

Department of Internal Medicine

GME Patient Safety and Quality Improvement Learning Program

Project Experience for 2nd year residents

Syllabus

Program Purpose

The second year program builds upon previous general patient safety and quality improvement (PS/QI) teachings in the first year of residency. This project experience immerses you in a real-world, structured problem solving situation so that you can learn additional PS/QI tools and develop your problem solving skills. The experience is designed to support you in your daily work and as prepare you for your clinical, academic, or research career.

Throughout the month we will focus education and experiential learning around PS/QI to answer this essential question: *How can physicians contribute to high quality and safe patient care?*

Learning Objectives

Patient Safety

Identify commonly occurring patient safety events/concerns to investigate as potential topics for the HO2 project rotation.	Routinely identify patient safety events and report.	Conduct a root cause analysis on the problem.	Routinely work with attending physicians to disclose patient safety events to patients and families.
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Quality Improvement

Articulate the importance and relevance of participating in quality improvement activities.	Identify a patient safety or quality problem that can be improved at a system-level, and develop a clear problem statement.	Engage effectively with relevant stakeholders and interprofessional team members to understand the current state situation.	Recommend and prioritize changes for improvement, and develop a plan for implementation.	Identify appropriate measures and demonstrate how to use data to understand the baseline situation and measure improvement.	Document their structured problem-solving efforts in an A3 format.
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M-Box

All course documents are available on the M-Box at this location:

https://umich.box.com/files/0/f/11867646521/PSIP?utm_source=trans&utm_medium=email&utm_campaign=collab%2Bauto%20accept%20user

Resident Expectations

You are expected to spend a minimum of four (4) half days per week dedicated to the patient safety/quality improvement group project. In addition, attendance at ambulatory morning report is expected every day during this month.

It is expected that you will be working on your project during these days and that you will be in town and on-page during the days that are allocated for the project.

All members of the group are expected to be active participants in the project and to be present during the presentation at the designated lunchtime conference.

Standard times (Monday morning, Tuesday morning and all day Friday) have been established for group meetings but meetings may occur outside these standard times. In the event there are conflicts with anyone's continuity clinic, the faculty mentor will work with you to accommodate meeting times. Conference rooms have been reserved for your group work during the standard times. A calendar with meeting locations can be found on the M-Box.

Faculty Facilitator

A faculty facilitator will be assigned to help direct your group. Your mentor will be meeting with you and helping guide you throughout the process.

Performance Improvement Team Member

A member of the Performance Improvement team for the Department of Internal Medicine will also join your group to provide resources and guidance on PS/QI methods and tools, project ideas, scope and feasibility. Team members are trained in problem solving, quality improvement and data analysis.

Additional Participants

In some cases, there will also be other clinicians or students joining the group. They are participating in order to gain experience with patient safety projects and should be integrated as an equal member of the group.

Program Evaluation

We strive to continually improve the patient safety/quality improvement program. You are asked to take a 5-minute post-assessment survey in the last week of this rotation.

https://umichumhs.qualtrics.com/jfe/form/SV_01g8k1Lg2sG7Lzn

Project Ideas/Selection

During your PS/QI project, you will be asked to examine a current problem and propose possible countermeasures while utilizing a variety of problem solving methods. It is not required that you implement a solution during the month. But of course if you are able to, that is a bonus!

Example problem statements from past patient safety projects:

"When University of Michigan Oncology patients who are being actively treated are admitted to resident services, there is variable communication between primary inpatient team and primary oncologist regarding patient care"

"In patients who are admitted to UMHS, telemetry is both started and continued inappropriately based on institutional guidelines, compared with a goal of 100% compliance."

Reference Module 1 for more helpful information on selecting a project idea.

Course Outline

A document that outlines weekly topics, expectations and what deliverable items are required by the end of the month is available to offer further guidance.

Course Content

Online content to help you become familiar with key tools in PS/QI is available on M-Box. The four content modules correspond to each week of this program. The content provides information on tools you can use to analyze an issue, identify appropriate interventions and when possible, implement and study these interventions. Please review each week's module prior to the beginning of the week as the PS/QI tools will be discussed in greater detail as needed during the weekly meetings.

Deliverables

We expect each group to have one deliverables that will be turned in at the end of the month, which is the A3 problem solving document. Your group will create an A3 document to that is used to communicate your group's work. We encourage you to use the A3 as a "living document" that is completed and revised in real time as the project progresses. Example A3s and a template A3 are available for your reference on the M-Box. You will present this document at the noon conference time as your final project product.

Your A3 will be evaluated by the faculty mentor and performance improvement team member using a standard rubric. The criteria will be shared with you at the beginning of the month. You will receive copies of this evaluation. The evaluation is for learning purposes and to further your A3 skills.

Additional Opportunities

Additional opportunities in PS/QI beyond this month may be available. Opportunities for this project can include: 1) publication or poster submission; 2) involvement in existing committee or project related to this work; and/or 3) continuation of this project to test interventions (with an identified faculty sponsor).

Opportunities in quality improvement can include involvement in a QI project or committee and HOQSC projects. If you are interested, please let your Faculty Facilitator or Performance Improvement Consultant know and they will provide further information.

Scholarship

While dissemination at conferences is **not** expected, scholarship of any kind (abstracts, manuscripts, poster presentations, oral presentations) is encouraged. An example poster for a national conference that was born out of a prior group's project is available for reference.

References for publishing QI work:

- Internal Medicine Quality Program – Scholarly Work resources
<https://medicine.umich.edu/dept/intmed/patient-care/quality-innovation/scholarly-activity>
- SQUIRE 2.0 guidelines
<http://www.squire-statement.org/index.cfm?fuseaction=Page.ViewPage&PageID=471>
- BMJ Quality and Safety
<http://qir.bmj.com/content/current>
- Michigan Medicine Quality Department - Presenting/Publishing QI
<http://ocpd.med.umich.edu/moc-qi/presenting-publishing-qi>

Research and Quality Improvement

Research and Quality Improvement are complimentary. A well-designed quality improvement project should bring together knowledge – from within the team, from outside the team, and from the evidence base (where it has been shown in pure science that a particular intervention has efficacy).

	Quality Improvement “Applied / Implementation Science”	Academic Research “Pure Science”
Generate new knowledge	Test interventions in the real-world setting, making adaptations if necessary, and understanding how to implement them across a variety of settings.	Understand what works (efficacy), often by comparing an intervention against a control or placebo.
Uses scientific method	Uses the PDSA (Plan-Do-Study-Act) cycle for hypothesis testing. Recognizes that improvement is complex, with multiple variables involved that cannot always be controlled or held constant.	Studies control for confounding factors and biases that might influence the outcome.
Test a Hypothesis	The hypotheses is modified as we gain new knowledge.	A null hypothesis is established and does not get modified during the course of the study
Data-driven conclusions	Can show a relationship between an intervention and an outcome, but cannot necessarily demonstrate a definitive causal link.	Can be more definitive about making cause-and-effect linkages, demonstrating which interventions have evidence to justify their use.

IRB Approval <http://eresearch.umich.edu>

While not required, we encourage you to request an IRB exemption for this project. Obtaining this exemption ahead of time will make it easier if you decide to publish or submit a poster.

There are 3 types of IRB approval:

- Self-determination - informal. If you determine that your project is “QI” you can do the project without any eResearch application to IRBMED. Note: this may or may not be accepted to journals.
- Self-determination - semi-formal. Fill out an abbreviated eResearch application, “Activities Not Regulated...” application type, and get a “Self-determination” letter.
- IRB determination. Fill out an abbreviated eResearch application, “Activities Not Regulated...” application type, submit it to IRBMED, and receive a formal “Not Regulated” determination. This often involves a clarification request from an IRB representative.

IRB "NOT REGULATED" STATUS:

Based on the information provided, the proposed study does not fit the definition of human subjects research requiring IRB approval (per 45 CFR 46, 21 CFR 56 and UM policy). Although the results of your project may be published, program evaluations, self-assessment of programs or business practices, and other quality improvement projects do not require IRB review because in these cases, it is the activities rather than humans subjects that are the objects of the study.

File Sharing

It can be helpful to set up a shared Google drive or M-Box so that team members can easily edit and access working documents. However, remember that PHI data cannot be stored on a Google drive. The M-Box Login is: <http://www.itcs.umich.edu/storage/box/>

Qualtrics Survey Software

Qualtrics survey software is available to you to conduct surveys as needed. It is free and easy to use. Do not pay for Survey Monkey! Qualtrics is a familiar format at the hospital and the recognized standard. It is PHI compliant for QI projects. Follow the link to log in, create a new user name and build a survey: <https://umichumhs.qualtrics.com>

Process Mapping Tool

LucidChart is an online tool for drawing process maps. www.lucidchart.com (You can also use Word, Excel or PowerPoint.) You can sign up for a free LucidChart account with your educational email address:

- Click your name in the top right and navigate to "Account Settings"
- Click "Get a Free Educational Upgrade" in the bottom left navigation.
- Receive your confirmation email, click the link, and you're in!

References

Web:

- Michigan Quality System at UMHS: www.med.umich.edu/mqs
- UMHS MQS Virtual Lean Resource Center (internal UMHS only): www.med.umich.edu/i/quality/tools/lean_assist.html
- Lean Enterprise Institute: www.lean.org
- Lean Transformation Model video (John Shook, "House video") www.lean.org/common/display/?o=2763
- Lean Healthcare Value Leaders Network: www.createvalue.org/networks/healthcare-value-network
- AMA StepsForward module: Intro to lean in office practice: www.stepsforward.org/modules/lean-health-care
- IHI. *Going Lean in Health Care* www.ihl.org/IHI/Results/WhitePapers/GoingLeaninHealthCare
- Kaplan: Lean Health Care: Safety, Quality, Cost: www.iom.edu/Global/Perspectives/2012/LeanApproach.aspx
- Improving Care Delivery Through Lean: Implementation Case Studies: Google "AHRQ 13(15)-0056"
<http://www.ahrq.gov/professionals/systems/system/systemdesign/leancasestudies>
- Lean Links: https://docs.google.com/document/d/14IF_0XJev5XgvdvJYHEDTMWBRz7PIJMtenaor72kt-0/edit

Books:

- Womack, Jones. *Lean Thinking*. (An overview)
- Liker, Meier, Hoseus, Convis. *Toyota Way; Toyota Way Fieldbook; Toyota Culture; Toyota Leadership*
- Shook. *Managing to Learn*. (Best book on leadership in a lean organization and A3 use)
- Sobek, Smalley. *Understanding A3 Thinking*. (Problem solving and detailed A3 guide)
- Dennis. *Getting the Right Things Done*. (Strategy deployment or *hoshin planning*)
- Rother, Shook. *Learning to See*. (Value stream mapping)
- Albanese, Aaby, Platchek. *Advanced Lean in Healthcare* (Stanford Packard Children's journey)
- Graban. *Healthcare Kaizen; Lean Hospitals*. (Applies Lean principles to health examples)
- Toussaint, Gerard. *On the Mend; Potent Medicine* (ThedaCare's lean journey); *Management on the Mend*
- Barnas, Adams. *Beyond Heroes*. (ThedaCare's management system)
- Kenney. *Transforming Health Care*. (Virginia Mason's lean journey)
- Wellman, Hagan, Jeffries. *Leading the Lean Healthcare Journey*. (Seattle Children's journey)
- Worth, Shuker, Keyte. *Perfecting Patient Journeys*. (value stream approach)
- Martin. *The Outstanding Organization*. (build clarity, focus, discipline, engagement in your organization)
- Spear. *The High Velocity Edge*. (operational excellence examples across industry and healthcare)

Articles:

- Collar, et al. Lean Management in Academic Surgery. *J Am Coll Surg*. 2012;241:928.
- Early ICU Mobility: uminsideview.org/2271/moving-toward-a-culture-of-mobility/

- Kim, Spahlinger, Kin, Coffey, Billi. *Implementation of Lean Thinking: One Health System's Journey*. Joint Commission J Quality and Safety 2009;35:406.
- Bush. *Reducing Waste in the US Healthcare System*. JAMA 2007;297:871.
- Spear. (all Harvard Business Review) *Fixing Health Care from the Inside, Today* (9/05); *Learning to Lead at Toyota*. (4/04); *Decoding the DNA of Toyota Production System*. (9/99)