

Emergency Medicine Resident Weekly Academic Lecture Review Optimization

Category of submission (select as many as apply):

Resident/Fellow Project

IOM Domains that this project addresses (select as many as apply)

Effective

Please share how you defined your project. Consider addressing the questions below. (Max 500 Words)

What was the identified Quality Gap? - What was the improvement target? - What was the timeline of the project? - Who were the stakeholders? - What was the stakeholders' input? - What was the method for collecting stakeholder input? - What was the potential for significant impact to the institution? - What was the potential for significant impact to society?

Review of weekly academic lectures is a core component of ongoing accreditation for the Emergency Medicine Residency under the Accreditation Council for Graduate Medical Education (ACGME) Section.C.e.c. IV6. In the past, the evaluation of these lectures has been sporadic, with paper forms handed out to random subsets of attendees with no oversight of completion, balancing between weeks to prevent overburdening, or follow up for the presenters for future use. These discrepancies can be cited as ACGME violations, putting the program's accreditation at risk. Between Jul19 and Jun20 compliance was 63%. There is no standardized process to do this. The goals of this project were to increase the compliance of evaluation of completion to at least 100% participation for each class, balance the tasking across each class to avoid too heavily relying on the same individuals to complete the evaluations, and provide a mechanism for lectures to review the feedback that they receive from completing said lectures. The timeline of the project was one month each to define the problem, measure the baseline information, and analyze the data, followed by six months to measure the improvement architecture and one month to establish the control plan. The stakeholders were the residents required to complete the surveys and present the lecture content, and their input (focusing on their thoughts surrounding the current process) were collected using nominal group technique and organized with an affinity diagram. The potential impact focused on improved quality of lecture from house staff and greater sense of ownership of the process.

Please describe how you measured the problem. Consider addressing the questions below. (Max 500 Words)

What data sources were used? - Was a numeric baseline OUTCOME measure obtained? - What defined the sample size? - What counterbalance measures were identified? - What numeric baseline COUNTERBALANCES

were obtained? - Was the outcome measure clinically relevant? - Was the outcome measure a nationally recognized measure?

The data used to measure the baseline and the improvement included the numbers of evaluations submitted for each lecture during weekly academic sessions. Under the original process, there was no inter-class accountability, so it was unclear the amount of participation by year group.

Please describe how you analyzed the problem. Consider addressing the questions below. (Max 500 Words)

What was one factor contributing to the gap? - Were multiple factors contributing to the gap? - Was a structured root cause analysis undertaken? - What was the appropriate QI method or tool used for root cause analysis? - Was a root cause analysis performed prior to identifying potential solutions? - What was the rationale for selecting intervention(s)? - Did the project use a QI method or tool for selecting intervention(s)?

The problem was analyzed using nominal group technique and affinity diagrams to determine critical to quality aspects of the process and customer requirements. A process flow diagram was established to identify the necessity of every step in the current process. A root cause analysis with circle voting determined the highest priority changes as determined by the group.

Please describe how you improved the problem. Consider addressing the questions below. (Max 500 Words)

What was the implementation of intervention(s) (date/time of go live)? - Was the target measure re-measured afterwards with comparison graph? - Was a structured plan for managing change used? - Was the project counterbalance re-measured with a comparison graph? - Was the counterbalance adversely affected? - Is the improvement in target outcome measure shown? - Was a statistical significance demonstrated in the outcome measure?

After the process flow map identified non-value added steps, a new submission system was designed that tracked individual participation to avoid over-assigning the same individuals and allowed for better real-time analysis of overall compliance. This system was tested for three months before a change was made wherein monthly totals were published to show inter-class participation and publicly identify weak points. There was a statistically-significant improvement in the process, the goal of 100% participation was not reached.

Please describe the control phase of your project. Consider addressing the questions below.

What were the lessons learned from the project? - Was there communication to stakeholders of the summary of the project, and lessons learned? - Was a process owner identified? - Did the process owner acknowledge ownership of ongoing monitoring? - What control measures were identified? - What was the reaction plan for deficiencies identified in the control measure? - Was there at least one year of sustained monitoring demonstrated? - Was the project successfully diffused in scholarly form (i.e. poster, manuscript, etc)?

The control phase of the project consisted of identifying different thresholds of non-compliance with triggered responses to prevent excessive deviation from the goal, with different members of

the team responsible for different aspects of the phase. Specifically, when compliance drops below 80% for a given week, an all-residency announcement is made reminding assigned individuals to complete their evaluations. When, for a given month of lectures, an individual class's compliance drops below 70%, a targeted communication with that class occurs including a graphical representation of their status vs those of other classes to encourage increased submission. The project was intended to be presented at the hospital's quality improvement symposium, but an academic scheduling conflict prevented its evaluation.

Attachments

[CTQ Tree](#)

[Baseline Analysis](#)

[Baseline Process](#)

[Root Cause Analysis](#)

[Future State Map](#)

[Control Map](#)

[Post-Improvement Analysis](#)

[Post-Improvement Analysis 2](#)