Quality Improvement for Leaders

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Quality Improvement for Leaders

Objectives:

- Understand the foundation of improvement methods from the science of improvement.
- Provide tools and methods to support improvement and innovation in member organizations.
- Describe the use of the Model for Improvement as a roadmap for improvement initiatives.
- Understand the use of data for improvement.
- Describe the use of collaborative innovation networks to accelerate improvement across a system.
Quality Improvement for Leaders - Agenda

8:30 Welcome and overview of the day
   Leading improvement in organizations (QI and QA)
   The Science of Improvement

10:30 Break

10:45 The Model for Improvement

12:00 Lunch
   1:00 Developing an aim statement and measurement strategy
   Collaborative Improvement

3:00 Discussion and Wrap-up
Quality in Public Health?

“Quality in public health is the degree to which policies, programs, services and research for the population increase desired health outcomes and conditions in which the population can be healthy.”

Public Health Quality Forum
The Quality Pioneers

Walter Shewhart
(1891 – 1967)

W. Edwards Deming
(1900 - 1993)

Joseph Juran
(1904 - 2008)
Quality: A “new” Approach

FREQUENCY

"Bad Apples"

Minimum Standard

Level of Quality

Traditional Quality Assurance
The Juran Trilogy:

- The Juran Trilogy consists of three types of activities:
  - Quality Planning,
  - Quality Control (or Quality Assurance)
  - Quality Improvement

*Quality Planning:*

- Setting aims
- Selecting improvement projects
Quality Control

- Quality Control (QC): “Quality control is the regulatory process through which we measure actual quality performance, compare it with quality goals, and act on the difference” (Juran, 1988)

- Define the control – what to control
  - Units of measurement (e.g. hours spent, fuel efficiency, number of errors, etc.)
  - Specific measurement (e.g. X number of errors, etc.)
  - Standard of performance (against which to measure any deviations)
Quality Improvement

- *Quality Improvement (QI):* "The organized creation of beneficial change; the attainment of unprecedented levels of performance." (Gibbons, 1994).
- Prove the need for improvement
- Identify specific projects
- Select appropriate project team
- Charter the project team activities
- Provide recognition for the team
- Track and follow-up to sustain improvements
Juran Trilogy

FIGURE 4.1 The Juran trilogy diagram. (Juran Institute, Inc., Wilton, CT)
Health Care QI

“The National Demonstration Project on Quality Improvement in Health Care” ("NDP")

- 20 Hospitals and 21 Quality Improvement Experts
- 8 Months – September 1986 to June 1987
- Initial and Summary Conference
- “Curing Health Care”
- Don Berwick formed IHI at end of project
Lessons: Curing Health Care (Berwick et al)

Lesson 1: Quality Improvement Tools Can Work in Health Care
Lesson 2: Cross-Functional Teams Are Valuable in Improving Health Care Processes
Lesson 3: Data Useful for Quality Improvement Abound in Health Care
Lesson 4: Quality Improvement Methods are Fun to Use
Lesson 5: Costs of Poor Quality Are High and Savings are Within Reach
Lesson 6: Involving Doctors is Difficult
Lesson 7: Training Needs Arise Early
Lesson 8: Non-clinical Processes Draw Early Attention
Lesson 9: Health Care Organizations May Need a Broader Definition of Quality
Lesson 10: In Health Care, as in Industry, the Fate of Quality Improvement Is First of All in the Hands of Leaders
This article discusses a definition of quality improvement in public health and describes a continuum of quality improvement applications for public health departments.

Quality improvement is a distinct management process and set of tools and techniques that are coordinated to ensure that departments consistently meet the health needs of their communities.
The Drivers of Improvement

Having the **Will** (desire) to change the current state to one that is better

Developing **Ideas** that will contribute to making processes and outcomes better

Having the capacity to apply QI theories, tools and techniques that enable the **Execution** of the ideas
Dr. W. Edwards Deming stressed the importance of studying four areas to become more effective in leading improvement:

- Appreciation of a system
- Understanding variation
- Theory of knowledge
- Psychology

The Basis for the Science of Improvement

Based on Deming’s System of Profound Knowledge

- Appreciation of a system
- Understanding Variation
- Human Side of Change (Psychology)
- Building Knowledge (Theory of Knowledge)
Deming’s System of Profound Knowledge

"One need not be eminent in any part of profound knowledge in order to understand it and to apply it. The various segments of the system of profound knowledge cannot be separated. They interact with each other. For example knowledge about psychology is incomplete without knowledge of variation."

Profound - having intellectual depth and insight  (Webster)
Two Types of Knowledge

Subject Matter Knowledge: Knowledge basic to the things we do in life. Professional knowledge.

Subject Matter Knowledge: e.g. nutrition

Profound Knowledge: The interplay of the theories of systems, variation, knowledge, and psychology.
Knowledge for Improvement

**Improvement:** Learn to combine subject matter knowledge and profound knowledge in creative ways to develop effective changes for improvement.

*E.g.* How do you combine both types of knowledge to develop changes to improve the health of women, children and families through better nutrition?
# Milestones for Development of Profound Knowledge

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*Events that made a significant impact on the view of Dr. Deming, Blankenship & Petersen (1999)
Applying the Science:

Key Principles to Guide Improvement work

- We can think of all work as a process.
- A system is an interdependent group of items, people, and processes with a common aim.
- Every system is perfectly designed to achieve the results it achieves.
- People are a key part of systems in organizations – they want to do a good job and take pride in their work.
- Improvement requires change, but not every change is an improvement.
- Variation in data can be due to common and special causes.
- Improvement in quality can occur with reduction in costs (the Chain Reaction and Business Case for Quality).
Elements of a Process

5. Suppliers

- 1. Sequence of steps
- 2. Thing being passed along
- 3. Inputs

6. Customers

- 4. Outputs

“QUALITY” Attributes of the outputs that meet the needs and aspirations of the customers
What Can Go Wrong in a Process?

1. Problems in execution within steps

2. Problems in hand-off between steps

3. Process was not designed to meet the needs
System Principles

- A system is an interdependent group of items, people, or processes working together toward a common purpose.

- If each part of a system, considered separately, is made to operate as efficiently as possible, then the system as a whole will not operate as effectively as possible [Ackoff (1981)].

- Every system is perfectly designed to achieve the results it achieves.
Key Concepts in Theory of Knowledge

- There is no substitute for knowledge
- Management is prediction, any plan is a prediction.
- Prediction is based on theory
- No true value - effect of the method of measurement.
- Operational definitions - put communicable meaning to a concept.
- Analytic vs. Enumerative Studies
Understanding Variation

Shewhart’s Theory of Variation:

**Common Causes**—those causes inherent in the process over time, affect everyone working in the process, and affect all outcomes of the process.

**Special Causes**—those causes *not* part of the process all the time or do not affect everyone, but arise because of specific circumstances.
## Tools to Learn from Variation in Data

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<th>Shewhart Chart</th>
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### Frequency Plot
- **Distribution of Wait Times**
  - Number of visits vs. Wait time (days) for Visit
  - (Graph showing distribution with bars)

### Pareto Chart
- **Clinic Wait Times > 30 days**
  - Number of waits > 30 days vs. Clinic ID
  - (Bar chart showing Clinic ID vs. number of waits > 30 days)

### Scatterplot
- **Relationship Between Long Waits and Capacity**
  - # wait times > 30 days vs. Capacity Used
  - (Scatterplot showing relationship with a trend line)
….. We used statistical process control techniques to evaluate initial process performance, implement an intervention, and assess process improvements. We found that implementation of these techniques significantly reduced waiting time and improved clients’ satisfaction with the WIC service.
Lobby Wait Time: Before and After Improvement

Figure 1—XMR charts of lobby wait time comparison between stage 1 and stage 3 process improvement intervention by (a) moving range chart and (b) X chart: Dakota County WIC Clinic, Minnesota, December 2005–April 2006.

Note. UCL = upper control limit; LCL = lower control limit; WIC = Special Supplemental Nutrition Program for Women, Infants, and Children.
“Psychology helps us to understand people, interaction between people and circumstance, interaction between customer and supplier, interaction between teacher and pupil, interaction between a manager and his people and any system of management.”

Interaction of the Components of Profound Knowledge

- Leveraging the interaction of the four components of profound knowledge leads to improvement.

- Focusing on *appreciation for a system* without considering the impact that *variation* is having on the system will not produce effective ideas for improvement.

- Similarly, the interplay of the *human side of change* and the *building of knowledge*, as seen in areas of study such as cognitive psychology, is critical for growing people’s knowledge about making changes that result in improvement.
Complete each of the steps in this process

Step 1: Pick a number from 3 to 9

Step 2: Multiply your number by 9

Step 3: Add 12 to the number from step 2

Step 4: Add your 2 digits together

Step 5: Divide # from step 4 by 3 to get a 1 digit number

Step 6: Convert your Number to a letter:
1=A  2=B  3=C  4=D  5=E  6=F  7=G  8=H  9=I

Step 7: Write down the name of a country that begins with your letter

Step 8: Go to the next Letter: A to B, B to C, C to D, etc.

Step 9: Write down the name of an animal (not bird, fish, or insect) that begins with your letter from Step 8

Step 10: Write down the color of your animal

Output:
Color____________
Animal____________
Country____________

Do you have a 2-digit Number?

NO

YES

Complete each of the steps in this process

API, 2013
“Every system is perfectly designed to achieve exactly the results that it gets”
Applying the Science of Improvement

- Appreciation of a system
- Human Side of Change (Psychology)
- Building Knowledge (Theory of Knowledge)
- Understanding Variation

Our “Lens of Profound Knowledge”
The Model for Improvement

What are we trying to accomplish?

How will we know that a change is an improvement?

What change can we make that will result in improvement?

Key Reference

The Improvement Guide

API, 2013
Fundamental Questions 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 result in an improvement?

Source: Improvement Guide, p 3, 4
The PDSA Cycle
Four Steps: Plan, Do, Study, Act

Also known as:
• Shewhart Cycle
• Deming Cycle
• Learning and Improvement Cycle
• Continuous Scientific Method

Source: Improvement Guide, p 7
Framework, or Roadmap, for Quality Improvement Projects

Other Frameworks Exist:
- DMAIC (from 6 Sigma)
- Focus PDCA
- 7-step Problem Solving
- QI Story

*HC Data Guide, p 4, 5*
Use the PDSA Cycle for:

- Helping to answer the first two questions
  - aim, measures

- Developing a change

- Testing a change

- Implementing a change

Source: Improvement Guide, p 6
Repeated Use of the Cycle

Model for Improvement
- What are we trying to accomplish?
- How will we know that a change is an improvement?
- What change can we make that will result in improvement?

Hunches
Theories
Ideas

Changes That Result in Improvement

Source: Improvement Guide, p 10

API, 2013
The Plan-Do-Study-Act Cycle

**Plan**
- Objective
- Questions and predictions (Why?)
- Plan to carry out the cycle (who, what, where, when)
- Plan for Data collection

**Do**
- Carry out the plan
- Document problems and unexpected observations
- Begin analysis of the data

**Study**
- Complete the analysis of the data
- Compare data to predictions
- Summarize what was learned

**Act**
- What changes are to be made?
- Next cycle?
**Project Aim:** Increase Client's preparedness for an appointment.

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**Plan:**
Identify an opportunity and Plan for Improvement

**Standardized Reminder Calls**
When calling a client to remind them of their appointment, we need to make sure these key points are being said.
State what kind of an appointment it is and what it is for. Example: NC/RC/MC. Tell them the time of their appointment and what Clinic it is. Remind them that they need to have the questionnaires fully completed.
*Ask these questions:
a) Have you received your questionnaires in the mail or handed to you at your previous appointment?
b) Do you have your questionnaires completed?
c) If not, then ask if there is anything you can assist them with at that time. Remind them that they need to have all the proofs with them. Remind them that they need to bring in the child(ren).

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**Do:**
Test the Theory for Improvement

6. Test the Theory
WIC staff developed a script for a standardized reminder call to be used for clients. A staff training was conducted with clerical staff and the standardized reminder calls were implemented. Client paperwork was tracked pre- and post-reminder call implementation to look for any changes.

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**Act:**
Standardize the Improvement and Establish Future Plans

8. Standardize the Improvement or Develop a New Theory
   a. Data suggests that providing standardized reminder calls to all WIC clients prior to their scheduled appointments may not be a productive use of time.
   b. Paperwork compliance may require more extensive efforts on WIC staff involving relationship building with client.
   c. Evaluating compliance based on the type of client (e.g., new client vs. recertification) may provide more insight to paperwork compliance barriers.

9. Establish Future Plans
   Possible plans for future projects could include:
   a. Reviewing the overall flow of the WIC clinic to determine other areas of improvement for decreasing wait times
   b. Review processes and wait times at other WIC sites

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**Project Title:** WIC Clinic Wait Times
2010-2011 Project Manager: Alyson Taylor
Team Members: Sandy Lewis, Socorro Lozano, Jason Ybarra
Some hints for planning useful PDSA Cycles for testing changes:

- Think a couple of Cycles ahead of the initial test (future tests, implementation).
- Scale down the size and decrease the time required for the initial test.
- Do not try to get buy-in or consensus for the test; recruit volunteers for the test.
- Use temporary supports to make the change feasible during the test.
- Be innovative to make the test feasible.
PDSA Cycles for Implementation

The change is expected to become part of the routine operation of the system.

- Support processes need to be developed to support the change as it is implemented.
- Failures are not expected when the change is implemented.
- Increased resistance to the change can be expected as it impacts more people.
- Cycles for implementing a change take longer than test Cycles.
Multiple Cycles to Implement a Change

**Idea:** use visit flow sheet to improve reliability of care processes

Will a flow sheet be useful for asthma patients?

Use of Flow sheet V.4 by all physicians and nurses

Chinatown, Asthma BTS

Cycle 1: Gather sample flow sheets. **Try** V.1 with two patients

Cycle 2: **Try** V.2 by two providers for a few days

Cycle 3: Two week **trial** of V.3, review meetings

Cycle 4: **Trial** of V.4 by all providers

Cycle 5: Implement use of V.4, do peer review of documentation and use
Improving Using the CARD-DECK Technology

What are we trying to accomplish?

We have a deck of cards which incorporates a new technology. The technology (represented by numbers on the cards) gives potentially valuable information for increasing the overall results achieved on your nutrition projects.

Each team should develop a method to predict the numbers on the cards and then implement the technology on all future nutrition projects.
How will we know that a change is an improvement?

1. Correct predictions of numbers on each card.
2. A theory for the predictions of the numbers.
3. An increase in overall improvement achieved on nutrition projects.
What changes can we make that will result in improvement?

Each time a card is available (i.e. each new project begun), your team has three choices:

a. Collect data from the card: Increase in effectiveness = -10%

b. Use card in a small-scale test (i.e. on one part of the project, with one team, one coordinator, for one shift, etc.):
   - Improvement, if prediction for card is correct = +10%
   - Improvement, if prediction for card is incorrect:
     - miss by <2 = -20%
     - miss by 2-4 = -30%
     - miss by >4 = -40%

   Improvement, if prediction for card is incorrect:
   - miss by <2 = -20%
   - miss by 2-4 = -30%
   - miss by >4 = -40%

   Improvement, if prediction for card is incorrect = - 80%
PDSA Cycles for Card Deck

**Act**
- Are we ready to test or implement the new technology
- What should we do the next cycle?

**Plan**
- Predict the # on the next card
- What is the # on the next card? Prediction?______
- Record prediction and choose option A, B, or C __________

**Study**
- Compare # to prediction
- Compare to # from previous cards
- Is team’s theory still useful?
- Would other theories work?

**Do**
- Turn the next card
- Record # on data sheet
# Results of Card Technology (cumulative net improvement)

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Developing Aim Statements for Improvement Projects

Our Focus

Model for Improvement

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

Act
Plan
Study
Do

Aim
Measures
Ideas

From: Associates in Process Improvement

API, 2013
Why an Aim Statement?

- Answers and clarifies “What are we trying to accomplish? for the QI Project
- Creates a shared language to communicate about the project
- Facilitates organizational conversations and understanding
- Provides a basis for developing the rest of the project (measures and changes)
Aim: What Are We Trying to Accomplish?

A team’s aim statement should include:

• What is expected to happen
• The system to be improved or the target population
• Specific numerical goals
• Time frame
• Guidance for activities, such as strategies for the effort, or limitations (include if appropriate)
AIM Statement
To provide standardized reminder calls to all WIC clients one day before their scheduled appointment to increase client preparedness for appointment.

One area that WIC clients have communicated as an area of frustration is the additional wait times that occur if their paperwork is not complete prior to their scheduled appointments. This was also identified as a cause of increased wait times by WIC clinic staff.
Aim Statements for QI Projects (Ghana)

1. Reduce Maternal Mortality in the Lungi District from the current rate of 240/100,000 lbs to <150/100,000 lbs by July, 2013.

2. Improve compliance to referral by pregnant women from current 20% to ≥70% by April 2013 within the catchment area of Banguu District through community stakeholder clients engagement.
Example Aim State: Office Practice

During the next six months, improve the office system in our three primary care clinics to get better appointment access and make office visits more productive:

- Same-day access for visit requests
- A 20 percent reduction in office visit cycle time
- Increase patients’ satisfaction with seeing their provider of choice by 25 percent

Focus on the downtown clinic for the first four months. Make their work visible to the other two clinic sites by having their representatives sit in on team meetings and receive regular reports on the downtown team’s progress.
Measurement for Improvement

Model for Improvement

What are we trying to accomplish?

How will we know that a change is an improvement?

What change can we make that will result in improvement?

Aim

Measures

Ideas

Our Focus

From: Associates in Process Improvement

API, 2013
Using Measurement

“You can’t fatten a cow by weighing it.”

--Palestinian Proverb
Need for Measurement in Improvement Efforts

Improvement is not about measurement. But measurement plays an important role:

- Key measures are required to assess progress on team’s aim
- Specific measures can be used for learning during PDSA cycles
- Balancing measures are needed to assess whether the system as a whole is being improved
- Data from the system (including from subjects and staff) can be used to focus improvement and refine changes
Three Types of Measures in Improvement Projects

**Outcome Measures**
- Are we achieving the aim?
- Are we moving toward key project goals?

**Process Measures**
- Are we making the changes we think will improve outcomes?

**Balancing Measures**
- As we do our improvement work relative to our project aim, what is our impact on the rest of the system?
Project Measures vs. PDSA Cycle Measures

**Project Measures:** Overall results related to the project aim (outcome and process measures)

**PDSA Measures**
- Quantitative data on the impact of a particular change
- Qualitative data to help refine the change
- Subsets or stratification of project measures for particular students
Measurement Guidelines for QI Projects

• A few key measures that clarify a team’s aim and make it tangible should be reported each month
• Be careful about over-doing process measures
• Make use of available data systems for measurement
• Integrate measurement into the daily routine
• Plot data on the key measures each week or each month during the project
Definition of a Run Chart

Figure 1  Example of a run chart demonstrating compliance with a standard procedure.
Minimum Standard for Reporting: Annotated Time Series

Medication Errors per Day

- Test IV Protocol
- 100% IV Protocol
- Formulary changes
- Floor mixing eliminated
- Single concentrations on units

Average ME/D

Month

API, 2013
Beginning the QI Process:

1. **Create an aim statement for an improvement project.** Describe:
   - What is expected to happen
   - The system to be improved or the target population
   - Specific numerical goals
   - Time frame
   - Guidance for activities, such as strategies for the effort, or limitations (include if appropriate)

2. **Develop a measurement strategy for the project.** Include 1 or 2 outcome measures, 2 process measures, and 1 balancing measure.
Collaborative Improvement
The IHI Breakthrough Series

An improvement method that relies on spread and adaptation of existing knowledge to multiple settings to accomplish a common aim.

The IHI Breakthrough Series Is Not:

• Research for new knowledge
• Single-setting (single team) focus
• Small changes to existing systems
• A benchmarking project
• A consulting engagement
Key Elements of the Breakthrough Series

- Focused topic
- Multiple teams (15-60 seems optimal, have done 4-160)
- Theory: aim, measures, changes
- Common Model for Improvement
- Short monthly reporting format to provide focus
- Tension for change: deadlines, transparency, assessments, peer pressure
- Strategy for small scale testing, then spread of changes within an organization
IHI Breakthrough Series (BTS)  
(6-18 Months Time Frame)

Select Topic  
(Develop Mission)

Participants  
(8-100 Teams)

Expert Meeting  

Develop Framework & Changes

Prework

Planning Group

Planning Group

LS 1  
AP1

LS 2  
AP2

LS 3  
AP3*

Dissemination
Publications, Congress, etc.

Holding the Gains

Supports

Email (listserv)  
Phone Conferences

Website  
Visits

Assessments

Sponsors  
Monthly Team Reports

*AP3 – continue reporting data as needed to document success

LS – Learning Session

AP – Action Period
IHI Experience: Essential Factors in Collaborative Success

- Action Oriented: Use of Model for Improvement - lots of testing
- Measurement system that connects testing to tracking progress
  - Each team has goals with measures to match
  - Required monthly reporting with measurement tracked monthly
- Great Learning sessions
- Robust Action Periods
  - Good communication system (listserv/extranet/ great calls)
- Oversight
  - Tracking progress, participation, connecting teams, fostering shared learning
- A culture is established with specific values:
  - Everybody learns, everybody teaches
  - A sense of “family” and support
  - Urgency-need results now!
NCHP Collaborative on High Risk Drinking
May 2011 - June, 2013

Reduce Harm and High Risk Drinking

Participants (32 Colleges)
Organize an Improvement Team
Prework

Expert Meeting
February, 2011

Develop Framework & Changes
Faculty

LS 1
June 2011
AP1

LS 2
Jan 2012
AP2

LS 3
June 2012
AP3

Dissemination
June 2013

Supports
Email (listserv) Extranet
Conferences calls Support Calls
Monthly Team Reports
Collaborative Innovation Networks (COINs):

- Are learning networks
- Need an ethical code
- Are based on trust and self-organization
- Make knowledge accessible to everybody
- Operate in internal honesty and transparency

Figure 4.4. Individual, team, and organizational properties of COINs.

Gloor, 2006. Swarm Creativity: 89
Collaborative Innovation Networks (COIN)

- Teams of self-motivated people with a common purpose

- Enabled by technology to collaborate in achieving innovations by sharing ideas, information, and work
NCS HiLo Recruitment Strategy CoIN

10 HiLo Study Sites
Approached in July, 2010

Faculty Planning
June, 10

COIN Framework:
Charter
Driver Diagram
Measurement Dashboard

Supports:
CoIN Website
1st CC Call (Aug 24)
Reviewed Data on
Apr 21 CC Call

LS – Learning Session
AP – Action Period
CC – CoIN Coordinators

LS 1 Aug 8,9,10 AP1
LS 2 Dec 14,15 AP2
LS 3 Feb 23 AP3
LS 4 Jun 16 AP4
LS 5 Aug 17 AP5

Model for Improvement
What are we trying to accomplish?
How will we know that a change is an improvement?
What change can we make that will result in improvement?

Act
Plan
Study
Do

API, 2013
Hi/Lo Recruitment Strategy for the NCS
Collaborative Improvement Network CHARTER

Collaborative Mission

All 10 participating Study Centers will reach a steady state of enrollment in High Intensity by September 30, 2011 to understand how the five drivers influence achievement of this steady state. The Study Centers will use innovations and optimization of HiLo strategies to realize broad-based community awareness of the NCS, effective community partnerships, two-tiered enrollment, successful conversion from LoI to HiI, and participant retention.
“Orchestrated” Testing
Testing multiple interventions at once
Factorial Design
## Testing Multiple Interventions Simultaneously

**$2^3$ Full Factorial Design with 3 Replications**

<table>
<thead>
<tr>
<th>Treatment Combination</th>
<th>Pre-visit Planning</th>
<th>Population Management</th>
<th>Self-Management Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site 1</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Site 2</td>
<td>+</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Site 3</td>
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<td>Site 4</td>
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</tr>
<tr>
<td>Site 8</td>
<td>+</td>
<td>+</td>
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</tr>
</tbody>
</table>
### 2³ Factorial Design for Hospital Readmissions

<table>
<thead>
<tr>
<th>Current Follow-up Practices</th>
<th>Current Approach to Handoffs</th>
<th>Enhanced Communication Handoff</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Assessment</td>
<td>Hosp 5, unit 1</td>
<td>Hosp 1, unit 2</td>
</tr>
<tr>
<td></td>
<td>Hosp 1, unit 1</td>
<td>Hosp 2, unit 2</td>
</tr>
<tr>
<td>Early Discharge Needs Assessment</td>
<td>Hosp 3, unit 1</td>
<td>Hosp 2, unit 1</td>
</tr>
<tr>
<td></td>
<td>Hosp 3, unit 2</td>
<td>Hosp 5, unit 2</td>
</tr>
<tr>
<td>Post-Hospital Follow-up</td>
<td>Hosp 4, unit 2</td>
<td>Hosp 7, unit 1</td>
</tr>
<tr>
<td>Current Assessment</td>
<td>Hosp 8, unit 1</td>
<td>Hosp 4, unit 1</td>
</tr>
<tr>
<td>Early Discharge Needs Assessment</td>
<td>Hosp 7, unit 2</td>
<td>Hosp 6, unit 2</td>
</tr>
<tr>
<td></td>
<td>Hosp 6, unit 1</td>
<td>Hosp 8, unit 2</td>
</tr>
</tbody>
</table>

1. All hospitals will begin work on enhanced teaching and learning.
2. Pick the combination of the other three changes that you want to work on for the next six months. If you have 2 pilot units, can pick the same or different change combinations.
3. After six months, all teams will work on all three of these changes.

API, 2013
## Sign Up Sheet for Change Assignments by Hospital and Unit

<table>
<thead>
<tr>
<th>Change Combination</th>
<th>Enhanced Handoff</th>
<th>Discharge Needs Assessment</th>
<th>Hospital Follow-up</th>
<th>Hospital (unit)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 – only enhanced teaching</td>
<td></td>
<td></td>
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<tr>
<td>2</td>
<td>Yes</td>
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<td>3</td>
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<tr>
<td>8</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
</tr>
</tbody>
</table>

(15 hospitals, 2 units = 30 of the 32 boxes below)
Western MCH Nutrition Leadership Network Meeting

March 22, 2013 Marina del Rey, California

Quality Improvement for Leaders

Model for Improvement

What are we trying to accomplish?
How will we know that a change is an improvement?
What change can we make that will result in improvement?

Act  Plan  Study  Do

API, 2013