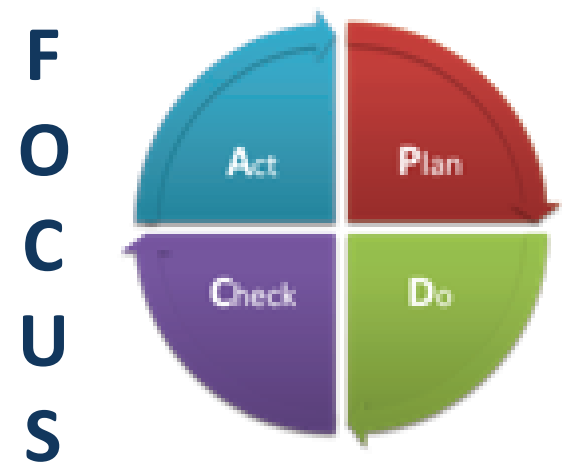


Division of admissions among Pediatric Hospitalist teams
Date Initiated: May 2018



F – IND a Process to Improve (background information, data, value stream map)

Variability in patient census’ between pediatric hospitalist teams can lead to an uneven distribution of workload between residents. Pediatric residents have reported feeling constrained in their ability to learn and feel prepared for patient rounds during periods of high patient volume. Improvement in the distribution of pediatric hospitalist admissions may lead to more consistent distribution between the hospitalist teams, increased time for direct patient care among residents and improved resident learning.

O – RGANIZE a Team (list of team including ad hoc members and roles)

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Acknowledgements: Alexey Kalinin, PhD for statistical support

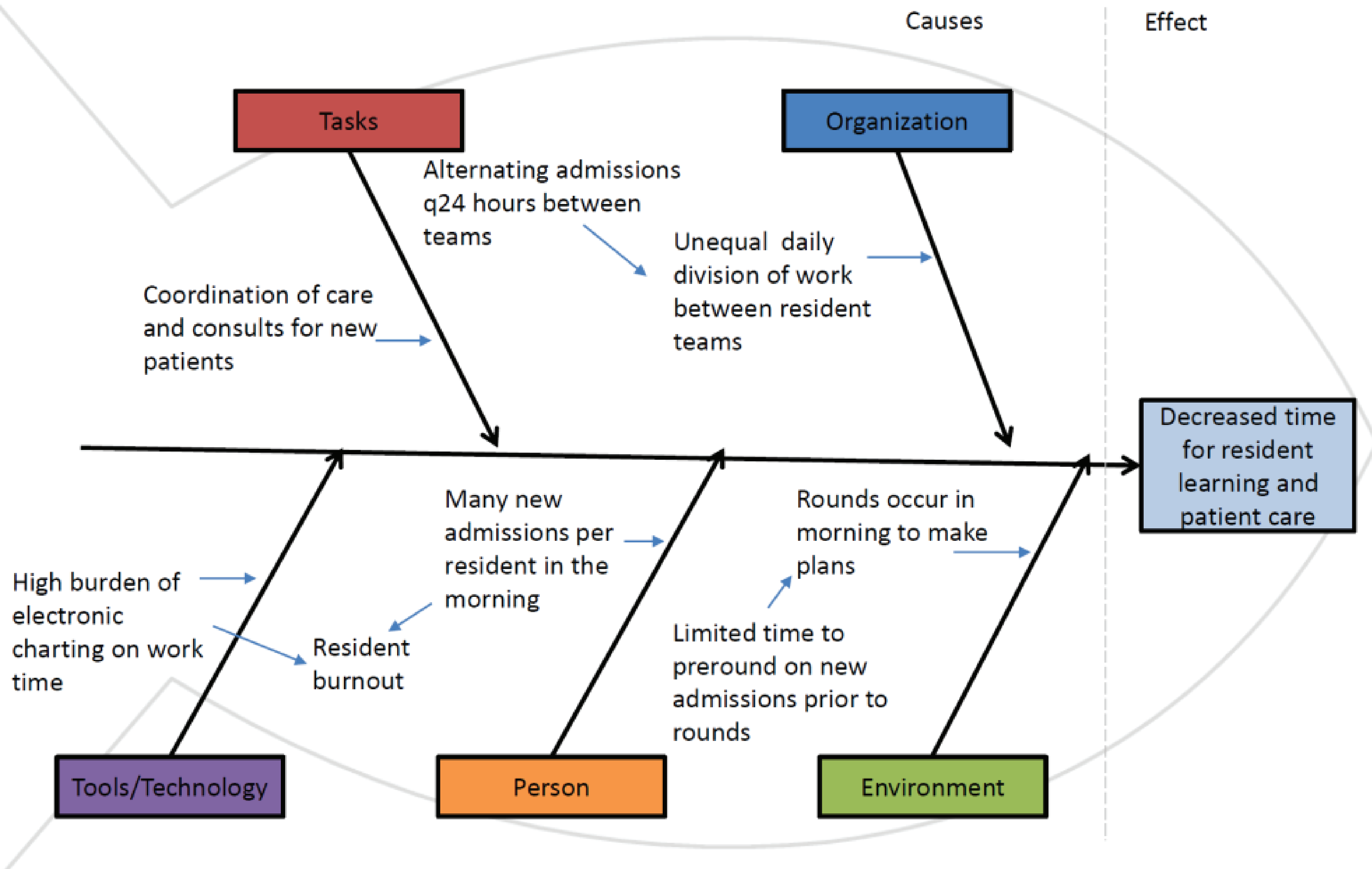
C – LARIFY Current Knowledge (current state process maps, observations, data, specific aim statement)

Prior to this project, the hospitalist admissions alternated between two pediatric hospitalist resident teams every other day leading one team to receive all new admission for a 24 hours period. In this system, the two teams often had variable patient censuses from day-to-day, though data indicated that they had similar volumes of patients when averaged over time.

SPECIFIC AIM STATEMENT: We will aim to:

- Improve resident learning by increasing average attendance at morning educational conferences by 10% by March 2019.
- Improve resident perception of division of workload and time for spent in direct patient care from Sept 2018 to March 2019.

U – NDERSTAND Root Causes (fishbone diagram, 5 whys, affinity diagram)



S – ELECT the Improvement (benchmarking / best practices – external and/or internal)

Root Causes	Change Ideas
Uneven distribution of patients between teams	Alternate admissions between teams overnight when single team is taking admissions

P – LAN the Improvement (future state process map)

D – O the Improvement improvement action items plan, data collection plan, forms)

Residents were polled to assess attitudes toward the current system, elicit a self-assessment of time spent learning, and determine the effectiveness of system in facilitating patient care, resident learning, and equal division of workload among teams. Fishbone analysis was used to help determine problems and potential solutions. Outcome measures were identified, and the new system of alternating overnight admissions between the two hospitalist teams was designed and a piloted from September 2018 through March 2019. Data was collected through weekly surveys of residents and attendings, daily census emails, and program conference attendance records.

Outcome measures for alternating admissions overnight

Change Goals	Outcome measures
Decreased inequality in hospitalist team censuses	<ul style="list-style-type: none">• Number of days with difference in census between teams < 4 patients at evening sign-out• Resident perception of division of labor between teams
Increased resident learning	<ul style="list-style-type: none">• Average morning report attendance by residents• Resident perception of preparedness for rounds
Increased satisfaction with admitting system	<ul style="list-style-type: none">• Resident satisfaction• Attending satisfaction

C – HECK the Results

TEAM CENSUS DATA

Daily data collection rate	Census data for 122/172 days (71%)
Patient census variability < 4 patients between teams at evening sign-out	87/122 days (71%)

RESIDENT AND ATTENDING SURVEY DATA

Role (n)	Increased equal division between teams (%)		Workflow Improvement (%)		Preferred System (%)	
	Agree	Disagree	Agree	Disagree	Agree	Disagree
Intern (15)	100	0	47*	20*		
Senior (9)	55	44	44*	22*	44*	11*
Attending (32)			31*	19*		

*When percentages do not add to 100%, the remaining subjects answered "neither agree nor disagree"

RESIDENT CONFERENCE ATTENDANCE PRE AND POST IMPLEMENTATION

Average attendance PRE (9/2017-3/2018)	Average attendance POST (9/2018-3/2019)	Difference in conference attendance	Two-sample T-test (87 df, one-sided test)	
			T-statistic	P-value
74% (42/57)	80% (50/62)	6% increased (3.4 conferences per resident)	2.17	0.016

A – CT and Determine Next Steps

Overall, survey data and hospitalist team census data showed that resident and attending perceptions were that the new admitting system improved division of labor between teams with only 29% of days having a high (>4 patients) disparity in census between teams. Resident attendance at educational conferences did increase after implementation of the new system.

Next steps will include consideration of modifications to the system to improve issues identified with assigning patients to correct care teams.