not demonstrated or used A3 thinking

- Number of Division Administrators who have been Bronze trained

Table 1 A Gap analysis.

Short Description of Top 3 – 6 Gaps	Suspected Root Cause
Division accountability meetings vary from division to division (no structure)	No standard process for discussing/setting performance metrics
Administrators/Chiefs do not always understand how to effectively countermeasure	Not understanding expectations for accountability meetings Lack of knowledge around A3 thinking
Minimal engagement with Division leaders in setting Division performance targets	No standard process for discussing/setting performance metrics.
Sometimes do not understand the ‘why’ behind metrics	No standard process for discussing/setting performance metrics
Poor accessibility and transparency of data/metrics	Individual “Division” culture and no process/tool for sharing performance of all Divisions.

Table 2 Root cause and possible solutions.

Root Cause	Top 3-6 Solutions
No Standard process for discussing/setting performance metrics	Utilize a Standard Report that is derived from the department report to clinical administration
Not understanding expectations for accountability meetings	Utilize a Standard Report that uses A3 Thinking to identify gaps/countermeasures. Use Division Clinical Administrator monthly meetings as training ground for identifying gaps/counter measuring.
Lack of knowledge of A3 Thinking	Offer A3 Thinking and Bronze trainings to administrators and chiefs
Individual “Division” culture and no process/tool for sharing performance of all Divisions	Create electronic monthly reports to send to Divisions (stepwise approach to transparency). Develop department tracker that is visible next to Mission Control Board.

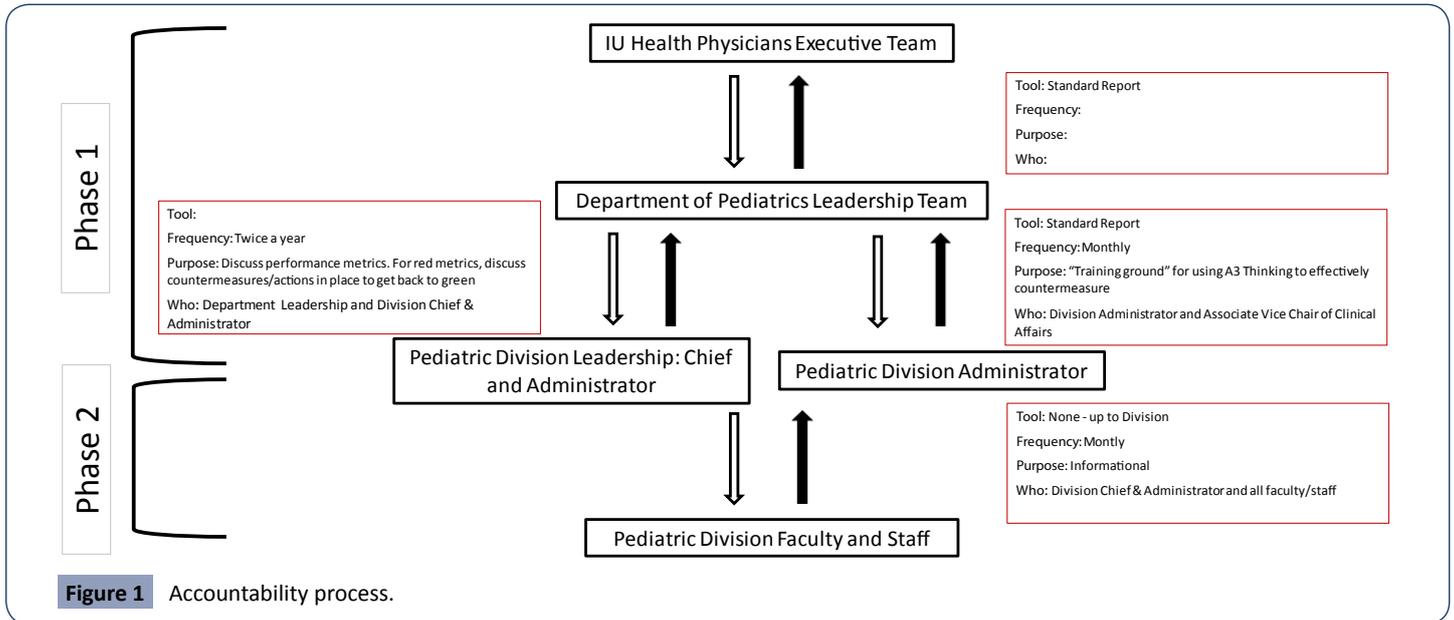


Table 3 Department of Pediatrics metric reporting board.

Department of Pediatrics	
Metrics – All Divisions	
Median Lag (Rolling 3 months)	target
	actual
wRVUs (budget)	target
	actual
wRVUs (60 th %ile benchmark)	target
	actual
wRVUs (APP)	target
	actual
WhiteSpace	target
	actual
Clinical Operating Margin (percent)	target
	actual
Academic Operating Margin (dollars)	target
	actual
Net Promoter Score	target
	actual
Non-Compliant Notes	target
	actual
Cerner Minutes Per Patient	target
	actual

- Number of Division Chiefs and Administrators who have received A3 Thinking training
- To facilitate better two ways communication with all members of all divisions, and insure that increased

understanding exists among team members in respect to department measures and countermeasures, minimum two representatives of the executive team will perform yearly visits to each division meeting.

We will measure the % of Divisions where Chair's office leaders come to at least one division faculty meeting during year.

Table 4 Structured reoccurring meeting.

Meeting	Frequency	Attendees
Division Chief Meetings	Monthly	Division Chiefs, Vice Chairs, and Chairman
Administrator Meetings	Monthly	Division Administrators, Associate Vice Chair of Operations
Faculty Meetings	Quarterly	All Faculty, Providers, Vice Chairs, Chairman

Box 9

Insights and next steps (See the Discussion Section).

Results

The standard reporting procedure has been implemented for all 18 divisions with a 92% success rate during the first semiannual review (**Table 5**). Most notable, the standard reporting procedure was followed with 100% success at the second semiannual meeting. A mechanism was created to insure readily available and automated data flow. Each division review was graded on their success of using A3 thinking in the presentation of their metrics and countermeasures (0- does not meet, 1-partially meets and 2-fully demonstrates). During the first semiannual review, the average A3 thinking score for the 18 divisions was 1.81 (target: 1.50). Effective communication has begun between department, division, providers and team members with increasing frequency. Visual management strategies have been used to increase transparency. As division leaders became more familiar with the A3 thinking process, we have observed an increased engagement in discussing current measures, gaps and in developing countermeasures. All department's metrics were successfully attained. At the division level, each leadership team was prepared to identify gaps and offer countermeasure. Most notable, the overall median lag improved from 26.8 days (Jan 1st 2019) to 16.8 days (August 31st 2019) without adding new providers.

Table 5 Results.

Department of Pediatrics		Thru 12/31/19											
Culture Mission													
2019 Metrics		Jan	Feb	(Begin)	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	(Final)
YTD Target				90%	90%	90%	90%	90%	90%	90%	90%	90%	90%
% of leadership meetings where standard reporting is used*	# of mtgs checked yes (cumulative)			5	15	20	24	26	28	30	33	40	51
	total # of mtgs that occurred (cumulative)			6	16	21	26	28	30	32	35	42	53
	YTD Actual			83%	94%	95%	92%	93%	93%	94%	94%	95%	96%
				1st set of reviews				2nd set of reviews					
Success rate in using A3 Thinking during the semi-annual Division reviews**	YTD Target (cumulative)			9	18	27	27	27	27	36	45	54	54
	YTD Actual (cumulative)			6	21	25	29	29	29	29	31	43	61
Number of Division Administrators who have been Bronze trained	YTD Target			0	0	1	1	2	2	3	3	4	4
	YTD Actual			0	0	2	2	2	2	2	5	5	5
Number of Division Chiefs and Administrators who have received A3 Thinking training	YTD Target			0	1	3	4	6	7	9	10	11	12
	YTD Actual			1	1	1	8	8	13	14	14	14	14
% of Divisions where Chair's Ofc leaders come to at least one division faculty mtg during year	YTD Target			0%	12%	24%	35%	47%	59%	71%	82%	94%	100%
	# of divisions checked yes (cumulative)			0	1	2	3	3	5	10	14	15	15
	total # of divisions			17	17	17	17	17	17	17	17	17	17
	YTD Actual			0%	6%	12%	18%	18%	29%	59%	82%	88%	88%
* Includes the following meetings:													
Internal Division Reviews (36 = 18 divisions at 2/year), Division Chief Meetings (10 from Mar thru Dec), and Division Administrator Meetings (10 from Mar thru Dec)													
If meetings don't occur, they will not count in the denominator when calculating the %													
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Discussion

“Culture” has been defined by Edgar Schein as a “shared way of thinking and feeling about problems within an organization” [2]. Changing the culture of an organization might seem a daunting task as it seems difficult to find appropriate metrics to measure the impact of the intervention.

According to a study conducted by IHI, the management practices identified that might result in sustained culture change focused on high performance include standardization, accountability, visual management, problem-solving and escalation [3]. In a High-Performance Management System (HPMS) (a set of management practices will result in behavioral shifts that will untimely be linked to cultural transformation towards transparency, proactive problem-solving and team collaboration) has been proven to be effective by a series of experiments conducted by IHI in multiple healthcare settings in the US and Europe. These management practices are systematic applications of quality improvement

and Lean principles. IHI studied several reputable healthcare organizations who have been successful in implementing a HPMS and demonstrated sustained improvement. In a recently published report [4], similar tactics were demonstrated to result in sustained improvements in fifteen inpatient respiratory wards in Scotland and two ambulatory surgery centers in the US. We are reporting how similar management tactics with a specific focus on Lean methodology resulted in culture change in a large academic department of pediatrics with 300 providers spread across 18 divisions, ranging from primary care providers to various pediatric specialties with clinical presence both in the inpatient and outpatient space. Furthermore, these management tactics have been successful in facilitating the management of the rapid changes in patient volume observed during the COVID-19 pandemic (Table 6). Specifically, the transition towards standard volume while promoting virtual visits was managed by setting targets and tracking weekly progress.

Table 6 Reverse Surge during COVID-19.

		APR	MAY	JUN
Virtual Visits	target#	n/a	>0.25 total	>0.25 total
	actual#			
	actual %(of total visits)			
In- Person Visits	target#	n/a	0.5* preCOVID	0.75* preCovid
	actual#			
	actual %(of total visits)			
Total Visits	target#	n/a		
	actual#			

Conclusion

Team members' engagement in a matrix organization is the key element in the journey to build a high reliable organization.

Executive leadership involvement is key. Various process improvement methodologies (Lean in our case study) will offer a rigorous and structured framework to lead the change to transparency and accountability.

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