Promoting Resident Involvement in Quality Improvement Initiatives Through Faculty Involvement and Curriculum

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The Challenge

There has been a growing emphasis on increasing resident involvement in quality improvement (QI) in the accreditation standards, and through a new type of institutional visit to assess quality and safety in the learning environment under the Clinical Learning Environment Review (CLER).[1,2] CLER site visits to sponsoring institutions, among other focal areas, "review residents involvement in institutional quality improvement and patient safety initiatives."[1,2] In the face of this growing emphasis on QI, departments, programs, and residents have reported barriers to meeting this requirement. They include difficulty balancing educational demands with clinical workload, variability in faculty and trainee enthusiasm, and lack of faculty expertise.[3,4] This Rip Out describes a strategy for implementing a QI curriculum to meet Accreditation Council for Graduate Medical Education common requirements and expectations under an evolving Pathways to Excellence approach for CLER.[5]

What Is Known—Ensuing Effective QI Projects

Residency programs are charged with ensuring trainees acquire meaningful and measurable skills in the process of QI. To fulfill this requirement, programs must establish methods to facilitate and document residents' meaningful involvement in QI.

Three basic approaches for resident involvement in QI have been described: teaching of QI principles, skill-building directed toward relevant quality and safety activities (eg, improving patient handoffs), and residents' participation in institutional QI initiatives, with all having some limitations.[4]

Based on its extensive experience, Cincinnati Children's Medical Center identified 4 key drivers for resident involvement in QI: (1) knowledge of key concepts of improvement science; (2) resident-initiated quality QI projects and facilitation of "buy in"; (3) protected time for

Rip Out Action Items

Residents should:

1. Become competent in basic quality improvement (QI) concepts and skills.
2. Begin to assess systems, processes, and outcomes to identify quality/efficiency gaps within familiar situations (eg, morning rounds, scheduled conferences).
3. Identify the problem's root causes, determine the steps needed for change, implement the improvement, and continuously chart progress appropriate to their time and training level.
4. Revise, adapt, or refine QI interventions as needed.

Program directors and faculty should:

1. Identify faculty members with training and experience in QI to serve as teachers and mentors to residents and other faculty members.
2. Identify hospital resources/personnel who can support resident and faculty QI skill development, support project alignment with system priorities, and identify opportunities to participate in institutional QI efforts.
3. Incorporate QI principles into assessments of the educational program, including the required Annual Program Evaluation.
4. Plan for an approach that allows for meaningful involvement of all residents in some QI activities and model "improvement" processes using resident involvement in QI (eg, soliciting feedback from residents/faculty, selecting criteria for QI projects to overcome resident-related training barriers).
5. Document QI projects and training in the educational curriculum for program site visits and institutional Clinical Learning Environment Review (CLER) visits.

learning and development of QI projects; and (4) a sustainable system to keep track of resident-initiated projects.[6]

Additional drivers include:

1. Residents do participate in QI projects that address problems in their clinical or learning environment, leading to safer, more effective patient care, and improving the quality of their education.

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2. Real QI learning occurs during implementation, from adapting initial solutions to real life context.

3. Resident interest in projects leads to a stronger commitment to ensure completion. Change can come from the bottom—residents can successfully initiate and lead projects, but need basic QI knowledge with sustainability increased through faculty and QI leader involvement.

4. Program/department leaders must support resident-initiated and system-aligned QI to ensure projects are followed through to completion.

5. Select "multi-generational" projects and facilitate junior resident involvement to overcome scope and scale limitations created by time constraints and rotational schedules.

6. Programs need to ensure a system for tracking improvement facilitated through resident QI projects to ensure sustainability of projects, and to create a record of improvement.

A Comprehensive Approach

Encouraging and sustaining active resident involvement in QI requires a multifaceted approach than lectures and/or resident participation in limited short-term QI projects. Key components of an integrated approach include use of dedicated preceptors to teach QI concepts and tools, including root cause analysis, control charts,[7] and use of key resources such as the QI curricular materials and modules available from the Institute of Healthcare Improvement (IHI) Open School,[8] the Association of American Medical Colleges Teaching for Quality report,[9] or the Michigan Quality System.[10] To apply these principles, residents must be guided though a step-wise QI process: (1) define a problem, (2) identify the stakeholders and align with health care system priorities, (3) perform a root cause analysis to find the source(s) of the problem, (4) devise potential interventions, (5) select the approach most likely to have the best outcome, and (6) implement the intervention and evaluate the impact. For most programs, faculty will need to develop their own knowledge and skills in QI methodology to enhance their capacity to facilitate and guide resident QI projects.

The ideal approach to engage residents in QI capitalizes on their knowledge about quality problems they encounter in their daily practice. Residents' use of these principles to identify gaps in quality and devise methods to correct these inefficiencies ensures they learn about QI in a way that will allow them to apply and teach these principles. Successful implementation of QI curricula requires attending to local contexts, including those centered on learners, faculty, and the institutional setting.[4]

To increase the impact of resident-activated QI projects, align projects with hospital and health system improvement priorities, resulting in larger projects that also teach residents to work as members of a team made up of individuals with various skills.[6]

Conclusion

Residents should work on QI initiatives that are feasible, given their level of knowledge and busy schedule. Examples include improving patient handovers, addressing the efficiency of discharge summary submissions, improving lecture attendance punctuality, and ensuring that routine orders are always placed when appropriate (ie, incentive spirometers). Residents may also benefit from involvement in larger institutional QI efforts that mirror their QI engagement in their subsequent practice. Emphasizing opportunities for improvement that are relevant to the residents' regular workflow may improve buy-in and help cement application of QI concepts to be used in practice after completion of training.

Resources

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