New York University, Robert F. Wager Graduate School of Public Service  
EXEC-GP.2811: Continuous Quality Improvement for Healthcare Leaders  
Course Syllabus

Course Description
One of the major challenges in healthcare is translating evidence and standards of care into practice, in order to improve the quality and satisfaction of care. The overall aim of this course is to learn how to systematically solve problems and implement change within complex healthcare settings. In addition to learning how to apply quality improvement tools, students will also examine how to create an environment that fosters learning and innovation. Upon completion of the course, students will be equipped with a toolkit of resources that they can directly apply to improve the overall patient experience.

Learning Objectives
At the successful completion of this course, students will be able to:
• Explain the components of a culture of safety
• Describe how to leverage teamwork to solve problems
• Articulate the differences between quality improvement, research, and compliance
• Use flowcharts to map out processes and identify inefficiencies and problem points
• Identify and prioritize barriers to implementing evidence-based guidelines
• Define examples of process, outcome, structural, and balance measures for a given process
• Identify and explain types of variation (common cause versus special cause)
• Collect, display, and analyze improvement data in a meaningful way
• Brainstorm improvement interventions and prioritize them based on impact and feasibility
• Apply an iterative approach to testing changes
• Develop an accountability plan to ensure sustainability of an improvement
• Understand the components of a high reliability organization
• Explain the relationship between service excellent and quality of care
• Describe how the cost of care impacts quality

Learning Methods
Learning and applying the CQI process will be facilitated with the following methods:

• Case studies and readings: Students will be expected to read all assigned case studies and readings prior to class, in order to engage in meaningful class discussions.
• IHI Open School for Health Professions online courses: these interactive courses will provide a foundation in the key quality and safety subject matter. Online courses must be completed prior to class, and two to three students will be assigned to report-out on specific topics from the courses throughout the semester. Upon completion of the 16 required courses, students will receive the IHI Open School Basic Certificate of Completion.
• Team Improvement Project: Students will form teams of 3-5 students to simulate an improvement project based on experiences and data from actual healthcare settings. Throughout the semester, the teams will apply the improvement tools that will be introduced in the course, in order to obtain first-hand experience with these tools.
**Readings**

Required Text:

All other required journal articles and cases will be posted on NYU Classes.

**Brief Course Outline**

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Detailed Course Outline

Session 1: Framework for Continuous Quality Improvement (CQI) in Healthcare

Guiding question: What is CQI and why is it needed in healthcare?

- Historical context of quality improvement
- Rationale for quality improvement in healthcare
- Overview of the Model for Improvement, as an overarching strategy for improvement
- The process knowledge spectrum

Readings:
- Course Text: Chapter 1

Session 2: Teaming for Improvement

Guiding question: What differentiates a high-performing improvement team from other teams and what tools can be used to achieve this?

- Roles of members on a team
- Application of teaming tools: executive charter, team charter
- Cognitive barriers to teaming
- Framing expectations

Readings:
- Course Text: Chapters 2-3

Session 3: Culture of Safety

Guiding question: How can healthcare workers learn from errors, and what culture must be present, in order to make this process meaningful?

- Speaking-up behaviors
- Psychological safety
- Learning from failures
- Event reporting

Readings:
- Course Text: Chapters 4-5
- Case 1: Culture of Safety
Session 4: Defining the Process
Guiding question: What tools can be used to visualize the current state of a process and how can these tools then be used to identify problems in the process?
- Flowchart basics (symbols, nomenclature, types)
- Common types of waste in a process (LEAN)
- Service blueprinting
Readings:

Session 5: Defining the Problem
Guiding question: How can you systematically determine the contributing factors to a problem?
- Overview of Barrier Identification and Mitigation tool
- Root Cause Analysis
Readings:
- Case 2: Root Cause Analysis

Session 6: Establishing Measures
Guiding question: How do you choose the most appropriate metrics to monitor improvement efforts?
- Process, outcome, structural, and balance measures
- Using logic models to determine appropriate measures
- Data dictionaries
Readings:

Session 7: Measuring the Effect of Changes
Guiding question: How can you use data to show whether an improvement has been achieved?
- Statistical process control basics
- Run charts: how to build and interpret
- Displaying data
Readings:
- NHS Improvement-Statistical Process Control (online link)
- Case 3: Quality Measurement
Session 8: Selecting Changes
Guiding question: What changes are most likely to have the greatest impact and be feasible?

• Hierarchy of changes (greatest to least impact)
• Integrating behavioral science
• Leveraging information technology
• Clinical decision support

Readings:

Session 9: Testing and Implementing Changes
Guiding question: How can you rapidly and effectively implement change?

• Elements of PDSA cycles (iterative cycles, hypothesis testing, using data, small test of change, documentation)

Readings:

Session 10: Sustaining and Spreading Changes
Guiding question: What is necessary in order for change to be sustained and/or spread to other settings?

• The Collaborative Model
• Accountability plans

Readings:
• Case 4: Collaborative Model

Session 11: High Reliability Organizations
Guiding question: What can be learned from other industries on how to sustain exceptional performance?

Readings:
• Course Text: Chapters 6-7
**Session 12: Service Excellence**

*Guiding question: What role does service and patient satisfaction have in delivering high-quality patient care?*

- Patient satisfaction
- Service recovery

**Readings:**

- Case 5: Service Recovery

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**Session 13: Value in Healthcare**

*Guiding question: What role does the cost of care play in quality improvement efforts?*

- The business case for quality improvement
- Value-Based Purchasing
- Meaningful Use

**Readings:**


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**Session 14: Final Presentations**
Course Grading and Requirements

Class Participation – 10%
Class participation and discussion is required. To facilitate discussions, students will be assigned specific content to prepare (e.g., discussion questions, insights from IHI Open School Courses).

Case Study Discussion – 10%
Each team will lead the discussion of one case study by providing an overview of the issues in the case and then facilitating discussion on how the issues could be resolved, using the improvement strategies learned in this course. (Note: a formal PowerPoint presentation is not required; instead, teams will be graded on how well they engage the class in a discussion that applies the principles learned throughout the course.)

IHI Open School Courses – 24%
Each online course that is completed prior to the assigned class is worth 1.5% of your final grade (total of 16 courses).

Improvement Project Simulation – 56%
At the beginning of the course, students will form teams of 3-5 students. Using the experience from one or more of the team members, each team will choose a specific problem to focus on, related to a failure to adhering to an evidence-based practice or guideline. Ideally, the team should have access to real data related to this problem, or else data should be relatively easy to collect. As various tools are introduced throughout the course, the teams will apply these tools to this problem, as a way to obtain first-hand experience with a systematic improvement process.

- Team Charter (5%)
- Problem Statement and Process Flowchart (10%)
- Baseline Run Chart (6%)
- Barrier Identification and Mitigation Tool (15%)
- MFI Questions and PDSA Worksheet (10%)
- Final Presentation (10%)