Improving Use of Formative Assessment for Physical Medicine and Rehabilitation Residents

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Background

Effective assessment is necessary, timely, specific, formative, based on direct observation and limited to 1-2 items [1]. Without this formative assessment, good behavior is not reinforced, mistakes go uncorrected and the learner will make assumptions. We noted that faculty in our division had difficulties with providing specific, timely formative assessment. On average, our division evaluated residents 1.5 times per month, or approximately 17 times in a year. Our resident evaluations were summative and provided at the end of the rotation.

Entrustable professional activities (EPAs) have been developed to provide a link between competency based medical education and clinical practice [2]. EPAs are units of professional practice that a trainee completes with increasing competence over the course of their training [3]. Recently, 19 physical medicine and rehabilitation-specific EPAs were published [4].

Given the challenges of obtaining consistent formative assessment in our program and the availability of PMR specific EPAs, we sought to improve the process of resident feedback by increasing the number of formative assessments per week with the global aim of improving assessment of physical medicine and rehabilitation residents to guide readiness for promotion to higher levels of training and independent practice.

SMART Aim: Improve the number of UC PMR resident formative assessments per week from 0 to 4 by December 2020.

Key Driver Diagram

Results

Number of resident formative assessments per week
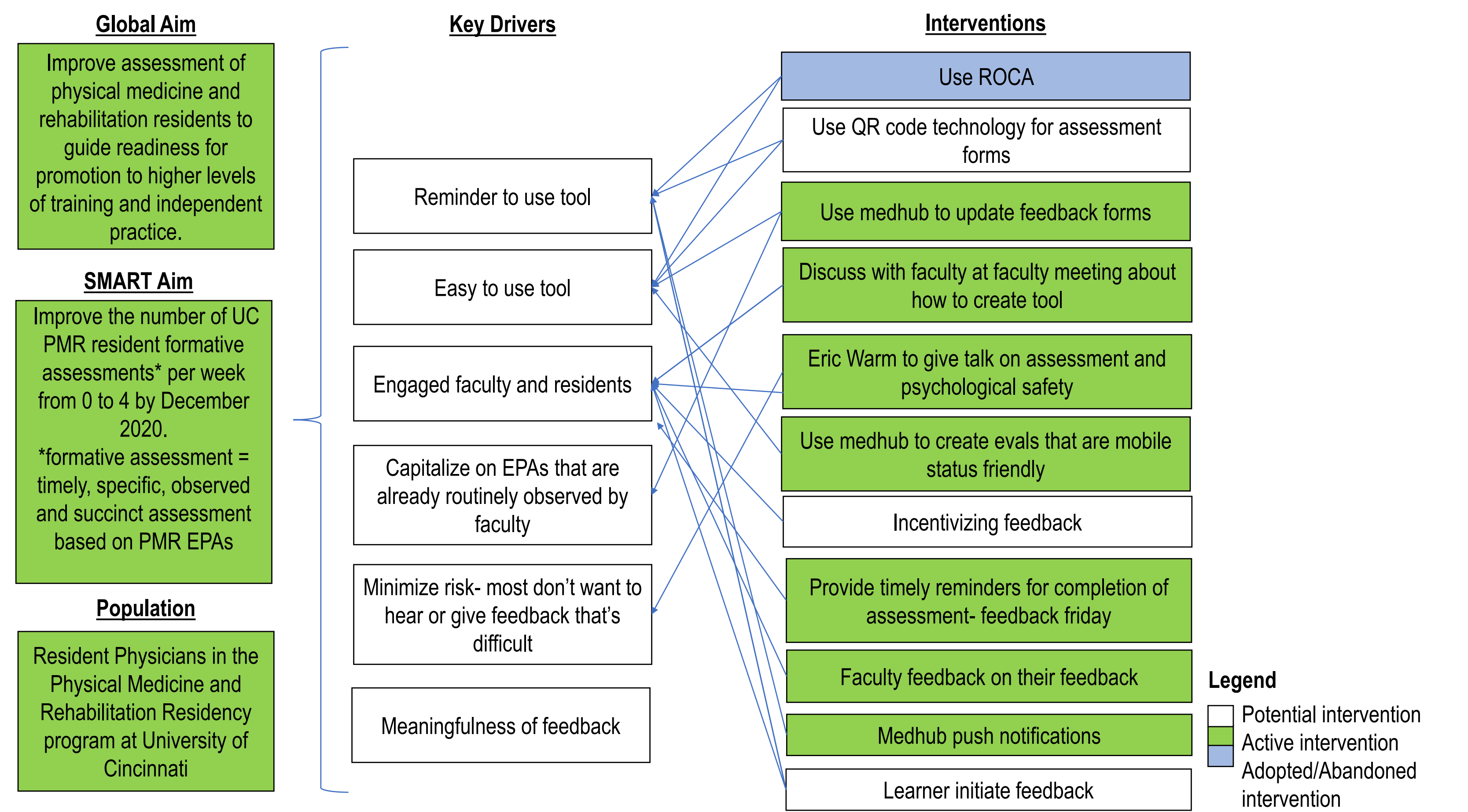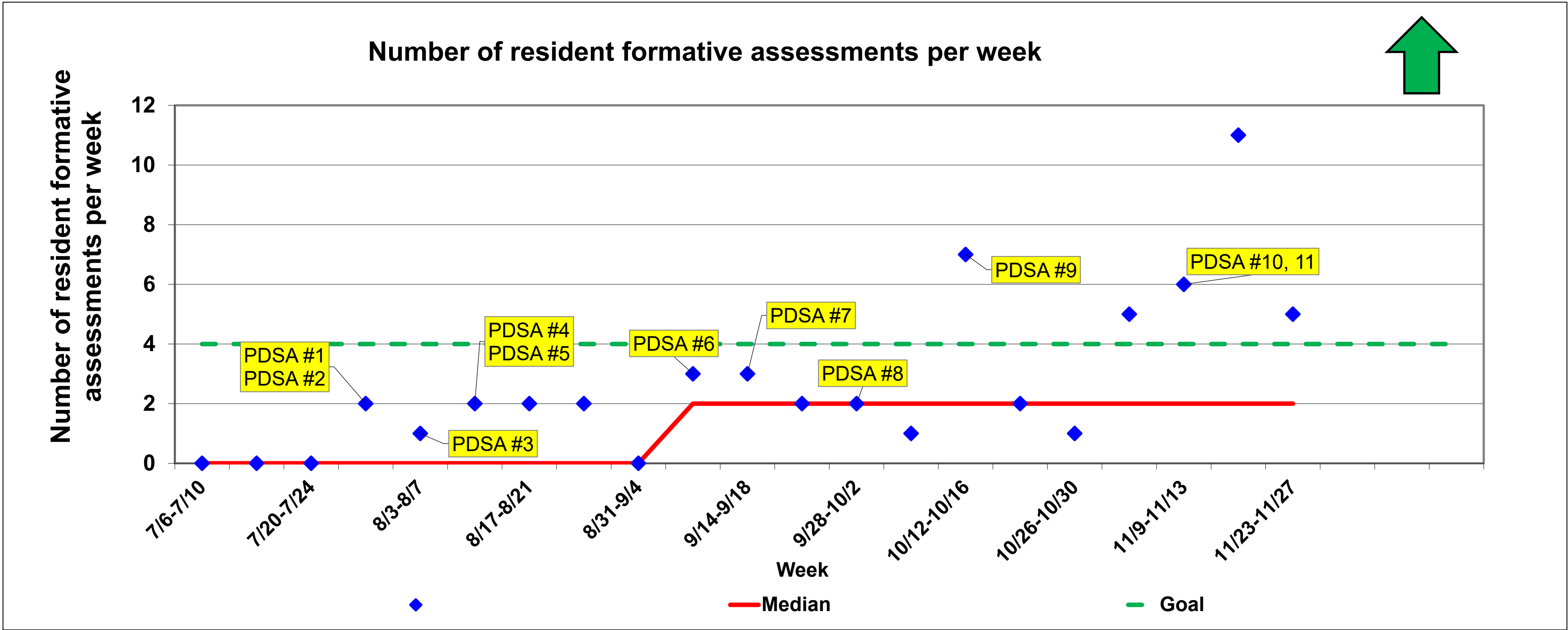
PDSA 1-4	Implement feedback form for specific residents and faculty
PDSA 5-6	Discussion/education with faculty at faculty meetings
PDSA 7	Reminder emails from Program Coordinator; trialed multiple days
PDSA 8	Grand Rounds on assessment from Eric Warm (PD Internal Medicine; Expert on GME assessment)
PDSA 9	Faculty meeting progress update and feedback session
PDSA 10-11	Trialed Medhub reminder to fill out feedback forms

Pareto Analysis

Pareto analysis of EPAs

Pareto analysis of day of week
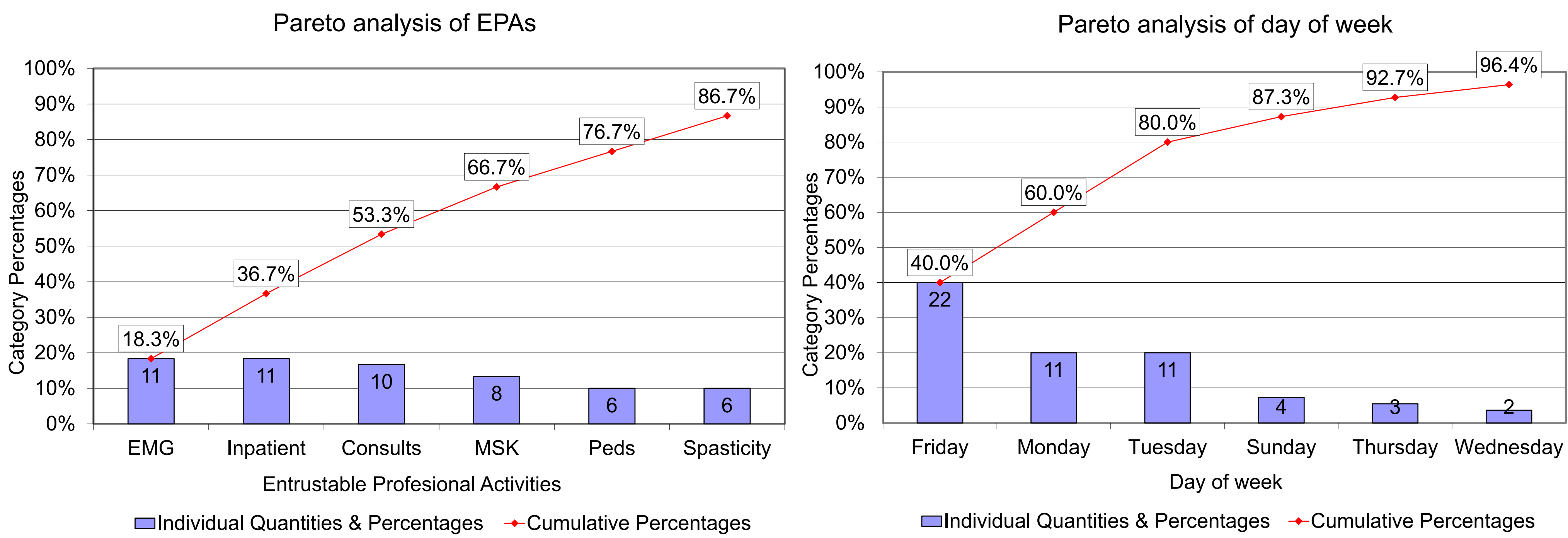
Discussion

Using the IHI Model for Improvement, we designed and implemented several interventions to increase number of assessments completed. We achieved a shift in our median number of formative assessments per week to 2/week but have not yet achieved our SMART Aim goal. These assessments were well-distributed across included EPAs. Our shift was driven by (1) Developing an easy-to-use tool, (2) engaging faculty in the process and , (3) sending frequent reminders.

(1) We created a novel feedback form to generate timely and specific feedback that was limited to 1-2 items and based on direct observation. We wanted to capture meaningful feedback in every low stakes assessment and encourage a growth mindset.
(2) We met frequently with faculty and solicited their feedback on the tool and the process.
(3) We trialed multiple reminder strategies for faculty reminder and found disparities in day of the week assessments were completed which may be a target for future interventions.

Number of assessments is a process measure, not an outcome measure though we expect that increased number of observations will help with more complete evaluation of our residents.

Next interventions include:
- Continuing to optimize reminder schedule
- Soliciting feedback after upcoming milestone meeting with these additional assessments
- Engage residents: both in soliciting feedback and assessing value of feedback through this process.

Key Terms
EPA – Entrustable Professional activities
Formative – Ongoing feedback throughout a rotation
Summative – Overall performance at end of rotation/year
Assessment – Formative, ongoing, process oriented, improve learning
Evaluation – Summative, Product oriented, gauge quality
SMART Aim – Specific, Measurable, Achievable, Relevant, Time bound
PDSA – Small test of change, problem solving model for improving a process

References

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4. Mallow M, Baer H, Moroz A, Nguyen VQC. Entrustable Professional Activities For Residency Training in Physical Medicine and Rehabilitation. *Am J Phys Med Rehabil.* 2017;96(10):762-764. doi:10.1097/PHM.0000000000000741