Overview
Improvement doesn’t just happen. Many health care organizations have the best of intentions to improve their clinical, operational and customer service processes, but they fall short of their goals because they lack the internal expertise needed to effectively and consistently execute quality improvement strategies.

The Improvement Science in Action course is designed to help health care organizations develop the skills and resources they need to carry out successful improvement projects. The course includes a 3-day workshop, one pre-work conference call, and two follow-up conference calls. It combines brief lectures with frequent interactive group exercises to support key concepts and tools. Participants should bring an improvement project charter to the workshop on which they are either currently, or plan to, work. Participants immediately apply what they have learned to their own improvement project. By the end of the course, participants can expect to have a strong start on a project that will show meaningful results in the months to come.

This prework packet is designed to help you get maximum return on your involvement in the course. It includes some background readings, a guide to selecting the project that you will work on during the course, and important information about course timing, procedures, and logistics.

Readings

Required Articles for Review:


To access copies of these articles and other materials for this meeting, please follow the steps below:

- Visit [www.ihi.org](http://www.ihi.org)
- Click on the “Login/Register” link at the top of the page
- Login using the email address and password that you used to register for the program
- When you have successfully logged in, click the “My IHI” link at the top of the page
- On the left-hand side of the page, click on “My Enrollments & Certificates”
- Under the title “Improvement Science in Action Seminar,” click on “Materials/Handouts”
All currently available presentations and resources will be available on this page. Some presentations may not be available until the program concludes. Please note, faculty may edit or update their presentations at their discretion. We will continually update this page as we receive new and updated presentations and resources.

Additional resources for your reference:

Project Selection

For this interactive workshop to have maximum benefit, it is essential that you identify an improvement project on which to focus your learning. In preparation for the course, you will develop a charter that formally describes your project (instructions follow).

Here are some guidelines for selecting an appropriate project:

- The proposed project should be important. Ideally it should be connected to strategic and business plans of your organization.
- The anticipated results of the project matter and are expected to be significant for the organization. The project is important to the leadership of your organization for one or more of the following reasons:
  - Patients are experiencing problems with safety, service or outcomes
  - There is a need to reduce costs while maintaining or improving quality
  - There is a need to expand customer expectations and attract new markets
- We strongly suggest that the scope of your project allows it to be completed in nine months or less. (If your work is focused on a large, long-term, improvement project you should scale down the effort, or select a portion of the project that can be accomplished in nine months or less).
- Key measures of success that connect directly to the goals for the project have been identified. Ideally, baseline data for the measures are available.
- The systems, processes, products, or organizations where the anticipated changes must be made are within the control or influence of you or the senior leader supporting your project.
- The project has a sponsor, that is, a senior leader who agrees to actively provide guidance, routinely monitor project progress and aggressively remove barriers.

The following are good examples of appropriate projects:

- Improve a process that produces good results most of the time but occasionally results in errors or problems (e.g. testing new protocols for reducing errors).
- Develop a new process, product or service because the previous product, process or service was plagued with problems to the point they were not worth fixing and the process needed to be discontinued all together and replaced with a new process. (e.g. develop and test new patient discharge process).
- Identify a service that better matches and meets a patient or family need, even if patients or family have not expressly asked for it. (e.g. test a process to better assess long term care residents’ needs)
- Identify and improve processes, products, and services by making fundamental changes even though the output is currently not considered a problem, in order to deliver even better outcomes in the future.
• Improve a product, process, or service today, which will put us in a better competitive position (e.g. improve outcomes for patients with chronic conditions through self-management support that includes collaborative goal setting, action planning, and problem solving).

**The following projects are NOT appropriate for this program:**

• Developing a measurement system. Such things as Balanced Score Cards, surveys, core measures, etc.
• Fix a recent problem to put process back (restore) to the level it was designed to perform.
• Implement various types of inspection or reviews to prevent errors from reaching a customer.
• A one-time, or infrequent, training or educational workshop.
• Any project where you cannot answer the question "How do you know a change is an improvement?"
• Huge ("solving world hunger") projects. Strategic issues, while worthy of work by their very nature, will require more than 9 months. Consider scaling down or partitioning these projects into a more manageable “chunk.”
• Politically charged issues are not a wise choice of projects for the Improvement Science in Action workshop; they can easily get mired in conflict.
• Improving employee compensation or rewards.

**Expectations for Participation**

• Attendance at the three-day workshop August 12-14, 2013
• Participation on the Pre-work call (July 9, 2013) and two WebEx sessions (September 4 and September 26, 2013).

  • Please mark your calendars now to be able to participate in all calls.
  • Send charter (MS-Word format) to Carly Underwood (cunderwood@ihi.org) by August 1. Guidance follows.
  • Commitment to work on the project immediately following the workshop
  • Willingness to share your work with the rest of the participants

**Call Schedule**

**Pre-work Call: July 9 from 3:00 – 4:00pm ET**

**Agenda:** Faculty will discuss the pre-work instructions and answer questions from participants.

**Follow Up Call 1: September 4 from 11:00am – 12:00pm ET**

**Assignments:** Participants will present and discuss their initial tests of change and measurement plans.

**Follow Up Call 2: September 26 from 11:00am – 12:00pm ET**

**Assignments:** Participants will present and discuss their current project data and their analyses of and learning from process successes and failures.

**Conference Call and Webex Information are attached.**
Developing your Project Charter

A charter is the guiding document that helps you structure your improvement project. It provides a rationale for your work that can be used to clarify your thinking about what needs to be done and why, and it provides a key communication tool to help you inform your colleagues and sponsors about what you are doing. The charter helps to maintain focus on a specific opportunity or problem and to identify appropriate members of the improvement team. The charter begins to answer the three essential questions of the Model for Improvement:

- What are we trying to accomplish?
- How will we know that a change is an improvement?
- What changes can we make that will lead to improvement?

Below are a set of questions to guide your thinking. Of course, your project may require answers to some and not others; however, please think carefully about the implications of each one. The goal of this prework exercise is to help you begin the very important process of thinking it through.

**What are we trying to accomplish?**

**General Description** (briefly defines WHAT broadly)
Provides an initial orientation toward the activities of the improvement initiative, e.g., design of a new process, improve an existing product or service, etc. Describes the subsystem(s), pilot population or demonstration unit in the organization in which the improvement will take place.

**Reason for the Effort** (Problem statement; defines WHY)
- Why is the effort important?
- How will this improvement benefit the organization?
- What is the potential downside of this effort for the organization?
- What data/analysis supports the choice?
- How does it impact patients?

**Expected Outcomes** (defines WHAT specifically, still not HOW)
- Anticipated outcomes (products, tools, and deliverables) or success criteria.
- Specific objectives to be accomplished.
- Specific, numerical goals to be attained.
- Business impact (financial, throughput, cost, and productivity).
- Time frame: expected dates for key milestones and completion date.

**How do we know that a change is an improvement?**

Feedback, Measures or Indicators: define the measures that will be used to monitor the impact of this 3-9 MONTH improvement effort:
- Connect measures to the goals and outcomes of the charter
- Measures monitor and guide progress of work on the charter.
- Consider qualitative feedback as well as quantitative measures.
- Consider both outcome and process measures.
- Are balancing measures needed to guard against sub-optimization (unintended consequences)?
What changes can we make that will lead to improvement?

- **Initial Activities:** provide initial focus for the project work, e.g., specific issues to investigate and/or alternatives to consider, concept design for the team to work with, guidance on adapting and testing some specific change ideas, summarize recent patient feedback, do a process map of current reality, etc.
- **Boundaries:** list any project constraints, financial limitations, existing guidelines or procedures to be adhered to, software considerations, what is not to be addressed, etc.
- **Resources:** Team membership (includes all members and the rationale for their inclusion on the team) and their expected time commitments for the work.
- **Sponsorship:** States the person or guidance team that is providing resources to work on the charter.

Example 1

**What are we trying to accomplish?**

**Overview**

To reduce the number of in-patient falls that occur on units 4C and 6W by 30% within 9 months.

**Problem Statement (Why we want to do this work)**

Our strategic plan calls for no preventable deaths, injuries, infections, pain, and suffering and the current state of our baseline data shows a general increase in the total number of falls occurring on the inpatient units. Falls are listed on the CMS hospital acquired conditions impacting payment for cases when an injury from a fall occurs during hospitalization. This is a patient sensitive indicator that nurses own and control. This is a measurement of their practice. A problem analysis uncovered numerous opportunities that can be managed on the units.

**Project Scope**

We will focus our efforts to reduce in-patient falls on units 4C and 6W for a period of 9 months.

**Expected Outcomes**

- Reduce falls to <3.5 per 1000 patient days (this is a 30% reduction)
- Reduce moderate (or higher) harm from falls to <0.1 per 1000 patient days
- Use a standard, evidence based approach to assessing patients’ risk for falls such that:
  - 95% of patients will have a falls risk assigned every 8 hours
  - 95% of patients on 4C and 6W will have evidence of hourly rounding
  - 95% of patients and families can verbalize their role in falls prevention
- We will not lose revenue associated with patient falls

**How will we know a change is an improvement?**

- Falls per 1000 patient days
- Percent compliance to falls risk assessment
- Percent compliance to hourly rounding
- Percent of patient and families that can describe their role in falls prevention
- Revenue associated with patient falls
What changes can we make that will result in Improvement?

Develop processes for:

- reliable rounding and documentation of rounding
- engaging patient/families to assist in prevention of patient falls
- assessing and documenting for fall prevention
- “huddling” after each fall
- engaging staff in this initiative. (Know why it is important, drive a culture change that falls should not be acceptable during a patient stay and to modify the plan for each patient)

Team members will include a nurse manager, staff nurse, patient/family member, and a nurse educator

Example 2

Overview

We will dramatically reduce the time to first dose antibiotics for ER and direct admit pneumonia patients over the next 6 months. This is important to our organization because:

Problem Statement

- Pneumonia is the 6th leading cause of death in United States and the 4th at our organisation during FY08.
- Pneumonia patients who receive timely antibiotics (less than 4 hours of hospital arrival) have been shown in studies to have statistically significant reduced mortality rates both in the hospital and for 30 days after admission.
- These same patients have shorter lengths-of-stay compared to pneumonia patients who had received antibiotics later than 4 hours. Lower length of stay will reduce variable cost for treatment of pneumonia patients.
- Comparing our pneumonia LOS data against the state reveals differing levels of variation depending on what classification system is used....additionally, when comparing DRG and RDRG percent mortality we are 1.5% and 1.4% over the state averages respectively.
- Our average time to administration of first dose antibiotics is stable and predictable at around 222 minutes (almost 4 hours). It is important to note that although the average is under 4 hours, 24% are receiving antibiotics after 4 hours has passed.
- The public release of JCAHO’s Quality Report, the Centers for Medicare and Medicaid Services (CMS) pay for performance initiative, and the ever increasingly savvy health care purchasers and consumers will force us to perform better on this measure in the very near future.

Project Scope

We will focus our efforts on ER and direct admit pneumonia patients for six months.

Expected Outcomes

- Provide 90% or greater of pneumonia patients entering care, regardless of admission source (ER or direct admits) will receive first dose antibiotics within 4 hours
- Lower our average LOS by 15%
- Lower our percentage mortality by 10%
Measures

- Percent of ED patients with pneumonia who receive antibiotics within 4 hours – now at 76%
- Percent of direct admit patients with pneumonia who receive antibiotics within 4 hours – now at 56%
- Average LOS for ED pneumonia patients
- Average LOS direct admit pneumonia patients
- Percent mortality for ED pneumonia patients
- Percent mortality for direct admission pneumonia patients

Example 3

Overview

Reduce outpatient appointments in secondary care in order to reduce pressure on acute care by simplifying and standardizing the diabetes patient journey to lead to earlier treatment and reduction in duplication.

Problem statement

The current diabetes patient journey is complex and unclear which results in increased duplication of services and outpatient appointments in secondary care. In the period between 2004 through 2006 nearly 13,563 follow-up appointments were made in MDC. In nearly 75% of these cases a specialist treatment is not required. There is a need to define simplified patient journey for diabetes and identify activities within Secondary care that can reasonably be delivered within primary care reducing pressure within the acute sector to deliver services faster.

Project Scope

- Diabetes type-2 patients with the exclusion of:
  - Unscheduled activity
  - Complex diabetes management
  - High risk age groups
  - Pregnancies

Expected Outcomes

- Reduction in outpatient appointments in secondary care that leads to reduced pressure on acute care
- Simplified and standardised diabetes patient journey that leads to earlier treatment and reduction in duplication
- Resultant financial benefit
- Improved clinician, patient, caregiver/relative experience

Ideas for Change

Simplification and standardization: from a patient journey that involves unclarity and duplication of work resulting in excessive referrals to secondary care

Substitution: of secondary services by primary care services i.e. extended services by GP practices

Proposed Team: PCP, opt nurse care manager, patient with diabetes, specialist, QI consultant
Measures

- Reduction in diabetic type-2 outpatient appointments
- Change in the level of services (as defined in the ladder model) offered by GP practices
- Cost benefit analysis
- Patient and carer/relative satisfaction

Charter Template

**What are we trying to accomplish?**
General Description (briefly defines WHAT broadly)
Reason for the Effort (Problem statement; defines WHY)
Expected Outcomes (defines WHAT specifically, still not HOW)

**How do we know that a change is an improvement?**
Feedback, Measures or Indicators: define the measures that will be used to monitor the impact of this 3-9 MONTH improvement effort:

**What changes can we make that will lead to improvement?**

**Team composition**