The University of Vermont
LARNER COLLEGE OF MEDICINE

# Department of Medicine
# Resident Quality Improvement and Patient Safety Curriculum

## Logistical Information

| Residency Year | PGY1 | PGY2 | PGY3 |
|---|---|---|---|
| Format | Live, seminar-based format | Mentored, small group Quality Improvement project | Mentored, small group Root Cause Analysis and High Value Care Case |
| Days and Times | Wednesday afternoons (10 sessions) | Thursday afternoons (10 sessions) | Thursday afternoons (5 sessions for each experience) |
| Location | Varies | | |
| Director | Allen Repp, MD | | |
| Quality Scholar Mentor | Amanda G. Kennedy, PharmD, BCPS | | |
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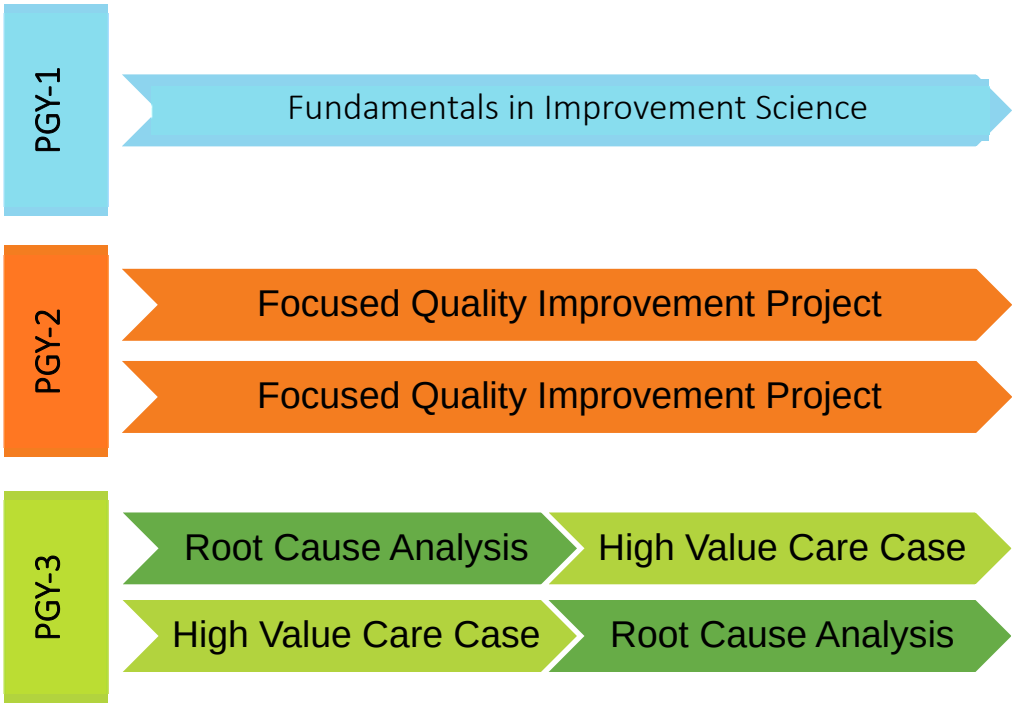
| Disclosures | None | | |

## Curriculum Overview



## Description

Quality Improvement (QI) is a clinical, academic and financial imperative for a safe and sustainable health care delivery system. The Department of Medicine Quality and Patient Safety Program seeks to deliver the highest value, patient-centered care and to advance the scholarship of quality and patient safety by supporting the following goals:

- Create infrastructure and resources within the department to support scholarly QI activities
- Develop faculty skills in QI methodology and cultivate a cadre of faculty experts in QI
- Enhance innovation and scholarly productivity in QI and high value care
- Align and promote collaboration in QI efforts across divisions

The Department of Medicine Quality Improvement (QI) and Patient Safety curriculum for residents is intended to prepare physicians to incorporate QI, patient safety, and high value care concepts into their current and future clinical care. The curriculum is divided across the three years of the residency program. The curriculum is taught as a small group seminar and as mentored, experiential learning. Residents work in small groups to learn fundamental concepts in QI, patient safety, and high value care, design and conduct projects that support these concepts, and present their work in local or regional venues.

## ACGME Internal Medicine Milestones

The Department of Medicine Quality Improvement (QI) and Patient Safety curriculum seeks to promote achievement of ready for unsupervised practice milestones and to promote progress towards aspirational milestones. Our curriculum specifically incorporates five of the ACMGE milestones.

ACGME Milestones

| Ready for unsupervised practice | Aspirational |
|---|---|
| **Recognizes system error and advocates for system improvement (SBP2)** | |
| • Identifies systemic causes of medical error and navigates them to provide safe patient care<br>• Advocates for safe patient care and optimal patient care systems<br>• Activates formal system resources to investigate and mitigate real or potential medical error<br>• Reflects upon and learns from own critical incidents that may lead to medical error | • Advocates for system leadership to formally engage in quality assurance and quality improvement activities<br>• Viewed as a leader in identifying and advocating for the prevention of medical error<br>• Teaches others regarding the importance of recognizing and mitigating system error |
| **Identifies forces that impact the cost of health care, and advocates for, and practices cost-effective care (SBP3)** | |
| • Consistently works to address patient specific barriers to cost-effective care<br>• Advocates for cost-conscious utilization of resources (i.e. emergency department visits, hospital readmissions)<br>• Incorporates cost-awareness principles into standard clinical judgments and decision-making, including screening tests | • Teaches patients and healthcare team members to recognize and address common barriers to cost-effective care and appropriate utilization of resources<br>• Actively participates in initiatives and care delivery models designed to overcome or mitigate barriers to cost-effective high quality care |
| **Transitions patients effectively within and across health delivery systems (SBP4)** | |
| • Appropriately utilizes available resources to coordinate care and ensures safe and effective patient care within and across delivery systems<br>• Proactively communicates with past and future care givers to ensure continuity of care | • Coordinates care within and across health delivery systems to optimize patient safety, increase efficiency and ensure high quality patient outcomes<br>• Anticipates needs of patient, caregivers and future care providers and takes appropriate steps to address those needs<br>• Role models and teaches effective transitions of care |
| **Monitors practice with a goal for improvement (PBLI1)** | |
| • Regularly self-reflects upon one's practice or performance and consistently acts upon those reflections to improve practice<br>• Recognizes suboptimal practice or performance as an opportunity for learning and self-improvement | • Regularly self-reflects and seeks external validation regarding this reflection to maximize practice improvement<br>• Actively engages in self-improvement efforts and reflects upon the experience |
| **Learns and improves via performance audit (PBLI2)** | |
| • Analyzes own clinical performance data and actively works to improve performance<br>• Actively engages in quality improvement initiatives<br>• Demonstrates the ability to apply common principles and techniques of quality improvement to improve care for a panel of patients | • Actively monitors clinical performance through various data sources<br>• Is able to lead a quality improvement project<br>• Utilizes common principles and techniques of quality improvement to continuously improve care for a panel of patients. |

## Definitions

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|---|---|
| **Choosing Wisely** | An initiative to promote conversations between clinicians and patients by helping patients choose care that is supported by evidence, not duplicative of other tests or procedures already received, free from harm, and truly necessary.[1] |
| **High-Value Care** | Improves health, avoids harms, and eliminates wasteful practices.[2] High-value care includes cost-conscious care and stewardship of resources, including avoiding the overuse and misuse of diagnostic tests and therapies that do not benefit patient care but add to healthcare costs.[3] |
| **Improvement Science** | A framework for research focused on healthcare improvement with the goal of ensuring that quality improvement efforts are based as much on evidence as the best practices they seek to implement[4,5] Healthcare improvement science is the generation of knowledge to cultivate change and deliver person-centered care that is safe, effective, efficient, equitable and timely. It improves patient outcomes, health system performance and population health.[6] |
| **Medical Error** | The failure of a planned action to be completed as intended or the use of a wrong plan to achieve an aim.[7] |
| **Patient Safety** | Freedom from accidental injury[7] |
| **Quadruple Aim** | Includes the Triple Aim of improving the patient experience of care (including quality and satisfaction), improving the health of populations, and reducing the per capita cost of health care plus the addition of the fourth aim of improving the work life of health care providers, including clinicians and staff.[8] |
| **Quality** | The degree to which health care services for individuals and populations increase the likelihood of desired outcomes and are consistent with current professional knowledge.[9] |
| **Quality Improvement** | Systematic and continuous actions that lead to measurable improvement in health care services and the health status of targeted patient groups.[10] |

[1] www.choosingwisely.org
[2] www.acponline.org/clinical-information/high-value-care
[3] Weinberger SE. Providing high-value, cost-conscious care: a critical seventh general competency for physicians. Ann Intern Med. 2011 Sep 20;155(6):386-8. PMID: 21930856
[4] https://isrn.net/
[5] Shojania KG1, Grimshaw JM. Evidence-based quality improvement: the state of the science. Health Aff (Millwood). 2005 Jan-Feb;24(1):138-50. PMID: 15647225
[6] Skela-Savič B, Macrae R, Lillo-Crespo M, Rooney KD. The development of a consensus definition for healthcare improvement science (HIS) in seven European countries: A consensus methods approach. Zdr Varst. 2017 Feb 26;56(2):82-90. PMID: 28289467
[7] Kohn, L. T., et al. (2000). To err is human : building a safer health system. Washington, D.C., National Academy Press.
[8] Bodenheimer T, Sinsky C. From triple to quadruple aim: care of the patient requires care of the provider. Ann Fam Med. 2014 Nov-Dec;12(6):573-6. PMID: 25384822
[9] Institute of Medicine (U.S.). Committee on Quality of Health Care in America. (2001). Crossing the quality chasm : a new health system for the 21st century. Washington, D.C., National Academy Press.
[10] https://www.hrsa.gov/quality/toolbox/methodology/qualityimprovement/

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|---|---|
| **Root Cause Analysis** | A structured method used to analyze serious adverse events. A central tenet of RCA is to identify underlying problems that increase the likelihood of errors while avoiding the trap of focusing on mistakes by individuals.[11] |
| **Safety Culture** | Maintaining a commitment to safety at all levels, from frontline providers to managers and executives.[11] |
| **Systems Approach** | Takes the view that most errors reflect predictable human failings in the context of poorly designed systems.[11] |
| **Triple Aim** | A framework developed by the Institute for Healthcare Improvement (IHI) that describes an approach to optimizing health system performance, including improving the patient experience of care (including quality and satisfaction), improving the health of populations, and reducing the per capita cost of health care.[12] |

## Helpful Resources

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| Agency for Healthcare Research and Quality (AHRQ) Patient Safety Network (PSNet) | psnet.ahrq.gov |
| American College of Physicians (ACP) High-Value Care | www.acponline.org/clinical-information/high-value-care |
| Choosing Wisely | www.choosingwisely.org |
| Institute for Healthcare Improvement (IHI) | www.ihi.org |
| Revised Standards for Quality Improvement Reporting Excellence: SQUIRE 2.0 | www.squire-statement.org |

[11] https://psnet.ahrq.gov/primers
[12] http://www.ihi.org

## Expectations

Residents are expected to attend educational sessions, prepare their projects, and participate in quality improvement and patient safety experiences. Residents are expected to actively participate in all discussions, projects, and experiences.

PGY1 Fundamentals in Improvement Science

Residents will actively participate in ten educational sessions over the course of the PGY1 year to gain an exposure to Quality Improvement and Patient Safety concepts.

PGY2 Quality Improvement Projects

Residents will work in small groups to design and complete an original quality improvement project over the course of the PGY2 year. The topic of the project will be selected by the small group and Faculty Mentor. The final project will be suitable for submission as a poster to the University of Vermont Medical Center (UVMMC) Quality Forum, or similar venue.

PGY3 Patient Safety Experiences: Root Cause Analysis and High Value Care

Residents will complete two patient safety experiences over the course of the PGY3 year. One experience will include completing a Root Cause Analysis case. The second experience will include evaluating a High-Value Care case. Residents will complete these experiences as part of a small group. The topic of the experiences will be selected by the small group and Faculty Mentor. The final experiences will be suitable for teaching and/or presenting to a local or regional audience.

## Curriculum Evaluation

Residents are expected to complete an evaluation of each year of the curriculum at its conclusion. The information gained, including constructive criticisms, will be used to improve the curriculum. De-identified results may be published in an effort to share best practices and lessons learned beyond UVMMC.

## Institutional Review Board (IRB)

Some projects in the PGY2 and/or PGY3 year may require approval by the UVM IRB and/or Jeffords Institute for Quality. Residents may be required by the IRB to complete the Human Subjects training described on the IRB website: http://www.uvm.edu/irb. Residents are encouraged to complete this training during their PGY1 year to avoid delays in the PGY2 and/or PGY3 years.

## Scholarship

It is expected that residents in their PGY2 and PGY3 years demonstrate evidence of scholarship as part of their quality improvement and patient safety curriculum. Scholarship includes documentation of productivity, such as through poster and oral presentations. There is no expectation that residents submit peer-reviewed publications or grants related to this curriculum. Faculty Mentors who wish to pursue peer-reviewed publications based on the residents' projects are expected to follow established criteria for authorship (http://www.icmje.org).

## Academic Integrity

Plagiarism, fabrication, collusion, or cheating of any kind will not be tolerated. Any suspected violations will be reported as appropriate. For a review and definitions associated with Academic Integrity, please see the University of Vermont's Academic Integrity policy: http://www.uvm.edu/~uvmppg/ppg/student/acadintegrity.pdf