

Instructor's Guide: Individual Teaching Sessions

(Objectives are described as Knowledge (K), Attitudes (A), Skills (S), or Process (P))

Session 1: Introduction to Quality Improvement

Goal: Introduce the learner to basic concepts of quality improvement and mobilize knowledge gained through online readings through a case-based example.

Objectives: At the end of this session, learners will be able to:

- ✓ Define basic concepts of quality improvement (K)
- ✓ Describe quality improvement tools (K)
- ✓ List major steps of Model for Improvement (K)
- ✓ Apply basic QI methods to a healthcare problem (S)
- ✓ Create a fishbone diagram to analyze a health care problem (S)

30 minutes	Quality Improvement Pre-test <ul style="list-style-type: none">– Learners will take the Quality Improvement Knowledge Assessment Pre-Test– Ogrinc G, Headrick LA, Morrison LJ, and Foster T. Teaching and Assessing Resident Competence in Practice-Based Learning and Improvement. <i>JGIM</i>. 2004; 19: 496-500.
30 minutes	Didactic Presentation: Quality Improvement Concepts 101 <ul style="list-style-type: none">– Intro to basic concepts of QI, Method for Improvement– Introduce QI Handbook and expectations for QI Program
90 minutes	Small Group Exercise: Applying QI <ul style="list-style-type: none">– Divide learners into 4 groups and each team will be given a health care problem to which they will apply the Model for Improvement– Instructions for each team are in the “Session 1: Small Group Work” handout– Consider providing the references articles for the learners at the session.– They will complete a Powerpoint presentation as part of their small group work to present their results to the larger group, including a fishbone diagram for the healthcare problem in their scenario
30-40 minutes	Small Group Report Out <ul style="list-style-type: none">– Each team presents their powerpoint presentations to the larger group (using template)
10 minutes	Debrief and eval

Prep work: Prior to the session, learners were asked to complete these tasks:

Read articles:

- Berwick, A primer on leading the improvement of systems, *BMJ*, 1996, 312: 619-22.
- Varkey, et al. Basics of quality improvement in healthcare, *Mayo Clin Proc*, 2007; 82(6):735-739.
- Complete IHI Open School QI 101 – Fundamentals of Improvement (<http://app.ihi.org/lms/coursedetailview.aspx?CatalogGuid=6cb1c614-884b-43ef-9abd-d90849f183d4&CourseGuid=60967fa6-4642-4f33-9ec2-60083d52d0fe>). Registration required.

Learners will need to bring:

Laptop computer, USB drive

Materials needed:

Laptop and projector

Poster paper/Easel

Markers

Tips for this session:

- ❖ The small group exercise will help introduce the learners to the overall steps of a quality improvement project. It also allows them to begin to work in their QI project teams to accomplish a task.
- ❖ Having 4 teams allows smaller groups to encourage discussion.
- ❖ Give plenty of time for both the report out and the discussion of each team's healthcare problem and how they completed the project.
- ❖ Flip charts and markers can be used by each team in lieu of completing the Powerpoint presentation during the session.

Session 2: Patient Safety, Root Cause Analysis, and Disclosure

Goal: Learners will recognize the relationship between medical errors, patient safety and quality improvement.

Objectives: At the end of this session, learners will be able to:

- ✓ Identify the steps of a root cause analysis (RCA) (K)
- ✓ Explain how an RCA can address system problems in health care. (K)
- ✓ Differentiate between adverse event and medical error (K)
- ✓ Describe a process for disclosure of medical error (K)
- ✓ Complete a root cause analysis (S)

30 minutes	Didactic: Introduction to the Root Cause Analysis <ul style="list-style-type: none"> – Basics about using an RCA – Defines terminology
120 minutes	Small Group work: RCA Case <ul style="list-style-type: none"> – Presentation of RCA Case – Divide learners into small group work on Case and RCA thread (will need markers and paper) – Each group will work on one aspect of the fishbone; facilitators should be available – Report out to large group
40 minutes	Disclosure of Medical Errors <ul style="list-style-type: none"> – Each group will review their scenarios and present their findings
10 minutes	Debrief and eval

Prep work: Prior to the session, learners will need to:

Read posted articles:

- Gallagher, et al. Disclosing Harmful Medical Errors. *NEJM*, 2007; 356:2713-9.
- Wachter, RM. Patient Safety at Ten: Unmistakable Progress, Troubling Gaps. *Health Affairs*, 2010; 29(1):165-173.

- Complete IHI Open School Course: Root Cause and Systems Analysis and Communicating with Patients after Adverse Events (PS 104 and PS 105)
<http://www.ihl.org/lms/coursedetailview.aspx?CourseGUID=450435c3-f015-4541-9432-46eb235461bb&CatalogGUID=6cb1c614-884b-43ef-9abd-d90849f183d4>

Materials needed:

Handouts
Markers and Paper Easels for Small Group work on RCA

Tips for this session:

- ❖ Learners can begin to see how Patient Safety and Medical Error event can lead to a quality improvement effort. Consider drawing on their previous experiences to promote discussion.
- ❖ The RCA exercise also begins to illustrate a systematic way that learners can approach dissecting a problem.

Session 3: Steps 1 and 2 - Understanding the Problem and Identifying Areas for Improvement

Goal: Learners will begin to define and understand the problem for their QI project in this session.

Objectives: At the end of this session, learners will be able to:

- ✓ Compose a problem statement for a QI initiative (S)
- ✓ Create a SIPOC diagram (S)
- ✓ Differentiate between a process map and a cause-effect diagram (K)
- ✓ Create a process map or cause-effect diagram to describe their QI problem (S)
- ✓ Identify areas of waste and inefficiency related to their QI problem (S)
- ✓ Prioritize areas of change that can balance degree of impact with degree of effort (S)

15 minutes	Didactic: Understanding the Problem <ul style="list-style-type: none"> - Brief discussion explaining and reviewing Step 1 in Handbook
75 minutes	QuIP Team Work: Understanding the Problem <ul style="list-style-type: none"> - Each team will work on Step 1 in their QI Handbook to write their Problem Statement - Faculty should help facilitate discussion during this time - Each QuIP Team will report out their problem statement (10 minutes for 4 teams)
60 minutes	Didactic and Small Group Work: Identifying areas for improvement <ul style="list-style-type: none"> - Refer to rough process map created earlier; identify areas of waste/inefficiency - Apply modified FMEA analysis to areas of improvement - Each QuIP Team will work on Step 2 in their handbook
10 minutes	Debrief and eval

Prep work: Prior to the session, learners will need to:

- Complete IHI Open School QI 102 - The Model for Improvement: Your Engine for Change (<http://app.ihl.org/lms/coursedetailview.aspx?CatalogGuid=6cb1c614-884b-43ef-9abd-d90849f183d4&CourseGuid=41b3d74d-f418-4193-86a4-ac29c9565ff1>)
- Begin a rough draft of their Project Charter (in QI Handbook)

Learners will need to bring:

Laptop computer (if available), QI Handbooks

Paper, Easel and Markers for SIPOC exercise

Materials needed:

Laptop and projector

Tips for this session:

- ❖ Expect that each team will NOT complete Steps 1 and 2 in their handbooks. The “in-class” exercises are meant to help them get their discussion started and allows the faculty to act as facilitators to ensure that they are on the right track.
- ❖ It is helpful for each team to arrive with their handbooks and laptops to make it easy to work on them while in-class.
- ❖ Having a rough draft of their project charter completed is useful.
- ❖ Use the report outs to gauge the learners’ understanding of the skills and knowledge.

Session 4: The Business of QI and Step 3- Identifying Interventions

Goal: To establish the financial context for quality improvement and begin to identify feasible and relevant interventions for QI.

Objectives: At the end of this session, learners will be able to:

- ✓ Define and give examples of business drivers (K)
- ✓ List the reasons for why quality is important to hospital leadership from a business standpoint (K)
- ✓ Describe the role of the hospitalist as a leader for quality improvement in the hospital setting (K)
- ✓ Identify appropriate and relevant QI interventions for a QI project (S)

80 minutes	Didactic and Group Discussion: Introduction to Business Drivers <ul style="list-style-type: none">– Powerpoint presentation allows for discussion at point intervals
60 minutes	Didactics and Group Discussion: The Value Equation - Why Hospitals Care about Quality <ul style="list-style-type: none">– Use knowledge and terms from last discussion to narrow scope as to how and why your institution engages in QI
45 minutes	Didactic and Small Group work: Identifying QI Interventions <ul style="list-style-type: none">– Short didactic on Step 3 in handbook– Last 20 minutes to be group work in QuIP Teams
10 minutes	Debrief and eval

Prep work: Prior to the session, learners will need to:

- Read article: Berenson RA, Ginsburg PB, and May JH. Hospital-Physician Relations: cooperation, Competition, or Separation? *Health Affairs*. 2007; 26 (1): w31-w43.
- Review Step 3 in QI Handbook
- Submit rough drafts of Step 1 and 2 to faculty mentor for review
- Complete QI103: Measuring for Improvement on IHI Open School (<http://app.ihi.org/lms/coursedetailview.aspx?CatalogGuid=6cb1c614-884b-43ef-9abd-d90849f183d4&CourseGuid=7ab177dc-a9cf-4d1d-b870-f4be6e8d8f67>)

Materials needed:

- Computer and projector

Learners will need to bring:

- QuIP Team Handbook

Tips for this Session:

- ❖ Learners often have never had discussion about business drivers and how they affect the way patients receive healthcare. It is helpful to illustrate to them that these are factors *outside* of their immediate institution.
- ❖ Illustrate to learners that a QI effort must have the buy-in and support of the clinical institution in which they hope to initiate the project.

Session 5: Teamwork and Leading Change

Goal: Learners grasp the importance of teamwork, communication and leadership in efforts to change systems.

Objectives: At the end of this session, learners will be able to:

- ✓ Understand their preferred style of communication (K)
- ✓ Describe the importance of effective communication in teamwork (K)
- ✓ Explain how QI efforts can affect the culture of an organization (K)
- ✓ Explain the barriers to effective change leadership (K)
- ✓ Recognize characteristics of an effective leader for change (K)

90 minutes	Didactic session and Large Group Discussion: Leading Change <ul style="list-style-type: none">– Didactic session– Discussion
70 minutes	Didactic and Individual exercise: Teamwork and Communication <ul style="list-style-type: none">– DiSC Profile– Refer to commercial product for interpretation guidelines of communication profiles. http://www.thediscpersonalitytest.com/?view=Assessments_disc&gclid=CNqdwcZsrACFSWFQAod5C8QVQ
10 minutes	Debrief and eval

Prep work: Prior to the session, learners will need to:

- Read posted articles:
 - Stoller JK. Developing physician-leaders: a call to action. *JGIM*. 2009 Jul;24(7):876-8.
 - Kotter, John. Leading Change: Why transformation efforts fail. *Harvard Business Review*. 1995; March-April 1995.
 - Kotter, John. What leaders really do. *Harvard Business Review*. December 2001.
- Complete IHI Open School Courses:
 - PS103: Teamwork and Communication
 - QI105: The Human Side of Quality Improvement

Materials needed:

- DiSC Profile Survey
- Computer and projector

Tips for this session:

- ❖ This session allows the learners to reflect on key aspects of change – namely the need to rally support and the front-line in order to truly affect change.

- ❖ The session also helps the learner gain insight into themselves, the way they communicate and how that can impact the interactions that they can have with stakeholders throughout the process of change. Other commercially available personality or communication profiles can be used to help learners reflect on their own communication styles.

Session 6: Step 4 - QI Metrics, Objectives and Interventions

Goal: Learners will apply their knowledge of their problem to devise potential interventions and ways to measure success of their interventions.

Objectives: At the end of this session, learners will be able to:

- ✓ Define metrics relevant to their quality improvement projects (K)
- ✓ Identify methods for collecting and tracking relevant metrics (K)
- ✓ Describe challenges to data management in QI projects (K)
- ✓ Plan appropriate interventions for a quality improvement initiative (S)

90 minutes	Didactic and Small Group Work: Defining relevant metrics for your QI Project <ul style="list-style-type: none"> – Discussion and team work on Step 4a and 4b
90 minutes	Didactic and Small Group Work: Evaluating the quality measures and methods for collection and tracking <ul style="list-style-type: none"> – Small group work
10 minutes	Debrief and eval

Prep work: Prior to the session, learners will need to:

- Read posted articles:
 - Zaratkeiwicz, et al. Development and Implementation of a Hospital Acquired Pressure Ulcer Incidence Tracking System and Algorithm. *JHealthQual.* 2010; 32(6): 44-51.
 - Oujiri, et al. Resident-initiated Interventions to Improve Heart Failure Management. *BMJ Qual Saf.* 2011; 20:181e186.
- Complete IHI Open School Courses:
 - QI103: Measuring for Improvement (<http://app.ihi.org/lms/coursedetailview.aspx?CatalogGuid=6cb1c614-884b-43ef-9abd-d90849f183d4&CourseGuid=7ab177dc-a9cf-4d1d-b870-f4be6e8d8f67>)
 - QI104: Putting it all Together: How Quality Improvement Works in Real Healthcare Settings (<http://app.ihi.org/lms/coursedetailview.aspx?CatalogGuid=6cb1c614-884b-43ef-9abd-d90849f183d4&CourseGuid=ea07c796-a771-4713-8bd8-520188b6c793>)

Materials needed:

- Laptop computer

Learners will need to bring:

- QI Handbook
- Any collected data

Tips for this session:

- ❖ Emphasize to learners the importance of data in this session. Understanding and interpreting the data is vital to recognizing if change has actually occurred. It is likely the learners will not know how/where to obtain data and importantly, which data they should use to build their case. They will need significant guidance and coaching around these points.

Session 7: Step 5 – Planning Small Tests of Change

Goal: Learners are introduced to concepts of the PDSA cycle.

Objectives: At the end of this session, learners will be able to:

- ✓ List the steps in a PDSA cycle (K)
- ✓ Plan a PDSA cycle as part of their QI project (S)
- ✓ Devise a framework to implement a PDSA cycle as part of their QI projects (S)

90 minutes Didactic and Small Group Work: PDSA cycles

- Small group work
- Each group will work on Step 5 in their handbooks and complete at least 1 of the PDSA Cycle sheets during the session

10 minutes Debrief and eval

Prep work: Prior to the session, residents will need to:

- Review Step 5 in handbook
- Complete IHI Open School Courses (if not already completed):
 - QI104: Putting it all Together: How Quality Improvement Works in Real Healthcare Settings (<http://app.ihl.org/lms/coursedetailview.aspx?CatalogGuid=6cb1c614-884b-43ef-9abd-d90849f183d4&CourseGuid=ea07c796-a771-4713-8bd8-520188b6c793>)

Materials needed:

- Laptop computers

Learners will need to bring:

- QI Handbook

Tips for this session:

- ❖ Learners should be reminded that the PDSA cycles should be short and rapid. They should complete the PDSA forms to help them anticipate the outcomes of their small tests of change. Remind them that issues and unexpected events can occur during their small tests of change and those events can inform the next PDSA cycle.

Session 8: Step 6 – Compiling, Analyzing, and Interpreting QI Data

Goal: Learners understand how to optimally manage QI data.

Objectives: At the end of this session, learners will be able to:

- ✓ Describe the following QI tools: Process Flow/Map, Ishikawa/Fishbone diagram, Consensus building tools, Pareto chart, Control/Run charts (K)
- ✓ Apply appropriate QI tool to specific data collection situations (S)
- ✓ Compile their collected data into useful databases (S)
- ✓ Synthesize data into appropriate QI interpretation tools (S)
- ✓ Present their data in a summative and informative format (S)

90 minutes Didactic and Small Group Work: QI Tools

- Small group work on reviewing data gathered from PDSA cycles and choosing which QI tools can best display and help interpret that data

10 minutes Debrief and eval

Prep work: Prior to the session, learners are asked to:

- Review Step 6 in handbook
- Complete IHI Open School Courses:
 - QI106: Level 100 Tools (<http://app.ihl.org/lms/coursedetailview.aspx?CatalogGuid=6cb1c614-884b-43ef-9abd-d90849f183d4&CourseGuid=7ef37a50-827f-477b-b603-9b4eef065fe6>)

Materials needed:

- Laptop computers

Learners will need to bring:

- QI Handbook
- Data from PDSA cycles

Tips for this session:

- ❖ Examples of various QI tools is most helpful in illustrating their utility to the learners. If possible, learners can attempt to recreate run charts, etc with their own data to further deepen their understanding of the tools.

Session 9: Step 7 - Disseminating and Sustaining Change

Goal: Learners will understand opportunities and the process for disseminating their QI work, as well as considering ways in which to sustain change long term.

Objectives: By the end of this session, learners will be able to:

- ✓ Describe an approach to submitting a QI abstract (K)
- ✓ Create a rough draft of a QI abstract (S)
- ✓ List venues for publishing QI work (K)
- ✓ Describe their IRB's requirements for QI work (K)

60 minutes	Didactic session and Small Group Work: Writing a QI Abstract <ul style="list-style-type: none">– Small group work: complete the Executive Summary in their handbooks
10 minutes	Debrief and eval

Prep work: Prior to the session, learners are asked to:

- Review Executive Summary and Practicum Summary report in handbook

Materials needed:

- Laptop computers

Learners will need to bring:

- QI Handbook

Tips for this session:

- ❖ In completing the Executive Summary in their handbooks, learners will have a template for a QI abstract. This tool also serves to help them think about how to integrate any changes into the system for durable change.
- ❖ Completion of the Practicum Summary report for submission to IHI is a requirement to earn Practicum Certification from the IHI.