

IHI Open School Online Courses: Curriculum Overview

| | |
|--|-----------|
| Improvement Capability | 4 |
| QI 101: Introduction to Health Care Improvement* | 4 |
| QI 102: How to Improve with the Model for Improvement* | 5 |
| QI 103: Testing and Measuring Changes with PDSA Cycles* | 6 |
| QI 104: Interpreting Data: Run Charts, Control Charts, and Other Measurement Tools* .. | 7 |
| QI 105: Leading Quality Improvement* | 8 |
| QI 201: Planning for Spread: From Local Improvements to System-Wide Change..... | 9 |
| QI 202: Addressing Small Problems to Build Safer, More Reliable Systems..... | 10 |
| Patient Safety | 11 |
| PS 101: Introduction to Patient Safety* | 11 |
| PS 102: From Error to Harm*..... | 12 |
| PS 103: Human Factors and Safety* | 13 |
| PS 104: Teamwork and Communication* | 14 |
| PS 105: Responding to Adverse Events* | 15 |
| PS 201: Root Cause Analyses and Actions | 16 |
| PS 202: Achieving Total Systems Safety..... | 17 |
| PS 203: Pursuing Professional Accountability and a Just Culture..... | 18 |
| Leadership | 19 |
| L 101: Introduction to Health Care Leadership* | 19 |
| L 102: Mental Health and Well-being During and After COVID-19..... | 20 |
| L 103: Making Publishable QI Projects Part of Everyday Work..... | 21 |
| L 201: The Role of Leaders in Workforce Safety..... | 22 |
| Person- and Family-Centered Care | 23 |
| PFC 101: Introduction to Person- and Family-Centered Care* | 23 |
| PFC 102: Key Dimensions of Patient- and Family-Centered Care | 24 |
| PFC 103: Incorporating Mindfulness into Clinical Practice | 25 |
| PFC 104: Confronting the Stigma of Substance Use Disorders | 26 |
| PFC 201: A Guide to Shadowing: Seeing Care through the Eyes of Patients and Families | 27 |
| PFC 202: Having the Conversation: Basic Skills for Conversations about End-of-Life Care | 28 |
| PFC 203: Providing Age-Friendly Care to Older Adults..... | 29 |

| | |
|---|-----------|
| Triple Aim for Populations | 30 |
| TA 101: Introduction to the Triple Aim for Populations* | 30 |
| TA 102: Improving Health Equity | 31 |
| TA 103: Increasing Value and Reducing Waste at the Point of Care | 32 |
| TA 104: Building Skills for Anti-Racism Work: Supporting the Journey of Hearts, Minds, and Action..... | 33 |
| TA 105: Conservative Prescribing..... | 34 |
| TA 201: Pathways to Population Health..... | 35 |
| Graduate Medical Education | 36 |
| GME 201: Why Engage Trainees in Quality and Safety?..... | 36 |
| GME 202: The Faculty Role: Understanding & Modeling Fundamentals of Quality & Safety | 37 |
| GME 203: Designing Educational Experiences in Health Care Improvement..... | 38 |
| GME 204: A Roadmap for Facilitating Experiential Learning in Quality Improvement.... | 39 |
| GME 205: Aligning Graduate Medical Education with Organizational Quality & Safety Goals | 40 |

Key

100 = Introductory concepts for all health care audiences

200 = Intermediate concepts and specialized topic areas

*Basic Certificate in Quality and Safety = The Open School offers a certificate of completion to learners who complete 13 essential courses: *QI 101–105, PS 101–105, TA 101, PFC 101, & L 101*

GME = Graduate Medical Education

L = Leadership

PFC = Person-and Family-Centered Care

PS = Patient Safety

QI = Improvement Capability

TA = Triple Aim for Populations

About Us

The IHI Open School’s multimedia online courses cover a range of topics in quality improvement, patient safety, system design, leadership, and population management. Through narrative, video, and interactive discussion, the courses offer a dynamic learning environment to inspire **students and health professionals of all levels, across professions**.

Courses are broken into digestible 15- to 40-minute lessons – each focused on practical learning around a narrow topic – designed for busy learners and educators. Institutional faculty and organizational leaders around the world rely on the courses as an easy way to bring essential training to students and staff.

Visit ihi.org/education/ihiopenschool/courses to learn more about how the Open School can help improve your interactions with patients, the safety within your organization, or any of the systems in which you live and work.

Improvement Capability

QI 101: Introduction to Health Care Improvement*

As the Institute of Medicine (IOM) declared in 2001, in words that still ring true, “*Between the health care we have and the care we could have lies not just a gap, but a chasm.*” This course launches you on your journey to becoming a health care change agent.

In Lesson 1, you’ll get a high-level picture of the current quality of care in the United States and other nations. You’ll also see how health systems around the world are facing similar challenges and how countries can study and learn from one another.

In Lesson 2, you’ll learn about a 2001 report from the Institute of Medicine (IOM) that laid out six simple aims that have since guided countless improvements in health care and inspired people across the globe. Then you’ll hear from agents of change describing improvements in the real world.

In Lesson 3, you’ll learn why improvement, especially in a complex environment such as health care, requires us to think about the larger systems in which we live and work. You’ll learn about the development of theories and tools to help improvers better visualize and understand the interdependent components of a system. Finally, you’ll practice applying W. Edwards Deming’s four-part framework for improvement, the System of Profound Knowledge.

Estimated Time of Completion: 1 hour 15 minutes

Lessons

Lesson 1: Health and Health Care Today

Lesson 2: The Institute of Medicine’s Aims for Improvement

Lesson 3: Changing Systems with the Science of Improvement

Course Objectives

After completing this course, you will be able to:

1. Describe common challenges for health care systems around the world.
2. List the six dimensions of health care, and the aims for each, outlined by the Institute of Medicine in 2001.
3. Explain the value of improvement science in health care.

QI 102: How to Improve with the Model for Improvement*

The Model for Improvement, developed by a group called Associates in Process Improvement, is simple to understand and apply. But it's powerful.

This course will teach you how to use the Model for Improvement to improve everything from your tennis game to your hospital's infection rate. You'll learn the basic steps in any improvement project: setting an aim, selecting measures, developing ideas for changes, and testing changes using Plan-Do-Study-Act (PDSA) cycles. As you go, you'll have the opportunity to use this methodology to start your own personal improvement project.

Lesson 1 will provide an overview of the Model for Improvement. You'll learn how a hospital system in Saudi Arabia successfully used it to reduce infections to zero in its neonatal intensive care unit. We'll also introduce you to a couple other helpful frameworks for improving care, Six Sigma and Lean.

Lesson 2 teaches you to craft an effective aim statement. You'll apply what you learn by continuing to work on the personal improvement project you began in Lesson 1.

In Lesson 3, we recommend three types of measures for you to define and collect in your improvement work: outcome measures, process measures, and balancing measures.

Lesson 4 will discuss several methods for developing good ideas for changes to test. We'll show you how visual tools can help you think critically about the systems and processes that you're part of. Finally, you'll have the chance to start developing ideas to test in your project.

In Lesson 5, you'll learn about testing changes on a small scale and tracking your results as you go.

Estimated Time of Completion: 1 hour 30 minutes

Lessons

Lesson 1: An Overview of the Model for Improvement

Lesson 2: Setting an Aim

Lesson 3: Choosing Measures

Lesson 4: Developing Changes

Lesson 5: Testing Changes

Course Objectives

After completing this course, you will be able to:

1. List the three questions you must ask to apply the Model for Improvement.
2. Identify the key elements of an effective aim statement.
3. Identify three kinds of measures: process measures, outcome measures, and balancing measures.
4. Use change concepts and critical thinking tools to come up with good ideas for changes to test.
5. Test changes on a small scale using the Plan-Do-Study-Act (PDSA) cycle.

QI 103: Testing and Measuring Changes with PDSA Cycles*

In this course, we'll take you through basic concepts you need to know to run successful PDSA (Plan-Do-Study-Act) cycles in a clinical setting. Measurement is an essential part of testing changes with PDSA. It tells you if the changes you are testing are leading to improvement.

In Lesson 1, you'll learn how to develop operational definitions for a family of measures (outcome, process, and balancing measures) during the "Plan" phase of PDSA. Then, you'll learn how to track those measures during the "Do" phase. We'll also provide some helpful data collection techniques, such as sampling, which can accelerate the pace of your improvement work.

In Lesson 2, you'll learn the value of displaying your data over time, on a run chart. We'll also show you how to break the data down into subsets, according to specific variables, to bring out additional learning and opportunities for improvement.

In Lesson 3, we'll show you how to act on your results, in the "Act" phase of PDSA. We'll explain how to increase the size or the scope of subsequent test cycles based on what you're learning, so that you continue to grow your confidence that your change idea is leading to improvement.

Estimated Time of Completion: 1 hour 15 minutes

Lessons

Lesson 1: How to Define Measures and Collect Data

Lesson 2: How to Use Data for Improvement

Lesson 3: How to Build Your Degree of Belief over Time

Course Objectives

After completing this course, you will be able to:

1. Describe how to establish and track measures of improvement during the "plan" and "do" phase of PDSA.
2. Explain how to learn from data during the "study" phase of PDSA.
3. Explain how to increase the size and scope of subsequent test cycles based on what you're learning during the "act" phase of PDSA.

QI 104: Interpreting Data: Run Charts, Control Charts, and Other Measurement Tools*

In this course, we'll delve into how to draw an effective run chart to create a compelling picture of your progress toward improvement.

We'll teach you to distinguish non-random patterns in your data – that is, evidence that performance has actually changed.

Once you've got that down, we'll introduce you to three more excellent tools for displaying and learning from data.

In Lesson 1, you will learn the elements of an effective run chart for improvement work: an X and Y axis, 10 or more data points, the baseline median, and annotations of tests of change. You'll have a chance to practice creating your own run chart for a hospital that's trying to reduce wait times.

In Lesson 2, we'll explain the difference between common cause and special cause variation. We'll teach you four rules to distinguish between these two causes of variation, and we'll introduce you to another type of chart that can also help with this, called a Shewhart (or control) chart.

In Lesson 3, IHI's Dave Williams, PhD, teaches you to use other charts that can also help you understand variation within data sets: histograms, Pareto charts, and scatter plots. These tools may help you from time to time in your improvement work.

Estimated Time of Completion: 1 hour 30 minutes

Lessons

Lesson 1: How to Display Data on a Run Chart

Lesson 2: How to Learn from Run Charts and Control Charts

Lesson 3: Histograms, Pareto Charts, and Scatter Plots

Course Objectives

After completing this course, you will be able to:

1. Draw a run chart that includes a baseline median, a goal line, and annotations.
2. Describe the difference between common and special cause variation.
3. Explain the purpose of a Shewhart (or control) chart.
4. Apply four rules to identify non-random patterns on a run chart.
5. Explain when and how to use the following tools for understanding variation in data: histograms, Pareto charts, and scatter plots.

QI 105: Leading Quality Improvement*

The first four IHI Open School quality improvement courses taught you basic improvement methodology, which you can apply to improve health care processes and make care safer. But when you assume a leadership role in a clinical improvement project, you'll need more than just technical knowledge.

In the real world, you'll need to know the steps for managing the project through to completion. You'll need to understand the psychology of change, and you'll need skills in interdisciplinary teamwork.

In the real world, the human side of quality improvement — that is, the ability to rally a group around a cause — is every bit as important as having a good idea for a change.

In Lesson 1, we'll walk you through the five stages of IHI's Improvement Project Roadmap. For each phase, we'll provide a short checklist of the tasks you'll need to accomplish before moving on. We'll also share tools to help you along, including driver diagrams and IHI's Framework for Spread.

In Lesson 2, you'll learn how to assess your own and your colleagues' natural tolerance for change. With that understanding, you'll learn what makes people say "no" to improvement efforts, and how you can address their concerns to move them closer to "yes."

In Lesson 3, we'll cover who should be on a clinical improvement team and the interprofessional competencies you'll need to make that team function. We'll talk about strategies to promote teamwork and communication, including getting to know your teammates and writing down your plan.

Estimated Time of Completion: 1 hour 15 minutes

Lessons

Lesson 1: The Four Phases of a Quality Improvement Project

Lesson 2: Change Psychology and the Human Side of Quality Improvement

Lesson 3: Working with Interdisciplinary Team Members

Course Objectives

After completing this course, you will be able to:

1. Describe how to lead an improvement project through four key phases.
2. Identify and describe the components of IHI's Framework for Spread.
3. Apply strategies to assess and overcome resistance to change.
4. Apply strategies to work effectively with interprofessional colleagues.

QI 201: Planning for Spread: From Local Improvements to System-Wide Change

Previous courses in the Quality Improvement catalog focused on testing and implementing a change in one location. This advanced course is about the next logical step: spreading the change.

In Lesson 1, you'll learn how new ideas typically spread through a population, according to the work of psychologist Kurt Lewin and sociologist Everett Rogers. With their research in mind, you'll learn what you can do to help motivate the more change-resistant individuals in your population to embrace a new idea, to allow your innovation to spread as far as possible.

In Lesson 2, you'll learn about how to help a new idea spread across a population, both by motivating the people within the population to adopt the change and by developing new ideas that are inherently more likely to spread. Based on the five traits of innovations that spread, we'll provide you with a tool, the New Idea Scorecard, to assess your idea for a change. Finally, we'll provide you with a roadmap for spreading a change, which we call IHI's Framework for Spread.

In Lesson 3, you'll follow a detailed case study about how a hospital network in Central Texas used the concepts from the first two lessons to spread a major improvement initiative — widely improving care across a vast system.

Estimated Time of Completion: 1 hour 15 minutes

Lessons

Lesson 1: How Change Spreads

Lesson 2: Tactics for Spreading Change

Lesson 3: Case Study in Spreading Innovations: Transforming Care at the Bedside

Course Objectives

After completing this course, you will be able to:

1. Describe how change spreads according to Kurt Lewin and Everett Rogers.
2. Assess the likelihood that a new idea will spread.
3. Apply IHI's Framework for Spread to spread an innovation across an organization.

QI 202: Addressing Small Problems to Build Safer, More Reliable Systems

If an organization is to avoid catastrophic failure, staff members need to call out small problems as they arise in daily work. In this lesson, you'll learn that organizations that successfully manage complexity have a deliberate approach to escalating the small concerns and suggestions of employees. Staff members know how to recognize problems, whom to contact, and how to get that person's attention immediately. The leaders, in turn, avoid blame and provide the resources necessary to solve problems.

Estimated Time of Completion: 1 hour

Course Objectives

After completing this course, you will be able to:

1. Explain why system complexity requires us to take a methodical approach to system design, operation, and improvement.
2. Explain how the absence of this methodical approach will cause complex systems to fail predictably.
3. Propose specific applications of this methodical approach to the design, operation, and improvement of health care.

Patient Safety

PS 101: Introduction to Patient Safety*

No one embarks on a health care career intending to harm patients. But much too often, patients die or suffer injuries because of their experiences within the health care system. In this course, you'll learn why becoming a student of patient safety is critical for everyone involved in health care today, and you will learn a framework for building safer, more reliable systems of care.

In Lesson 1, you'll go beyond the numbers to hear from people who have experienced harm from the health care system and learn how it has changed their lives. You'll explore the reasons that providing safe care isn't always easy in an environment where powerful drugs, quick decisions, and persistent distractions are the norm.

Lesson 2 discusses the component parts of a culture of safety, including psychological safety, accountability, and teamwork and communication. Through different scenarios, you'll learn about the structures and behaviors that contribute to a culture of safety and see these elements at work.

Finally, in Lesson 3, you'll learn that organizations that successfully manage complexity have a deliberate approach to escalating the small concerns and suggestions of employees. Staff members know how to recognize problems, whom to contact, and how to get that person's attention immediately. The leaders, in turn, avoid blame and provide the resources necessary to solve problems.

Estimated Time of Completion: 1 hour 15 minutes

Lessons

Lesson 1: Understanding Adverse Events and Patient Safety

Lesson 2: Your Role in a Culture of Safety

Lesson 3: Your Role in Building Safer, More Reliable Systems

Course Objectives

After completing this course, you will be able to:

1. Summarize why it is essential to improve patient safety.
2. Describe a framework for improving the safety of health care systems.
3. Identify four key elements of a culture of safety.
4. Explain why systematic learning from error and unintended events is the best response to ensuring patient safety.

PS 102: From Error to Harm*

This course provides an overview of the key concepts in the field of patient safety. You'll learn the relationship between error and harm, and how unsafe conditions and human error lead to harm — through something called the Swiss cheese model. You'll learn how to classify different types of unsafe acts that humans commit, including error, and how the types of unsafe acts relate to harm. Finally, you'll learn about how the field of patient safety has expanded its focus from reducing error alone to encompassing efforts to reduce harm as well.

Lesson 1 will describe the Swiss cheese model of accident causation, which represents the ways that serious adverse events are almost always the result of multiple failed opportunities to stop a hazard from causing harm. We'll explore how this model informs thinking about error and harm in health care.

In Lesson 2, you'll learn how the human brain is wired to make certain kinds of mistakes. You'll also learn to identify four kinds of unsafe acts, as defined by psychologist James Reason: slips, lapses, mistakes, and violations.

Lesson 3 looks at how our understanding of harm in the health care system has changed and expanded over time.

Estimated Time of Completion: 1 hour 15 minutes

Lessons

Lesson 1: The Swiss Cheese Model

Lesson 2: Understanding Unsafe Acts

Lesson 3: A Closer Look at Harm

Course Objectives

After completing this course, you will be able to:

1. Explain the Swiss cheese model of error.
2. Define active failures and latent error and discuss their roles in causing harm.
3. List the main types of unsafe acts utilizing James Reason's classification system.
4. Explain why patient safety experts recommend focusing less on reducing errors and more on reducing harm.

PS 103: Human Factors and Safety*

This course is an introduction to the field of human factors: how to incorporate knowledge of human behavior in the design of safe systems. You'll explore case studies to analyze the human factors issues involved in health care situations. And you'll learn how to use human factors principles to design safer systems of care and implement effective strategies to prevent errors and mitigate their effects. Finally, you'll learn how technology can reduce errors — even as, in some cases, it can introduce new opportunities for errors.

The purpose of Lesson 1 is to build awareness of the ways in which multiple factors in the workplace, involving both people and their surroundings, can contribute to error.

Lesson 2 introduces several ways to prevent or mitigate the effects of factors that contribute to error, and provides examples of each.

Lesson 3 discusses the advantages and disadvantages of technology and offers some suggestions on how people can design technology to mitigate the impact of factors that contribute to errors.

Estimated Time of Completion: 1 hour 15 minutes

Lessons

Lesson 1: Understanding the Science of Human Factors

Lesson 2: Design Principles to Reduce Human Error

Lesson 3: The Risks and Rewards of Technology

Course Objectives

After completing this course, you will be able to:

1. Explain how human factors principles apply to health care.
2. Describe how changes to processes can mitigate the effects of factors that contribute to error.
3. Define simplification, standardization, constraints, forcing functions, and redundancies.
4. Discuss the risks and benefits of using technology to improve patient safety.

PS 104: Teamwork and Communication*

Effective teamwork and communication are critical parts of the design of safe systems. In this course, you'll learn what makes an effective team through case studies from health care and elsewhere. You'll analyze the effects of individual behavior for promoting teamwork, communication, and a culture of safety. You will learn several essential communication tools, and you will learn how to prevent common problems associated with lapses in communication during inherently risky health care situations.

Lesson 1 discusses why effective team functioning is so critical to protecting patients from harm, including common types of errors associated with ineffective teamwork and communication. You'll learn to distinguish teams that are working effectively from those that are not.

Lesson 2 provides specific techniques teams can use to improve their communication, such as SBAR (Situation-Background-Assessment-Recommendation), critical language, and briefings.

Lesson 3 reviews some of the most common problems associated with miscommunication during critical transitions in health care – when responsibility for a patient is transferred between providers and/or locations – and how to prevent them.

Estimated Time of Completion: 1 hour 15 minutes

Lessons

Lesson 1: Fundamentals of Teamwork and Communication

Lesson 2: Tools and Techniques for Effective Communication

Lesson 3: Safety During Transitions Across the Continuum of Care

Course Objectives

After completing this course, you will be able to:

1. Explain how individual behavior and team dynamics in health care can make care safer or less safe.
2. Use structured communication techniques to improve communication within health care.
3. Specify possible interventions to improve patient safety and reduce risk during times of transition.

PS 105: Responding to Adverse Events*

In this course, we're going to describe and advocate a patient-centered approach to use when things go wrong. This approach to adverse events and medical error centers on the needs of the patient, but it is also the best way to address the needs of a caregiver in the wake of an adverse event.

In Lesson 1, we'll discuss what caregivers should say – and how to say it – immediately after such an event occurs. Because, as you'll see through several examples, communication is important. You'll also learn who should handle this initial communication and who else may need to be notified about the event.

Lesson 2 offers suggestions for when and how to communicate with a patient after an adverse event, including recommendations for crafting an effective, sincere apology when it is warranted.

In Lesson 3, you'll hear some caregivers describe how terrible they felt after an adverse event occurred in a patient's care. You'll learn what kind of support caregivers may need after an adverse event, including counseling, time off, and involvement on improvement teams. You'll also learn why sometimes caregivers don't receive the necessary support after something goes wrong and how some organizations are working to improve this.

Estimated Time of Completion: 1 hour 15 minutes

Lessons

Lesson 1: Responding to an Adverse Event: A Step-by-Step Approach

Lesson 2: Communication, Apology, and Resolution

Lesson 3: The Impact of Adverse Events on Caregivers: The Second Victim

Course Objectives

After completing this course, you will be able to:

1. Describe four steps to take following an adverse event.
2. Explain how to communicate effectively about bad news and when you should apologize.
3. Discuss the impact of adverse events on providers.

PS 201: Root Cause Analyses and Actions

This course introduces learners to a systematic response to error called Root Cause Analyses and Actions (RCA2). The goal of RCA2 is to learn from adverse events and near misses, and to take action to prevent them from happening in the future. By the end of this course, you'll have a step-by-step approach for investigating an event and improving after something goes wrong.

Lesson 1 introduces RCA2 and describes the key elements of the process, including the concept of risk-based prioritization.

Lesson 2 describes how to conduct RCA2, focusing on actions that should occur within 45 days of an adverse event or near miss incident. You'll learn whom to include on an RCA2 team, how to conduct interviews and draw a high-level flowchart to understand what happened, and how to use what you learn to develop causal statements.

Lesson 3 takes a close look at the true purpose of RCA2: action. You will learn how to compose recommended actions so that people with appropriate authority in the system can use the findings to improve.

RCA² is a trademark of the Institute for Healthcare Improvement. IHI does not endorse any software or training for the RCA² process that is not directly provided by IHI.

Acknowledgement: This course content is based on the report *RCA²: Improving Root Cause Analyses and Actions to Prevent Harm*. IHI gratefully acknowledges the members of the expert panel who contributed to the report.

Estimated Time of Completion: 1 hour 15 minutes

Lessons

Lesson 1: Preparing for Root Cause Analyses and Actions

Lesson 2: Conducting Root Cause Analyses

Lesson 3: Actions to Build Safer Systems

Course Objectives

After completing this course, you will be able to:

1. Explain how adverse events and near misses can be used as learning opportunities.
2. Determine which events are appropriate for Root Cause Analyses and Actions (RCA Squared).
3. Describe a timeline of activities for the RCA Squared review period.
4. Describe activities that should take place during the action period of RCA Squared.

PS 202: Achieving Total Systems Safety

This course will review eight key recommendations for achieving safety on a system-wide level, as proposed by the IHI report *Free from Harm: Accelerating Patient Safety Improvement Fifteen Years after To Err Is Human*.

Lesson 1 will briefly review the complete set of recommendations, with a focus on actions for leaders of health systems.

Lessons 2 will provide a closer review of critical recommendations for supporting the health care workforce. Failure to support the health care workforce is associated with a variety of adverse consequences that ripple across the health care system, making it less safe for patients, families, and providers.

Lesson 3 focuses on how engaging patients and families as respected partners can improve the safety of care.

Acknowledgement: This course content is based on the report *Free from Harm: Accelerating Patient Safety Improvement Fifteen Years after To Err Is Human*. IHI gratefully acknowledges the members of the [expert panel](#) who contributed to the report.

Estimated Time of Completion: 1 hour 15 minutes

Lessons

Lesson 1: Eight Recommendations for Total Systems Safety

Lesson 2: Supporting the Health Care Workforce

Lesson 3: Partnering with Patients and Families

Course Objectives

After completing this course, you will be able to:

1. List eight recommendations for leaders to accelerate patient safety and prevent harm.
2. Explain three key recommendations for promoting safety among the health care workforce.
3. Identify five strategies that empower patient and family engagement in patient safety.

PS 203: Pursuing Professional Accountability and a Just Culture

This course focuses on how organizations can create and foster a culture of safety. It will assist leaders in creating, shaping, and sustaining the type of culture needed to advance patient and workforce safety efforts. It is designed to inspire, motivate, and inform you as you lead your organization on its journey to zero harm.

In Lesson 1, you'll learn how a wrong-site surgery occurred at a respected Boston hospital and how the hospital handled it immediately afterward. The lesson will also discuss a range of responses to error, including whether to disclose the mistake and whether to punish the people involved.

Lesson 2 will describe six domains of a culture of safety and provide useful tools for assessing and advancing your organization's culture of safety.

Lesson 3 will help you determine the current state of your organization's journey toward a culture of safety, to help set priorities and drive improvement.

Estimated Time of Completion: 1 hour 15 minutes

Lessons

Lesson 1: A Just Culture Case Study

Lesson 2: Building a Culture of Safety

Lesson 3: Understanding and Improving Organizational Culture

Course Objectives

After completing this course, you will be able to:

1. Discuss your opinions on one hospital's response to a serious adverse event.
2. Describe six domains of a culture of safety.
3. Explain how to use quantitative and qualitative data to assess the culture of an organization.

Leadership

L 101: Introduction to Health Care Leadership*

When you think of a leader, who comes to mind? A president? A CEO? This course will teach you a different idea of leadership: No matter your position or formal title, you can be a leader. In this course, you'll learn about a hospital that's having some trouble with infection control. As you grapple with the case, you'll learn that leadership isn't a position of authority – it's an action.

In Lesson 1, you'll learn how to persuade different types of people and build enough unity to move forward.

In Lesson 2, you'll learn how good leaders use different approaches to persuade different types of people. You'll learn to develop persuasive arguments based on power, logic, and emotion. You'll also learn some specific tactics to help the teams of which you're a part achieve what psychiatrist John Gardner calls a "workable level of unity."

In Lesson 3, we'll show you how to focus on yourself as you move forward with your career. We'll introduce you to a former IHI Fellow who will share her positive experiences and give you some tips to keep in mind as you start thinking about ways you can improve care. This lesson will provide several strategies to overcome obstacles and chart a steady course toward improvement.

Estimated Time of Completion: 1 hour 15 minutes

Lessons

Lesson 1: What Makes a Leader?

Lesson 2: Practical Skills for Leading Teams

Lesson 3: Strategies to Sustain Your Health Care Leadership Journey

Course Objectives

After completing this course, you will be able to:

1. Describe several characteristics of leaders, who may or may not have formal positions of authority.
2. Describe different techniques for persuading different types of people.
3. Explain why achieving a workable level of unity among teammates is essential for effective team functioning.
4. List several ways to help sustain your health care leadership journey over time.

L 102: Mental Health and Well-being During and After COVID-19

Everyone needs support in times of crisis. For some, informal support from friends, family, or colleagues is sufficient. Others may need professional counseling or treatment. And many would benefit from something in the middle: the type of formalized peer support services we will discuss in this course.

This short course will recommend actions for a difficult time. It will discuss how individual health care workers can promote their own health and well-being, and how team leaders can support staff, reduce fear and anxiety, promote psychological safety, and facilitate peer support and connections everyday – especially during and after the COVID-19 pandemic.

The COVID-19 pandemic is exacerbating existing issues with health care professional burnout and joy in work that will persist once the more immediate crisis has abated. While many staff are currently experiencing distress related to their work, others are not but are at risk of mental health sequelae in the future.

Although this course will cover individual and team leader actions, these are short-term solutions; the actions of system-level leaders remain paramount to maintain and improve all aspects of health care quality and safety, including provider mental health and well-being.

Estimated Time of Completion: 45 minutes

Course Objectives

After completing this course, you will be able to:

1. Describe how you will prioritize self-care during and after the COVID-19 pandemic.
2. Identify steps you will take to support colleagues during and after the COVID-19 pandemic.
3. Explain the concept of peer support in general and in relation to times of crisis.
4. Describe how you will use open, honest questioning as a tool during times of crisis.

L 103: Making Publishable QI Projects Part of Everyday Work

Health care workers often find it challenging to incorporate disciplined quality improvement (QI) into their daily work. Planning, managing, and completing improvement projects with sufficient rigor to generate credible evidence and potentially publishable knowledge are even more difficult. Nonetheless, careful set-up and agile leveraging of existing resources and expertise can lead to surprisingly robust results.

Estimated Time of Completion: 30 minutes

Course Objectives

After completing this course, you will be able to:

1. Describe how you will design and execute improvement projects that yield credible, publishable results.
2. Identify whether or not a QI project is “research” that needs to be reviewed by an institutional ethics review board.
3. Discuss writing strategies that have worked for published authors

L 201: The Role of Leaders in Workforce Safety

In regard to physical injury, hospitals are among the most hazardous job sites in the United States. Meanwhile, it is well-known that the culture of medicine can be toxic and emotionally damaging. When workforce safety is a concern, it impacts patient safety and an organization's financial well-being. If your organization is on a journey to become a high-reliability organization, it needs to prioritize workforce safety.

In this short course, experts will explore the foundational role of leaders in keeping the health care workforce safe and strategies that have succeeded in reducing physical harm and improving psychological safety across organizations.

Estimated Time of Completion: 1 hour

Course Objectives

After completing this course, you will be able to:

1. Explain the impact of health care worker safety on patients, families, and the health care workforce.
2. Establish the business case for workforce safety.
3. Describe how you will implement strategies for reducing physical harm and improving psychological safety across your health care organization.

Person- and Family-Centered Care

PFC 101: Introduction to Person- and Family-Centered Care*

The relationship between patient and provider is changing. Many health care systems aim to provide not only high-quality services, but also patient-centered care that advances the unique health goals of each person and family. In this course, you'll learn about the ideal relationship to promote health — especially for underserved people who face the greatest barriers to health — as well as some practical skills to make the relationship a reality.

In Lesson 1, you'll learn about several models of patient-provider relationships, and we'll introduce a new model: patient-provider partnerships. You'll also hear from a patient about her experience with illness and treatment.

In Lesson 2, you'll see how social conditions, trust in health care, and culture affect the patient-provider relationship.

In Lesson 3, you'll learn several concrete skills any provider can use in clinical interactions with patients to foster such partnerships. You'll also learn about new models of care that position patients at the center.

Estimated Time of Completion: 1 hours 30 minutes

Lessons

Lesson 1: Patient-Provider Partnerships for Health

Lesson 2: Understanding Patients as People

Lesson 3: Skills for Patient-Provider Partnerships

Course Objectives

After completing this course, you will be able to:

1. Describe the partnership model of patient-provider relationships.
2. Explain why the partnership model can improve health.
3. Discuss how social conditions, faith, culture, and trust affect the patient-provider relationship.
4. Identify at least four skills to improve clinical interactions with patients.

PFC 102: Key Dimensions of Patient- and Family-Centered Care

What are the key attributes of patient- and family-centered care, and how can you bring them into health care? In this course, you'll learn the four core concepts of patient-centered care as described by the Institute for Patient- and Family-Centered Care and how to apply them. You'll also see how your health care system can involve patients in redesigning care.

Estimated Time of Completion: 1 hour

Course Objectives

After completing this course, you will be able to:

1. Describe four dimensions of patient- and family-centered care.
2. Identify practices of health care providers that can promote patient- and family-centered care.
3. Discuss how health care systems can collaborate with patients and families on an institution-wide level.

PFC 103: Incorporating Mindfulness into Clinical Practice

Clinicians juggle many tasks all day long: assessing patients, making critical decisions, administering medications, documenting care, admitting and discharging patients, and much more. But when the clinician is able to embrace an aware, focused, and present state – that transcends the execution of tasks – that is practicing mindfulness.

This course will show you how to incorporate mindfulness into your practice. You'll learn how it can improve patient safety, quality of care, the patient experience, and joy in work in any health care setting.

This content was made possible through grant funding awarded to the primary author, Kate FitzPatrick, DNP, RN, ACNP, NEA-BC, FAAN, by the Robert Wood Johnson Foundation (Executive Nurse Fellowship Program, 2014 Cohort).

Estimated Time of Completion: 1 hour

Course Objectives

After completing this course, you will be able to:

1. Describe the need for mindfulness practices in the health care setting, including how these practices relate to quality of care, patient safety, patient experience, and joy in work.
2. Explain the difference between informal and formal mindfulness practice.
3. List several examples of mindfulness exercises for the health care setting.
4. List four situations in health care when mindfulness is especially important.
5. Conduct a body scan.

PFC 104: Confronting the Stigma of Substance Use Disorders

How does the language we use to describe health conditions affect the way we treat patients? In this short course, you'll learn to recognize substance use disorders (SUD) as a chronic disease — like diabetes — that can be prevented and treated. You'll practice swapping stigmatizing phrases that frame SUD as a moral failing with language that emphasizes the person, rather than the condition, and emphasizes the possibility and power of recovery.

Estimated Time of Completion: 30 minutes

Course Objectives

After completing this course, you will be able to:

1. Define substance use disorder as a chronic disease rather than a moral failing.
2. Describe how you will use person-first, recovery-focused language to help destigmatize substance use disorders.

PFC 201: A Guide to Shadowing: Seeing Care through the Eyes of Patients and Families

In this one-lesson course, we'll introduce you to patient and family shadowing, a valuable exercise for health professions students and health care professionals at any stage of their career. You'll learn five steps for using shadowing to better empathize with patients and families. You'll see how empathy can help you in your daily work, and how it can drive a sense of urgency to start testing and spreading changes to improve care.

Estimated Time of Completion: 30 minutes

Course Objectives

After completing this course, you will be able to:

1. Define patient and family shadowing.
2. List five steps for conducting a successful shadowing project.
3. Describe how to interact with patients, families, and clinical staff involved in a shadowing project.
4. Discuss how you can use your shadowing experience to create a care experience flow map, observational summary, and final report.
5. Explain how shadowing can help you come up with ideas for changes to improve care.

PFC 202: Having the Conversation: Basic Skills for Conversations about End-of-Life Care

In conjunction with the Boston University School of Medicine and The Conversation Project (an initiative of IHI), the IHI Open School offers this course to introduce students and health professionals to basic skills for having conversations with patients and their families about end-of-life care wishes.

This course will also help you develop skills to have conversations with patients and their families about their preferences for care at the end of life. As part of developing these skills, the course invites you to “have the conversation” yourself, with a family member or other loved one.

In Lesson 1, we’ll talk about why it’s important to communicate with patients and families about their wishes regarding end-of-life care. People are dying for different reasons today than they were a century ago, but too often they aren’t dying where (or how) they’d like to.

Lesson 2 will guide you step by step through the delicate, but meaningful process of having the conversation about end-of-life care. We’ll show you a video of people who have had the conversation with their families, and we’ll introduce you to something called The Conversation Project.

In Lesson 3, we’re going to focus on practical skills for having the conversation with patients and their families about their wishes regarding end-of-life care; about how best to respond to questions they might ask you; and about difficult family situations and how to deal with them.

We are focusing on talking about end-of-life care, but the truth is, these are skills that will help with all important conversations you have with patients and their loved ones.

Estimated Time of Completion: 1 hour 30 minutes

Lessons

Lesson 1: Conversation: An Essential Element of Good End-of-Life Care

Lesson 2: The Conversation Begins with You

Lesson 3: Understanding and Respecting Your Patients’ Wishes

Course Objectives

After completing this course, you will be able to:

1. Conduct conversations with patients and families to learn their wishes for end-of-life care.
2. Explain available treatment options to patients and families in terms they can understand.
3. Demonstrate how to answer difficult questions related to end-of-life care.
4. Facilitate conversations with patients and families to help them make decisions about end-of-life care, based on an understanding of what matters most to them.

PFC 203: Providing Age-Friendly Care to Older Adults

The John A. Hartford Foundation and the Institute for Healthcare Improvement (IHI), in partnership with the American Hospital Association (AHA) and the Catholic Health Association of the United States (CHA), set a bold vision to build a social movement so that all care with older adults is age-friendly care. This means all older adults receive care that: follows an essential set of evidence-based practices; causes no harm; aligns with what matters to the older adult and their family caregivers

Becoming an Age-Friendly Health System entails reliably providing a set of four evidence-based elements of high-quality care, known as the “4Ms,” to all older adults in your system. When implemented together, the 4Ms represent a broad shift by health systems to focus on the needs of older adults.

Lesson 1 will review the 4Ms Framework. Follow along with the Guide to Using the 4Ms in the Care of Older Adults to learn how to become an Age-Friendly Health System.

In Lesson 2, we will review a series of steps (a “recipe”) for integrating the 4Ms into your standard care: understand your current state; describe care consistent with the 4Ms; design or adapt your workflow; provide care; study your performance; improve and sustain care.

In practice, you can approach steps two through six as a loop aligned with Plan-Do-Study-Act (PDSA) cycles. Lesson 3 will review how to do this.

Estimated Time of Completion: 1 hour 15 minutes

Lessons

Lesson 1: Overview of Age-Friendly Health Systems

Lesson 2: Putting the 4Ms into Practice: A Recipe

Lesson 3: Integrating the 4Ms into Care Using PDSA

Course Objectives

After completing this course, you will be able to:

1. Define age-friendly care.
2. Describe the 4Ms framework, which presents four evidence-based elements of high-quality care for older adults.
3. Explain how you will assess the current state of the 4Ms in your health system and how to act on those findings to incorporate the 4Ms into routine care.
4. List six steps you will take to integrate the 4Ms into standard care for older adults.

Triple Aim for Populations

TA 101: Introduction to the Triple Aim for Populations*

You might think we do a pretty good job of providing care to individuals with illnesses and diseases. But it's important to take a step back and consider the factors contributing to illness. It's important to realize that things like education, the environment, and wealth (and how it's distributed) play an enormous role in health outcomes, too.

In this course, you'll learn that to make progress against many of the most important threats to human health, it's not enough to improve clinical care for one patient at a time. We also have to focus on improving the health of entire populations.

The Triple Aim for populations is a three-part aim: better care for individuals, better health for populations, all at a lower cost. This course will explore why each dimension is an essential part of improving health and health care, and how you can promote the Triple Aim in your organization and daily work.

Lesson 1 will introduce you to the concept of population health — a different way of thinking about how and why some of us enjoy healthy lives and others do not.

In Lesson 2, we'll share strategies for providing excellent care experiences at the individual level and maximizing health care's impact on overall health.

Lesson 3 will explain why lowering costs of care is an essential component of improving the quality of health care and the health of populations. We'll step back to show you how organizations and communities are working together to make a difference for the populations they serve — part of which is lowering costs.

Estimated Time of Completion: 2 hours

Lessons

Lesson 1: Improving Population Health

Lesson 2: Providing Better Care

Lesson 3: Lowering Costs of Care

Course Objectives

After completing this course, you will be able to:

1. Describe the three components of the IHI Triple Aim for populations.
2. Explain the responsibilities of clinicians and health care systems in optimizing population-level outcomes with available resources.
3. Understand medical care as one determinant of the overall health of a population, and the relationship of health care quality and safety to population health.
4. Provide examples of population-level interventions designed to improve overall health and reduce costs of care.

TA 102: Improving Health Equity

This three-lesson course will explore health disparities – what they are, why they occur, and how you can help reduce them in your local setting. After discussing the current (and alarming) picture, we'll learn about some of the promising work that is reducing disparities in health and health care around the world. Then, we'll suggest how you can start improving health equity in your health system and community.

Lesson 1 uses statistics and videos of experts to highlight disparities in health care and health – and to consider what's causing these gaps to widen among populations.

In Lesson 2, it's time to examine work that is reducing inequities by better serving people with poor health and inadequate health care. We'll introduce IHI's Framework for Health Care Organizations to Achieve Health Equity and give examples of organizations pursuing equity by taking a tour of several successful initiatives.

Finally, it's your turn. You have the opportunity to make a difference in the lives of patients and their communities. In Lesson 3, we offer several strategies for getting started.

Estimated Time of Completion: 2 hours

Lessons

Lesson 1: Understanding Health Disparities

Lesson 2: How Health Care Can Advance Health Equity

Lesson 3: Your Role in Improving Health Equity

Course Objectives

After completing this course, you will be able to:

1. Recognize at least two causes of health disparities in the US and around the world.
2. Describe at least three initiatives to reduce disparities in health and health care.
3. Identify several ways you can help reduce health disparities.

TA 103: Increasing Value and Reducing Waste at the Point of Care

This course will provide you with an overview of value in health care. We'll start by distinguishing between cost and value, and understanding how both of these concepts relate to quality.

We'll introduce you to the growing problem of health care spending, as well as the health care practitioner's role in managing these costs. Finally, we'll explain how to identify and overcome barriers to providing high-value, cost-effective care.

Estimated Time of Completion: 45 minutes

Course Objectives

After completing this course, you will be able to:

1. Explain the potential harm of low-value tests and procedures.
2. Distinguish between cost and value in health care.
3. Define resource stewardship in health care.
4. Describe the ethical case for resource stewardship in health care.
5. Identify common barriers to resource stewardship and enablers of inappropriate resource use.

TA 104: Building Skills for Anti-Racism Work: Supporting the Journey of Hearts, Minds, and Action

In this course, we will build skills to counter structural racism and improve health equity. We will examine the ways racism and anti-racism operate in our organizations and systems, with a focus on addressing inequities in health and health care. You will learn strategies for starting or continuing your work in this area individually and collectively.

This course largely focuses on the history of anti-Black racism and resistance in the United States. These specific learnings can fuel work to address inequities worldwide so that all people can achieve their full potential.

In Lesson 1, we will begin by defining racism and the way it operates not simply through individuals, but through our organizations, policies, and structures. Then, we will focus on anti-Black racism from the 1600s to today.

In Lesson 2, we will focus on racism and anti-racism in health and health care. We will talk about the history of mistreatment and mistrust between communities and health care providers, as well as other institutions that play a crucial role in health and well-being. We will look at implicit bias and the ways racism can influence our actions without our awareness. And, we will hear about “curb cut thinking” and how we can address inequities facing groups experiencing disadvantage to improve health and health care for all.

In Lesson 3, we offer several strategies for getting started or continuing your work as an individual and in your workplace, school, or community. Finally, we’ll share resources to continue to learn, explore structural and systemic change, and improve health equity and well-being.

Estimated Time of Completion: 1 hour 35 minutes

Lessons

Lesson 1: Racism and Anti-Racism in the US: History and Context

Lesson 2: Focus on Health and Health Care

Lesson 3: What You Can Do

Course Objectives

After completing this course, you will be able to:

1. Define anti-racism and four types of racism.
2. List ways that structural racism creates and reinforces inequities in the US.
3. Name examples of structural and institutional racism in health and health care.
4. Define implicit bias and list ways to reduce and mitigate it.

TA 105: Conservative Prescribing

This course provides an overview of conservative prescribing, an approach that encourages health care professionals to ask questions and carefully weigh the risks and benefits of a medication before starting or continuing a prescription. You'll learn how to prescribe drugs strategically and to recommend non-drug therapy where appropriate. You'll learn to watch for adverse events and consider long-term, broader health effects. Finally, you'll learn critical skills to create a shared agenda with patients and families, and to evaluate data to improve the health and quality of life of patients.

Although medications can provide great benefits for patients, they can also cause great harm. Lessons 1 and 2 introduce the concept of conservative prescribing and explore the six domains of conservative prescribing: think beyond drugs, prescribe strategically, watch for adverse effects, use caution with new drugs, engage patients and families, and consider the long term.

Lesson 3 examines drug approval pathways and key features of clinical trial design that play a role in evidence about new drugs. When a medication is approved, information about the drug is shared through different formats, including published studies, clinical guidelines, thought leader opinion articles, and advertising by pharmaceutical companies.

A variety of tools can support conservative prescribing, including use of non-pharmaceutical therapy, shared decision making with patients, and collaboration across the care team. Lesson 4 builds on earlier lessons, offering practical strategies and resources to inform more conservative prescribing.

This content was made possible through grant funding to Brigham and Women's Hospital and Dr. Gordon Schiff by the Gordon and Betty Moore Foundation. Dr. Schiff was the principal investigator for the project.

Estimated Time of Completion: 1 hour 40 minutes

Lessons

Lesson 1: Balancing Risks and Benefits

Lesson 2: Six Domains of Conservative Prescribing

Lesson 3: Evaluating Evidence for New Medications

Lesson 4: Strategies and Resources for Better Prescribing

Course Objectives

After completing this course, you will be able to:

1. Define conservative prescribing.
2. Interpret claims about the risks and benefits of drugs, especially new drugs, based on an understanding of the strengths and limitations of available evidence.
3. Describe historical and current examples of serious adverse drug effects.
4. Apply the six domains of conservative prescribing to optimize the safety and effectiveness of drug therapy.

TA 201: Pathways to Population Health

While health care leaders increasingly recognize the opportunity to improve the health of the communities they serve, the pathways to do so remain the roads less traveled.

In the words of one CEO, “I’m on the bus for population health; in fact, I’m driving the bus. But I need help shifting my core business — all of which focuses on sick care — to focus on health and well-being. I need a roadmap to help me know how to do that.”

In this course, we present a roadmap for those involved in setting and operationalizing their organization’s population health strategy. It’s a new way for health care change agents at all stages of their population health journeys to organize efforts and guidance to start making improvements in health, well-being, and equity for patients, populations, and communities.

Estimated Time of Completion: 35 minutes

Course Objectives

After completing this course, you will be able to:

1. Identify the four portfolios of population health and list associated activities and examples.
2. Describe how to organize your strategy around the four portfolios and equity.
3. Explain the uses of tools and tips for accelerating your progress in population health, well-being, and equity.

Graduate Medical Education

GME 201: Why Engage Trainees in Quality and Safety?

In this course, we'll discuss several reasons why organizations should strive to incorporate trainees (medical residents and fellows) in quality and safety work. You will hear from faculty and residents about why this effort is so important – and how it can enhance the overall quality and safety of health care delivery.

Estimated Time of Completion: 30 minutes

Course Objectives

After completing this course, you will be able to:

1. List at least two reasons why it is important to engage medical residents and fellows in quality and safety work.
2. Describe the benefits of starting quality and safety training during a residency or fellowship.
3. Identify at least three barriers to engaging residents and fellows in quality and safety work.

GME 202: The Faculty Role: Understanding & Modeling Fundamentals of Quality & Safety

Just because you agree that quality and safety are priorities doesn't mean you will feel well prepared to lead the charge in these complex areas. You may be at the very beginning of your own journey toward becoming proficient in quality improvement and patient safety (QI/PS) – and that's okay.

In this course, you'll gain a better understanding of your current knowledge of QI/PS, and then have the opportunity to expand your knowledge where it may be lacking. Even if you haven't received formal training in these areas, we'll show you that teaching QI/PS skills to the next generation relies on faculty like you.

Estimated Time of Completion: 30 minutes

Course Objectives

After completing this course, you will be able to:

1. Explain why it is important for faculty members to engage trainees in meaningful QI/PS work that is tied to everyday clinical care.
2. Describe four principles for designing educational experiences in QI/PS.
3. List the core competencies in QI/PS that every faculty member should possess.
4. List several ways faculty can model the use of improvement principles in everyday work.

GME 203: Designing Educational Experiences in Health Care Improvement

In this course, we'll discuss how to create an effective curriculum to teach quality improvement and patient safety. We'll provide some examples of organizations that have been successful in this endeavor, along with a planning checklist any institution can use. We'll also highlight some organizations that are successfully integrating didactic sessions with experiential training – a topic we'll discuss further in the next course in this series.

Estimated Time of Completion: 30 minutes

Course Objectives

After completing this course, you will be able to:

1. Explain what kinds of topics are important to include in a didactic curriculum on QI/PS for trainees.
2. Give examples of available QI/PS training materials, and explain how they could be integrated into a curriculum.
3. Describe the characteristics of a successful QI/PS curriculum for adult learners.

GME 204: A Roadmap for Facilitating Experiential Learning in Quality Improvement

In this course, we'll provide a roadmap that will help you engage trainees in experiential learning at the point of care. We'll cover three different models of experiential learning within an adaptable framework. Based on your setting, role, and evolving comfort with quality improvement and patient safety (QI/PS) concepts and tools, you'll choose the best approach for you.

Estimated Time of Completion: 60 minutes

Course Objectives

After completing this course, you will be able to:

1. Explain the importance of supplementing didactic instruction with experiential training.
2. Describe three different models for experiential learning, and list several pros and cons of each.

GME 205: Aligning Graduate Medical Education with Organizational Quality & Safety Goals

In this course, we'll present innovative strategies that training programs around the country are using to engage residents in institution-wide quality improvement and patient safety (QI/PS) efforts. This toolbox of change ideas will help you or your institution's quality leaders build successful collaborations between existing QI/PS infrastructures and graduate medical education (GME) programs.

Estimated Time of Completion: 1 hour

Course Objectives

After completing this course, you will be able to:

1. List and describe four change ideas that are being implemented in training programs around the country to accelerate QI/PS education at the graduate medical education level.
2. Discuss the cultural shift that is occurring, in which organizations are focusing on root cause analysis and systemic improvement as opposed to placing individual blame.
3. Suggest at least two reasons why trainee participation in institutional QI/PS activities and committees is critical.