Scholarly Concentration: Quality Improvement

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Objectives and Goals
Quality Improvement is an application area in the Scholarly Concentration program. The goals of our program are to expose students to the primary issues in the field of Quality Improvement, and give them the tools to begin addressing these through hands-on field research. Some specific goals include:

1. Expose students to quality improvement methodology
2. Engage students in quality improvement projects as a part of their medical education
3. Promote excellence in the areas of hospital metric data analysis and implementation science
4. Prepare students to deliver safe and high-value care in the future
5. Promote scholarship in QI

Coursework
Students who pursue Quality Improvement must take (a) 6 units of Foundation coursework and (b) 6 units of Quality Improvement (Application coursework). We recommend the following courses to satisfy the 6 units for the QI Application coursework:

**HRP 254: Quality & Safety in U.S. Healthcare.**
The course will provide an in-depth examination of the quality & patient safety movement in the US healthcare system, the array of quality measurement techniques and issues, and perspectives of quality and safety improvement efforts under the current policy landscape.
Units: 3

**EDUC 291X: Introduction to Survey Research (EDUC 191X)**
Planning tasks, including problem formulation, study design, questionnaire and interview design, pretesting, sampling, interviewer training, and field management. Epistemological and ethical perspectives. Issues of design, refinement, and ethics in research that crosses boundaries of nationality, class, gender, language, and ethnicity.
Units: 3-4
HRP 225: Design and Conduct of Clinical and Epidemiologic Studies
Intermediate-level. The skills to design, carry out, and interpret epidemiologic studies, particularly of chronic diseases. Topics: epidemiologic concepts, sources of data, cohort studies, case-control studies, cross-sectional studies, sampling, estimating sample size, questionnaire design, and the effects of measurement error. Prerequisite: A basic/introductory course in statistics or consent of instructor.
Units: 3-4

HRP 218/CHPR 212/MED 212: Methods for Health Care Delivery Innovation, Implementation and Evaluation.
Focus is on implementation science and evaluation of health care delivery innovations. Topics include implementation science theory, frameworks, and measurement principles; qualitative and quantitative approaches to designing and evaluating new health care models; hybrid design trials that simultaneously evaluate implementation and effectiveness; distinction between quality improvement and research, and implications for regulatory requirements and publication; and grant-writing strategies for implementation science and evaluation. Students will develop a mock (or actual) grant proposal to conduct a needs assessment or evaluate a Stanford/VA/community intervention, incorporating concepts, frameworks, and methods discussed in class.
Units: 2

HRP 244: Developing Measurement Tools for Health Research.
The focus of this course is on providing the skills necessary to develop, validate and administer both qualitative and quantitative measures and instruments. Topics will include creating valid measures, ensuring the measures used address and apply to the research questions, design and samples; determining when to use standardized measures or develop new ones; instrument validation techniques; factor analysis; and survey administration, including determining the most effective way of administering measures (e.g., online, paper-and-pencil, ACASI) and the best way to design the survey.
Units: 2

SOMGEN 275: Leading Value Improvement in Health Care Delivery
Successful leaders on the journey to better care delivery methods with lower total spending inevitably face pivotal crises. What confluence of attitude, strategy, and events allows them to prevail? Contexts will include entrepreneurship and early stage investing, spread of higher value care delivery innovations, health care delivery system management, and private and public policy making to reward value. Guest faculty will include nationally recognized leaders and change agents, who will invite students to recommend alternative approaches to managing pivotal challenges. The course is open to any member of the Stanford community aspiring to lead higher value in health care delivery including graduate students, undergraduates, and postdoctoral candidates, as well as medical center residents and clinical fellows. May be repeated for credit.
Units: 1-2

This innovative course for first year medical students places patients front and center in the journey to explore health from the patient’s perspective, and better understand the challenges of managing optimal health in a complex health care system. In a unique 3-part monthly workshop format, students will learn about national, state, and local perspectives from experts from Stanford and the community and explore the broad impact of the monthly topic on patient care.
and health. In the second part of the workshop, students will learn about the patient/family perspective from a patient/family, with time to engage in discussion. Students will then actively engage in a workshop activity based on real-world examples of the impact of the monthly topic, and establish a framework for clinical exploration. Outside the monthly seminar session, students are matched with a patient/family partner for the duration of the course, and meet on a monthly basis at the medical center or other location key to learning about the patient’s journey, and explore together the impact of the monthly topic at the individual level. This course is a partnership of the Stanford Healthcare Innovations and Experiential Learning Directive (SHIELD), the Stanford Health Care Patient & Family Partner Program, and the Stanford Medicine Office for Medical Student Wellness.

Units: 3

**Experiential Component**
- Complete basic QI modules in the Institute of Health Improvement Open School curriculum
- Completion of Stanford student QI interest group (QIIG) curriculum
- Participation in Stanford student QIIG
- Participate in hospital quality meetings
- Attend resident and hospital QI symposiums

**Scholarly Project**, to be completed in one of the following ways:
- Resident or faculty-driven QI project
- Hospital or department QI project
- Participation in the SHIELD program