

Reducing Excessive Laboratory Testing in Hospitalized Patients: An Interdisciplinary Quality Improvement Initiative

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INTRODUCTION

Excessive laboratory testing performed on hospitalized patients can be harmful and costly, and often does not provide information that impacts clinical decision making. Our project utilized interdisciplinary input to generate ideas to decrease excess labs.

SMART AIM

Our project sought to decrease the median laboratory tests per admitted patient on two medical/surgical units at a quaternary care center by an additional reduction down to 8.5 lab draws/patient between July 2023 and July 2024.

METHODS

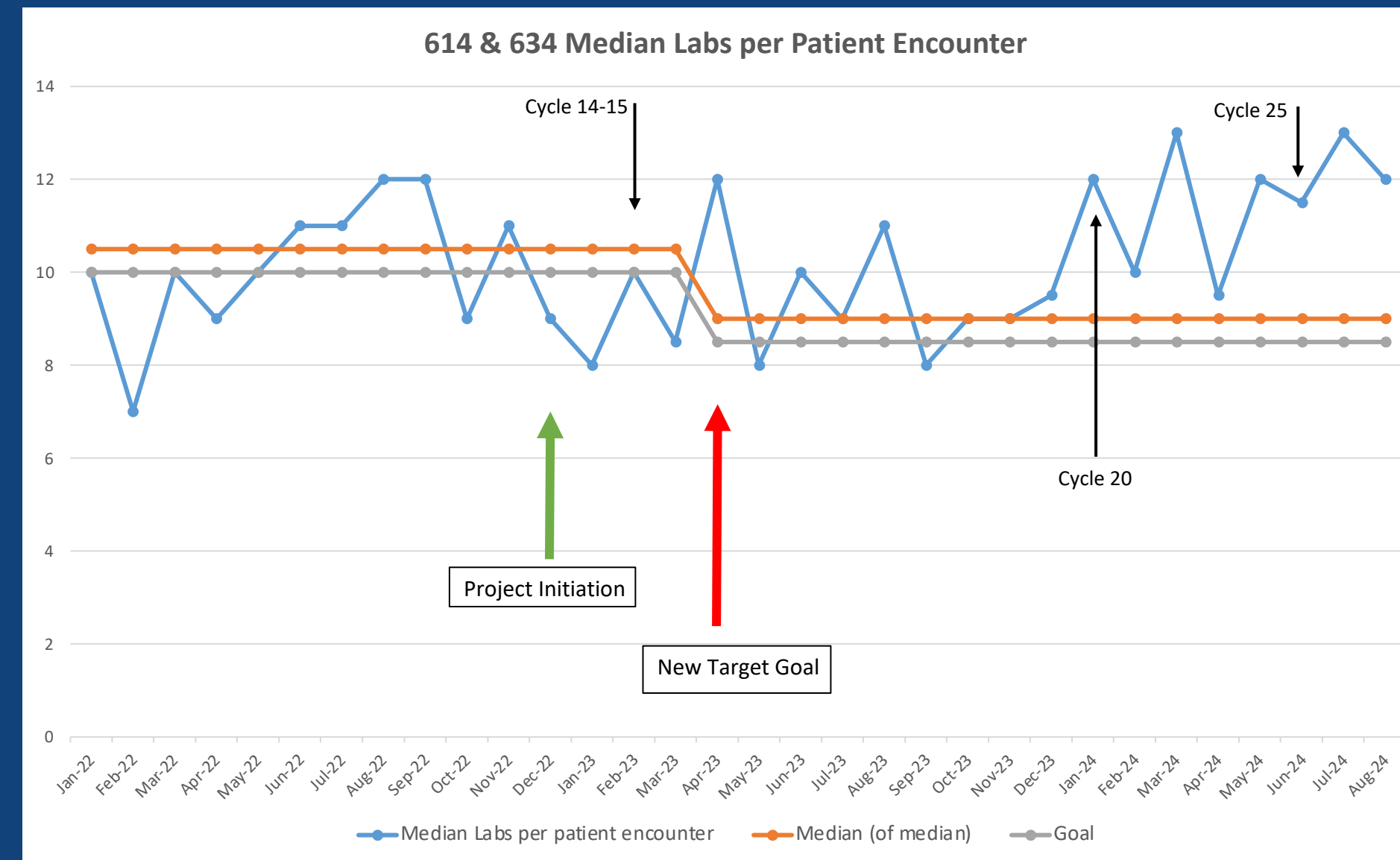
Automated electronic medical record data mining was utilized to collect baseline data on the total number of laboratory tests performed per hospitalization. A 1 yr retrospective review revealed a baseline median of 11 laboratory tests per hospitalization. Patients whose stay was longer than ten days and laboratory tests that were POCT were excluded.

PDSA Cycles incorporating various interventions were utilized to improve mindful ordering of laboratory tests by teams. Our interventions included visual aids, email reminders, and check lists. We also incorporated discussion regarding the frequency of laboratory tests during work rounds and interdisciplinary team rounds. Surveys of residents and nursing staff were conducted from 2023-2024 assessing perceived response to PDSA interventions. Surveys also collected qualitative information on strategies for lab reduction.

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Resident surveys identified a standardized approach to discussing lab frequencies as a potential useful tool for lab reduction



Themes from qualitative analysis of nursing & resident surveys

“Consolidating the timing of daily lab draws”

“Discussing lab frequencies during presentations”

“Implementing an e-Record prompt after 2-3 consecutive days of labs”

Cycle	Date	Intervention
1 to 10	12/2022	Team member education on communication via newsletter and email, discussion during daily nursing huddle and inter disciplinary rounds, and signage
11 to 12	1/2023 – 2/2023	Faculty members on resident team email
13	2/2023	Project presented to faculty members at the Hospital Medicine Division Business Meeting
14 to 15	2/2023 – 3/2023	Visual aids placed in resident work rooms & units
16	4/2023 – 6/2023	Weekly emails to teaching attendings
17 – 25	9/2023 – 7/2024	Resident and faculty survey (76 participants) Resident, faculty and nursing qualitative survey

RESULTS

The median number of laboratory tests per patient encounter continues to be variable. Per the survey conducted most residents/faculty members felt comfortable without daily labs on stable patients (59%) and 41% reported discussing lab frequencies at least weekly.

DISCUSSION

Updated data suggests while providers report comfort without daily labs, variable results of previous interventions indicates room for improvement.

Themes identified via multidisciplinary input regarding further interventions include consolidating lab draw timing and standardizing discussing lab frequencies during rounds.

Limitations included small sample size and difficulty in maintaining a sustained response potentially influenced by an influx of new residents at the beginning of the academic year.

FUTURE PLANS

We plan on re-sending our survey and implement identified strategies for sustained lab reduction such as an E-record notifications or addition of lab columns on lists. We also aim to incorporate social determinants of health, by examining number of lab draws data to determine if disparities exist between populations by SES, Race, or preferred language.

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Residents & Faculty:
Survey QR Code:

