



**NYU**

**ROBERT F. WAGNER GRADUATE  
SCHOOL OF PUBLIC SERVICE**

# **HPAM-GP 2825**

## **Continuous Quality Improvement (CQI)**

### **Spring 2022**

#### **Instructor Information**

Hillary Jalon, MS

- Email: [hsj4@nyu.edu](mailto:hsj4@nyu.edu) (Please allow 24 hours for response)
- Office Hours: Email for Appointment

#### **Class Schedule**

- Live Session Meeting Times: Wednesdays, 6:45-8:25pm, from Wednesday, January 26, 2022 to Wednesday, May 4, 2022

Live Session Location: Bldg: BOBS Room: LL141 Location: Washington Square

Please make note of the following, given current circumstances of the COVID-19 pandemic:

- For students that need to be out of class, relevant materials will be shared on NYU Brightspace. Please contact Hillary Jalon at [hsj4@nyu.edu](mailto:hsj4@nyu.edu) if you will be out of class.
- If the CQI course needs to be offered entirely online for a particular class meeting, we will meet together at the usual class time (6:45 to 8:25pm) using Zoom. I will email you advance notice of the Zoom link for the particular class, if we need to shift to online instruction.
- If you must be out of class due to the pandemic, I am planning to record the classes and will make them available in NYU Brightspace.
- Students who have not had an exposure to COVID-19 should make every effort to attend the in-person class. There are a large number of team-oriented discussions and

assignments in class; teaching it in a hybrid manner will not be as beneficial for the student's learning and engagement in the course content.

## Course Prerequisites

- CORE-GP.1011, Statistical Methods for Public, Non-Profit, and Health Management
- HPAM-GP.4833, Health Care Management 1: Control and Organizational Design
- Computer proficiency
- Students lacking the prerequisites must obtain permission to enroll in this course
- Required for health management specialization students.

## Introduction

This course will provide students with an introduction to the tools and methods used to produce effective changes in improving healthcare quality, with specific emphasis on using proactive quality improvement (QI) approaches, as opposed to reactive quality assurance, within healthcare systems. We will explore the current policy and practice environments driving the focus on quality, value, and cost. We will discuss quality broadly, as defined by the Institute of Medicine groundbreaking reports, *To Err is Human* and *Crossing the Quality Chasm*. Students will engage in how to initiate QI efforts, mostly using the Institute for Healthcare Improvement's (IHI) Model for Improvement, including how to develop QI projects, using initial small tests of change, and eventually leading to widespread, sustainable change within a healthcare organization. We will study how to initiate strategies to engage key stakeholders, use measurement and data, and communication effectively to achieve change. **Much of what will be learned will be geared toward a hospital system perspective in quality improvement.**

## Course and Learning Objectives

At the successful completion of this course, students will be able to:

1. Understand the historical evolution of healthcare quality improvement
2. Apply a systematic method of improving a process using a team-based approach
3. Plan for the eventual sustainability and spread of an improvement effort

This course also addresses Core Competencies recommended by the Commission on Accreditation for Health Management Education (CAHME) which include:

1. The ability to measure, monitor and improve safety, quality, access and system/care delivery processes in healthcare organizations (**Individual Assignment #1: Article Review and Team Assignment #3: Aim Statement and Plan-Do-Study-Act Worksheet**)
2. The ability to use information systems and evidence-based management principles for problem-solving, strategic planning and decision-making, and implementing and measuring change. (**Team Assignment #2: Selection and Use of Quality Improvement Tool for Problem Analysis**)
3. The ability to synthesize evidence, and apply statistical, financial, economic and cost effectiveness tools/techniques in organizational analysis. (**Team Assignment #4: Run and Control Charts**)

4. The ability to present convincingly to individuals and groups the evidence to support a point of view, position or recommendation. (**Individual Assignment #5: Read and Review of Article** and **Team Final Project Presentation Assignment**)
5. The ability to manage teams, projects and people; to work in change-oriented health care organizations; and mentor a diverse and changing workforce. (**Team Final Project Presentation Assignment**)

## Level of Competency

In addition, the level of competency expected to be achieved is denoted, according to the following key:

[1] = Basic: Foundational understanding of knowledge/skill/competency

[2] = Intermediate: Student demonstrates greater depth of understanding of this knowledge/skill/competency and can use this ability to analyze a problem

[3] = Advanced: Student demonstrates expertise in this knowledge/skill/competency and can use this ability to evaluate, judge, and synthesize information

## Learning Assessment Table

Program Competency	Corresponding Course Learning Objective	Corresponding Assignment Title (Memo, Team Paper, Exam, etc.)	Denote Level of Competency Expected to Achieve via the Assignment (basic = 1, intermediate = 2, advanced = 3)
#1	Objectives 1 and 2	Individual Assignment #1, Team Assignment #3	1
#2	Objective 2	Team Assignment #2	1
#3	Objective 2	Team Assignment #4	1
#4	Objectives 2 and 3	Individual Assignment #5, Team Final Project Presentation	2
#5	Objectives 2 and 3	Team Final Project Presentation	2

## Learning Strategies

This course is based on:

1. Discussion of current events and the common themes emerging that are affecting the delivery of healthcare services.
2. "Learning by doing," i.e., applying methods learned in class to quality improvement assignments.
3. Problem analysis provides the student the opportunity to think, read, write, and present ideas logically in an organized manner. Emphasis will be placed on oral and written communication and working in teams.

In this course, students will take on the role of a team in a specific department or service in a healthcare organization. Students will use quality improvement tools and techniques, diagnose problems, and develop innovative, practical solutions to address a process needing improvement. Assignments are geared toward analyzing a specific process or processes producing a less than optimum outcome, identifying the data required to analyze the problem, and using specific QI tools and techniques for innovative solutions. Finally, students will work on the additional tasks required to make a solution sustainable, or spread across an organization.

## Teams

**Working in teams is a critical aspect in all QI work.** This is something that will be reinforced throughout the duration of this course. Students will be grouped into teams of 4-7 members (depending on class size) during the second session of this course, and will work together throughout the semester on a QI topic of their choice. Students will investigate a process that needs improvement, either real or hypothetical. The process you choose should be meaningful so that recommended changes can be adapted. You must be able to collect data (concurrently or retrospectively) about the process over time, so be sure to choose a process that is well-defined and lends itself to measurement. I recognize that not all students work, so I will help these teams problem-solve hypothetical healthcare problems/issues they could work on.

## Institute for Healthcare Improvement (IHI) Open School

This course will integrate with the IHI Open School for Health Professions, an online school for helping students learn about quality improvement and patient safety competencies. (See more below).

## Course Expectations

- Attend classes, and attend them on time.
- Thoroughly review all assigned materials prior to class.
- Actively participate in the discussions and exercises.
- Actively engage and work with team members to complete assignments.
- Complete assignments on time.

Please discuss with me as soon as possible should you foresee difficulty in adhering to any course expectation. **All class absences must be excused in advance. Extensions for assignment completion are granted on an as-needed basis, only in cases of**

**emergency.** Please contact Hillary by email at [hsj4@nyu.edu](mailto:hsj4@nyu.edu) with either of these circumstances.

## Required Articles/Book Chapters

Posted on NYU Brightspace website.

## Assignments and Grading

**Note: Assignments also included in “Assignments” on NYU Brightspace**

1. IHI Open school learning modules (5) -- **Total 25 points.**
  - These modules are an important part of the course and will be assigned at the same time as the corresponding lecture. They should be completed online, **evidenced by the printed certificate**, and sent via the NYU Brightspace website or via email to [hsj4@nyu.edu](mailto:hsj4@nyu.edu).
  - The 5 IHI Open School course modules should be completed by the end of the course, **by May 9, 2022. Without an approved extension, the student will not be credited.**
2. Written assignments (5) -- **Total 50 points.**
  - Assignments are to be handed in via the NYU Brightspace website, before midnight of due date.
3. Final Team Presentation -- **Total 20 points.**
  - Students will work in teams to develop and present a specific improvement project, including the results of initial steps to test a change, data to support improvement, and planning to take a project to a new location (i.e., spreading improvement).
  - **The final group presentation will be a culmination of all of the group assignments given during the course.** Based on feedback the instructor provides to teams on each group assignment throughout the course, teams will be expected to make improvements for the final group presentation.
4. Class Participation and attendance -- **Total 5 points.**
  - One point will be deducted for each unexcused absence.
  - Students who excel by actively participating during the classroom topic discussions will obtain points of extra credit at the end of the course.

**Late assignments will lose 2 points per day after due date!**

## Required Online Courses: IHI Open School

**(25 points of grade, with each module worth 5 points)**

IHI Open School online courses are free to students and provide important lessons in patient safety, quality improvement, and leadership. Completion of the selected courses (and recommended due dates), as noted in the syllabus is required. To receive credit for completion:

1. Generate the course completion certificate (**you must complete the evaluation at the end of the course to generate the certificate**).
2. Submit the certificate through the NYU Brightspace site as an attachment.
3. All 5 required IHI modules must be submitted by **May 9, 2022** to receive credit for them. The required modules are specified on the syllabus, and include:
  - QI 101: Introduction to Healthcare Improvement

- PS 201: Root Cause, System Analysis
- QI 102: How to Improve with the Model for Improvement
- QI 103: Testing and Measuring Changes with PDSA Cycles
- QI 201: Planning for Spread: From Local Improvement to System-Wide Change

## Written Assignments

**(10 points each, total of 50 points of grade)**

There are **two individual assignments and three team assignments**.

- Individual assignments should be submitted through the Assignments area of the NYU Classes Web site.
- For each team assignment, please include a cover page stating your team name (team number), team members, and the “problem” you’ll be focusing on for improvement. When submitting Team Assignments, please either email them to [hsj4@nyu.edu](mailto:hsj4@nyu.edu), or have one member of your team include the completed assignments in the “Assignments” area of the NYU Brightspace website.

### **Individual Assignment #1**

Review the editorial, “What is ‘quality improvement’ and how can it transform healthcare?” by Paul Batalden and Frank Davidoff. *Quality and Safety in Healthcare* 2007;16;2-3. Based on the editorial, and any other research as desired, please write a **1-page, 12-point font** summary describing:

1. What do you view or understand to be key features or components necessary for effective quality improvement work?
2. Explain how well these features are currently integrated into healthcare systems.
3. Provide at least 2 options for strengthening the integration into healthcare systems.

You can also obtain up to 1 point of extra credit if you effectively use other literature in your analysis to answer the 3 questions. The article can be found here: [batalden.pdf](#)

**Individual Assignment #1 DUE ON FEBRUARY 9, 2022.**

### **Team Assignment #2**

Problem analysis, using a Quality Improvement Tool: During the second class, students will be split into small teams to prepare this assignment, as well as various other team assignments given during this class.

1. Select one quality improvement tool for analyzing a problem from a sub-set of tools you’ll learn about. Explain why you selected the tool.
2. Provide the display of what you came up with in using the tool to assess the problem.
3. Prepare a short analysis and explanation of what you found by using the tool.

**Team Assignment #2 DUE ON FEBRUARY 23, 2022.**

### **Team Assignment #3**

Institute for Healthcare Improvement, Use of the Model for Improvement:

1. Develop an Aim Statement.
2. Complete a Plan-Do-Study-Act Cycle using a Worksheet Provided.
3. Up to 2 points of extra credit will be given if you complete a second PDSA **that builds upon the first PDSA cycle.**

### **Team Assignment #3 DUE ON MARCH 9, 2022.**

#### **Team Assignment #4**

Run Charts and Control Charts:

Run charts are graphs of data, displaying data over time. Control charts build upon run charts and are a key tool used to display variation in the process, and identify the presence or absence of special or common cause variation over time.

1. Gather data and prepare a run chart.
2. Add upper and lower control limits to turn it into a control chart.
3. Prepare a written statement of your analysis.

### **Team Assignment #4 DUE ON MARCH 23, 2022.**

#### **Individual Assignment #5**

Article Review and Critique (article can be found [here](#)): Coury J, Schneider JL, Rivelli JS, Petrik AF, Seibel E, D'Agostini B, Taplin SH, Green BB, Coronado GD. Applying the Plan-Do-Study-Act (PDSA) approach to a large pragmatic study involving safety net clinics. *BMC Health Serv Res* 2017, 17(1):411-420.

Apply what you have learned from this course to date in using the Model for Improvement/PDSA cycles to a real-world, large QI project focused on testing the effectiveness of a direct-mail fecal immunochemical testing (FIT) program involving eight Federally Qualified Health Centers (FQHCs—Health Centers) in Oregon and California, to ultimately improve colorectal cancer screening. As you pull together your analysis, please answer these questions:

1. Critique the aim statements and plans for each of the 8 Health Centers that participated in this quality improvement effort. What are the strengths and areas you would improve?
2. Provide a commentary of the PDSA cycle activities that Coury and colleagues found from Health Centers 2, 4, 5, & 8. What do you agree with, and what would you have done differently if you were part of the improvement teams at the Health Centers?
3. What are your thoughts about the measurement strategy? What other process or outcome measures might you have focused on? If you would have approached the measurement strategy differently, please describe this here.

### **Individual Assignment #5 DUE ON APRIL 13, 2022.**

**NOTE:** Spread in quality improvement will be part of the course content. The Spread component will be included in the final team assignment, but no detailed, separate assignment on Spread will be included.

**FINAL TEAM PRESENTATION/ASSIGNMENT COMPONENTS WILL BE GIVEN DURING THE APRIL 13, 2022 CLASS! ALL FINAL ASSIGNMENTS ARE DUE ON APRIL 26, 2022, PRIOR TO THE APRIL 27, 2022 CLASS.**

## **Detailed Course Overview**

## Module 1, Week 1: January 26

### Topics

- Course Introduction
- Introduction to the Healthcare Landscape and Quality Improvement

### Required Readings / IHI Course Module

- Editorial: “What is ‘quality improvement’ and how can it transform healthcare?” Paul Batalden and Frank Davidoff. *Quality and Safety in Healthcare* 2007;16;2-3.

### Suggested Resources

- The Triple Aim: Care, Health, and Cost. Donald M. Berwick, Thomas Nolan and John Whittington. *Health Affairs* May 2008; Vol 27, no 3:759-769.
- The Habits of an Improver. By Bill Lucas and Hadjer Nacer. The Health Foundation. October 2015.

### Assignments

- Review instructions for IHI Open School course on NYU Brightspace.
- (Individual) Assignment #1
  - Article Review, based on required reading. One Page: “What is Quality Improvement and How Can it Transform Healthcare?”
  - **DUE: February 9, 2022**

## Module 2, Week 2: February 2

### Topics

- How do we improve?
- Differences between Quality Improvement and Quality Assurance
- Teams organized

### Required Readings / IHI Course Module

- Chapter 1 in The Improvement Guide, G. Langley, R. Moen, Kevin Nolan, et al. 2nd edition. 2009; pp 15-25
- Provost L, Bennett B. [What's your theory? Driver diagram serves as tool for building and testing theories for improvement opens in new window](#). *Quality Progress*. 2015 Jul:36-43.
- IHI Module QI 101: Introduction to Healthcare Improvement

### Suggested Resources

- [IOM 2001 Exec summary. Crossing the Quality Chasm: A New Health System for the 21<sup>st</sup> Century.](#)



## Assignments

- No new assignments

## Module 3, Week 3: February 9

### Topics

- Understanding the Problem: A Sub-set of Tools in Quality Improvement

### Required Readings / IHI Course Module

- Provost L, Bennett B. What's your theory? Driver diagram serves as tool for building and testing theories for improvement. *Quality Progress*. 2015 Jul:36-43.
- IHI, QI Essentials Toolkit: [here for QI Essentials Toolkit](#)
- IHI Module PS 201: Root Cause, System Analysis

### Suggested Resources

- The improvement Guide. G. Langley, R. Moen, Kevin Nolan, et al. 2<sup>nd</sup> edition. 2009. *Appendix B-Tools and Methods to Support Improvement*
- RCA<sup>2</sup>: Improving Root Cause Analysis and Actions to Prevent Harm: [RCA Resource Here.](#)

## Assignments

- (Team) Assignment #2.
  - Select one quality improvement tool for analyzing your problem. Prepare a display of how you used the tool and an analysis of what you found by using that tool.
  - **DUE: February 23, 2022**

## Module 4, Week 4: February 16

### Topics

- IHI Model for Improvement Introduction

### Required Readings / IHI Course Module

- Chapters 4 and 5, pp 75- 108 in The Improvement Guide
- IHI QI 102: How to Improve with the Model for Improvement

### Suggested Resources

- N/A

## Assignments

- No new assignments

## **Modul 5, Week 5: February 23**

### **Topics**

- Model for Improvement: Using PDSA Cycles and Measurement

### **Required Readings / IHI Course Module**

- IHI QI 103: Testing and Measuring Changes with PDSA Cycles

### **Suggested Resources**

- N/A, other than to continue using IHI Essentials Toolkit:
- [here for QI Essentials Toolkit](#)

### **Assignments**

- (Team) Assignment #3 IHI Model for Improvement
  - Complete Aim Statement, and PDSA Worksheet
  - **DUE: March 9, 2022**

## **Module 6, Week 6: March 2**

### **Topics**

- Using and Socializing Data in Quality Improvement
- Time allocated to work on Assignment #3 in Zoom groups

### **Required Readings / IHI Course Module**

- The run chart: a simple analytical tool for learning from variation in healthcare processes. Perla RJ, Provost LP, Murray SK. BMJ 2011; 20:46-51. [The run chart a simple analytical tool article here](#)
- IHI Resource for Run and Control Charts: [Run Chart and Control Chart resource here](#)

### **Suggested Resources**

- N/A

### **Assignments**

- (Team) Assignment #4
  - Complete Run Chart and Control Chart
  - **DUE: March 23, 2022**

## **Module 7, Week 7: March 9**

## Topics

- High Reliability Organizations
- Guest Speaker: TBD

## Required Readings / IHI Course Module

- The path to safe and reliable healthcare. Leonard MW, Frankel A. Patient Educ Couns. 2010;80:288-292.

## Suggested Resources

- N/A, other than to continue using IHI QI Essentials Toolkit:
- [here for QI Essentials Toolkit](#)

## Assignments

- No new assignments

## (SPRING BREAK: March 16 – NO CLASS)

## Module 8, Week 8: March 23

## Topics

- Sustainability and Spreading Improvements: Where to Start?

## Required Readings / IHI Course Module

- [“A Framework for Spread”](#) Massoud MR, Nielsen GA, Nolan K, Schall M, Sevin C. IHI Innovation Series white paper.
- Review of IHI Spread Planner: [Spread planner tool here.](#)
- The Improvement Guide “Spreading Improvements” pp 210-216. Langley et al 2009.
- QI 201: Planning for Spread: From Local Improvement to System-Wide Change

## Suggested Resources

- Spreading improvement across your health system, editors Kevin Nolan and Marie Schall. 2006 Chapter 5 -“Redesigning Chronic illness care in a public hospital system.” Karen Scott Collins, MD, MPH and Reba Williams, MD. Chapter 5 (pp 77-94)
- Sodzi-Tettey S, Twum-Danso NAY, Mobisson-Etuk LN, Macy LH, Roessner J, Barker PM. *Lessons Learned from Ghana’s Project Fives Alive!* [A practical guide for designing and executing large-scale improvement initiatives](#). Cambridge, Massachusetts: Institute for Healthcare Improvement; 2015. (Available at [www.ihl.org](http://www.ihl.org)) pp 1-23.
- Batalden, P. BMJ Quality and Safety 2014; 23:4-7 “Making improvement interventions happen- the work before the work: four leaders speak”

## Assignments

- (Individual) Assignment #5
  - Article Review and Critique (article can be found [here](#)): Coury J, Schneider JL, Rivelli JS, Petrik AF, Seibel E, D'Agostini B, Taplin SH, Green BB, Coronado GD. Applying the Plan-Do-Study-Act (PDSA) approach to a large pragmatic study involving safety net clinics. *BMC Health Serv Res* 2017, 17(1):411-420.
  - **DUE April 13, 2022**

## **Module 9, Week 9: March 30**

### **Topics**

- Nuts and Bolts on Team Dynamics: Why are Teams so Important in Quality Improvement?

### **Required Readings / IHI Course Module**

- Teaming, How organizations learn, innovate and compete in the knowledge economy. Chapter 3 – “The Power of Framing” pp 83-113. Amy C. Edmondson.

### **Suggested Resources**

- [Leadership Lesson: Tools for Effective Team Meetings](#). Yvette Pigeon and Omar Khan, Association of American Medical Colleges.

### **Assignments**

- No new assignments

## **Module 10, Week 10: April 6**

- Care Experience: An Essential Part of Health Care Quality Improvement
- Guest Speaker: TBD

### **Required Readings / IHI Course Module**

- Hachem F, Canar J, Fullam F, Gallan A, Hohmann S, Johnson C. The relationships between HCAHPS communication and discharge satisfaction items and hospital readmissions. *Patient Experience Journal* 2014, 1(2), Article 12.

[Review paper here.](#)

- NEJM Catalyst, January 2018: NEJM Catalyst; web site link: [Patient Satisfaction Surveys.](#)

### **Suggested Resources**

- N/A

## Module 11, Week 11: April 13

### Topic

- Recap of What You Learned about Quality Improvement
- Pulling it All Together for Final Team Assignment (elements of team assignment given during this class)
- Teams to split up in groups to work on their final assignments

### Required Readings / IHI Course Module

- Continue to review IHI Essentials Toolkit:
- [here for QI Essentials Toolkit](#)

### Suggested Resources

- N/A

### Assignments

- (Team) Final Presentation Assignment Distributed
  - **ALL TEAM ASSIGNMENTS ARE DUE April 26, prior to April 27, 2022 class**

## Module 12, Week 12: April 20

### Topic

- Patient Safety and Applying Just Culture in Health Care Settings
- Guest Speaker: TBD

### Required Readings / IHI Course Module

- Reason J. Human error: models and management. *BMJ* 2000, 320(7237): 768-770.  
[Reason article here.](#)

### Suggested Resources

- N/A

## Week 13: April 27

### Topic

- Class Team Presentations: Groups 1, 2, and 3 to present final projects

### Assignments

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- **REMINDER: ALL TEAM ASSIGNMENTS ARE DUE April 26, prior to April 27, 2022 class**

## **Week 14: May 4**

### **Topics**

- Class Team Presentations: Groups 4 and 5 to present final projects
- Closing Remarks and Thoughts of Class

### **Assignments**

- **All 5 assigned IHI modules are all due by May 9, 2022.** Enjoy the Summer!

## **Academic Integrity**

Academic integrity is a vital component of Wagner and NYU. All students enrolled in this class are required to read and abide by [Wagner's Academic Code](#). All Wagner students have already read and signed the [Wagner Academic Oath](#). Plagiarism of any form will not be tolerated and students in this class are expected to report violations to me. If any student in this class is unsure about what is expected of you and how to abide by the academic code, you should consult with me.

## **Henry and Lucy Moses Center for Student Accessibility**

Academic accommodations are available for students with disabilities. Please visit the [Moses Center for Students with Disabilities \(CSD\) website](#) and click the “**Get Started**” button. You can also call or email CSD (212-998-4980 or [mosescsd@nyu.edu](mailto:mosescsd@nyu.edu)) for information. Students who are requesting academic accommodations are strongly advised to reach out to the Moses Center as early as possible in the semester for assistance.

## **NYU's Calendar Policy on Religious Holidays**

[NYU's Calendar Policy on Religious Holidays](#) states that members of any religious group may, without penalty, absent themselves from classes when required in compliance with their religious obligations. Please notify me in advance of religious holidays that might coincide with exams to schedule mutually acceptable alternatives.

## **NYU's Wellness Exchange**

[NYU's Wellness Exchange](#) has extensive student health and mental health resources. A private hotline (212-443-9999) is available 24/7 that connects students with a professional who can help them address day-to-day challenges as well as other health-related concerns.

