IHI Expedition:
Integrating Improvement Approaches

Robert Lloyd, PhD
Jill Duncan, RN, MS, MPH

Session 5
November 20, 2012
These presenters have nothing to disclose

WebEx Quick Reference

- Welcome to today's session!
- Please use Chat to “All Participants” for questions
- For technology issues only, please Chat to “Host”
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When Chatting…

Please send your message to
All Participants

If you’re joining with colleagues, please type the **organization** you represent & the **number of people** joining from your organization.

*Example: Midwest Health Alliance – 3*

Please type your **name** and the **organization** you represent in the chat box!

*Example: Chris Jones, Midwest Health Alliance*
IHI Expedition Team

Kayla DeVincentis
Project Coordinator, IHI

Jill Duncan, RN, MS, MPH
Director, IHI

Agenda

• Welcome
• Expedition Recap (Sessions 1-4)
• Session #5: Sustaining an Effective Quality Improvement Strategy
  — Robert Lloyd, PhD, Executive Director, IHI
• Resources
• Next steps
What is an Expedition?

**ex•pe•di•tion (noun)**
1. an excursion, journey, or voyage made for some specific purpose
2. the group of persons engaged in such an activity
3. promptness or speed in accomplishing something

Expedition Aim

Introduce participants to various improvement methodologies and guide participants in building an integrated quality improvement strategy for their unit, department or organization.
Expedition Objectives
Participants will be able to . . .

• **Describe** the similarities and differences among Lean, Six Sigma (which includes DMAIC) and the Model for Improvement.
• **Determine** which approach(es) are most appropriate for their organization.
• **Initiate** a plan to build an integrated quality improvement strategy.
• **Define** a customized approach for crafting projects and hardwiring discipline into improvement processes across participant’s organization.
• **Plan** small tests of change they can test throughout the Expedition.

Expedition Faculty

Robert Lloyd, PhD
Executive Director, IHI

Kevin Little, PhD
Improvement Advisor, IHI

Helen Zak, MS
President & COO
ThedaCare Center for Healthcare Value

Dennis Deas
Senior Director
Kaiser Permanente
Department of Care and Service Quality
Ground Rules

We learn from one another – “All teach, all learn”

Why reinvent the wheel? - Steal shamelessly

This is a transparent learning environment

All ideas/feedback are welcome and encouraged!

VCUHS can increase its capabilities by utilizing additional methodologies for PI projects, replacing the FADE model currently being used, and training department-level staff in these new methodologies. This will help to both increase our resources for completing PI projects and develop the skills of our workforce. We can also do a much better job in creating expectations for long term sustainability of project metrics by the process owner once the project team disbands.

Shelly van’t Riet, MSHA, RD, CPHQ, PMP - VCU Health System

We determined we have made significant improvement in developing and tracking quality measures in the last five years. We do have significant opportunities in the resource category and find many areas do not have dedicated resources for quality improvement. We also find opportunities with the alignment of goals/measure by key stakeholders.

Heather Mann, MSPH, CPHQ - Palmetto Health
I have noticed the development of the culture in the hospital over the last period of time especially the last 5 years when the management started to use the Model of Improvement, which had an impact on the improvement of good leadership models in the hospital from the top management to the unit based leaders.

I can feel and see the improvement in the organization, from the resources being used and updated, knowledge all around the organization, as well as the workforces and human resources being introduced.

Najla Fadel Abdulla, Mafraq Ambassador

The Improvement Capability Self Assessment Tool was very user friendly. The descriptions made the scoring very objective and easy to assign.

This team also shared an example from one of the facilities

Denise Evans RN, MSN, Catholic Health Partners

We have been saying we use MFI for years. However, this past January we joined IHI as a Passport member. Since that time we have begun the education process to more seriously employ the MFI. I have 7 projects I am officially tracking as a result of the Essentials class. The prediction piece was in fact very uncomfortable for the teams. A couple of them did try to predict, but only in very general terms. They all included multiple cycles. They all also included core work process changes. Implementation has gone very smoothly for 4 teams. The key difference – stakeholder involvement, executive sponsorship and strong communication plan.

Christianna B. Orvis - Director of Education
Gulf Coast Medical Center

In our organization the department of Infection Control has implemented the MFI approach in their project in regards of hand hygiene. It was started with a survey among the hospital staff which shows an initial result of high compliance among nurses but didn't show a good result among other health care professionals. A PDSA cycle was applied on the next survey using mystery shoppers to do the surveys and collecting data, predicting a good compliance rate which was the result.

As a Case Manager in the organization we are in the process of applying the lean approach for facilitating the patients' discharge safely from the hospital by coordinating the different services the patient might need from the time of admission and providing them by the discharge time and providing safe discharge eventually.

Najla Fadel Abdulla - Case Manager - Quality Department
Mafraq Ambassador
There were no “surprises”, but this is another excellent tool to guide the organization toward a culture of continual improvement. This tool provides more detail on the types of behaviors we are seeking for our managers and leaders. It will be a very useful self-assessment for our staff, helping them rethink their role in the organization and what types of behaviors we are seeking. The close alignment of this tool with the Caldwell Butler consulting approach introduced into our organization approximately 5 months ago will make this a useful tool for us. While in many areas we are organizationally in our infancy, we are heading in the right direction.

Wendy Manners

I love this tool! Connecting behavioral indicators with outcome measures is a great way to get a richer picture of an organization’s opportunities for improvement. For my organization, there were not a lot of surprises as we are a very young organization as far as a systematic approach to improvement.

Christianna B. Orvis
Director of Education
Gulf Coast Medical Center

Today’s Faculty

Robert Lloyd, PhD, Executive Director of Performance Improvement, Institute for Healthcare Improvement, provides leadership in the areas of performance improvement strategies, statistical process control methods, development of strategic dashboards, and quality improvement training. He also serves as faculty for various IHI initiatives and demonstration projects in the US and abroad. Before joining IHI, Dr. Lloyd served as the Corporate Director of Quality Resource Services for Advocate Health Care, Director of Quality Measurement for Lutheran General Health System, and spent ten years with the Hospital Association of Pennsylvania in various leadership roles. He is author of numerous articles, reports, and books.
Sustaining an Effective Quality Improvement Strategy

Robert Lloyd, Ph.D.

Tuesday 20 November 2012

Session #5
Discussion Topics

• Review where we have been on this Expedition and starting the next journey

• Define concepts
  • Building an Integrated approach to QI
  • Creating the foundation for Sustaining our approach

• The Keys to Excellence
  • Constancy of purpose
  • Having a theory (not tools)
  • Building capacity & capability
Expedition Objectives

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Where We’ve Been and WHERE WE’RE HEADED
The **Scientific Method** provides the foundation for all improvement

> Deductive Phase (general to specific)

- Information for Decision Making
- Interpretation of the Results (asking why?)

> Theoretical Concepts (ideas & hypotheses)

> Theory and Prediction

> Data Analysis and Output

> Inductive Phase (specific to general)

**Source:** R. Lloyd *Quality Health Care*, 2004, p. 153.

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**History of the Scientific Method, PDSA, Six Sigma & Lean**

**Evolution of the scientific method and PDSA cycle**

- F. Taylor *The Principles of Scientific Management* (1911)
- Toyota Family (late 1940’s and early 1950’s)
- Taiichi Ohno 1950-1980
- Toyota Production System

- P. D. Smith (1986) Motorola

- Mikel Harry (1988) Motorola MAIC

- Forrest Breyfogle III (1992) Integration

- Michael George (1991) Integration

- Womack & Jones

The Deming Wheel
1. Design the product (with appropriate tests).
2. Make it; test it in the production line and in the laboratory.
3. Sell the product.
4. Test the product in service, through market research. Find out what user think about it and why the nonusers have not bought it.


The Shewhart Cycle for Learning and Improvement

Act – Adopt the change, abandon it or run through the cycle again.

Plan – plan a change or test aimed at improvement.

Study – Examine the results. What did we learn? What went wrong?

Do – Carry out the change or test (preferably on a small scale).

(Deming, 1993)
**MFI, Lean & Six Sigma**

**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**
- Study
- Do

**Lean**
- Identify Value
- Understand Value Stream
- Eliminate Waste
- Establish Flow
- Enable Pull
- Pursue Perfection

**Six Sigma**
- Define
- Measure
- Analyze
- Improve
- Control

Source: The Improvement Guide, API

**Similarities**

- Have disciplined processes and approaches
- Rely heavily on detailed measures
  - Lean – process steps, value
  - Six Sigma – Defects per 1,000,000 opportunities
  - MFI – Process, outcome & balancing measures
- Have a specific language and tools
- Have a long history in the field
  - Lean – Japanese production – Toyota Production System (TPS)-healthcare
  - Six Sigma – Japanese – Motorola, GE-healthcare
  - MFI – Shewhart, Deming, Japanese Union of Scientists and Engineers (JUSE), Associates in Process Improvement (API)

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Poll Question #1

The current quality improvement strategy/model(s) we follow in my organization allow(s) us to meet all of our strategic objectives and targets.

- Strongly Agree
- Agree
- Not Sure
- Disagree
- Strongly Disagree

Go to Poll

Looking beyond this Expedition

“The main criterion for choosing a quality system is how well it serves the needs of the Gemba”

Reference: Kelly Allen, “Get Into Gemba” Quality Progress April, 2004
**Gemba (the real place)**

- Literally translated to mean “The place of specific work” or “the “real place”
- Peter Scholtes (*The Leader's Handbook*, McGraw-Hill, 1998) defines it as “the critical resources and sequence of interdependent activities that add value to the customer.”
- The Gemba for a manufacturing company could include product design and development, production, delivery and maintenance.
- The Gemba for a service organization might include service design, development and delivery, flow and customer service.
- In healthcare, Gemba could include a clinic visit with the physician, the physical therapy department, an OR procedure, the patient’s room or a home care visit.
- Activities related to finance, HR and IT are **NOT Gemba** but should support the Gemba.
- Understanding your organization’s Gemba will help you decide which quality system or approach is most appropriate.

Let *Gemba* help guide your decision!

<table>
<thead>
<tr>
<th>If…</th>
<th>Then…</th>
</tr>
</thead>
<tbody>
<tr>
<td>there are specific opportunities for further improvement in quality to reduce waste, improve turnaround time</td>
<td><strong>Lean</strong> could best serve the <em>Gemba</em></td>
</tr>
<tr>
<td>there are specific opportunities for further improvement in quality to have fewer defects or improve reliability of performance</td>
<td><strong>Six Sigma</strong> could best serve the <em>Gemba</em></td>
</tr>
<tr>
<td>the organizational components/units or system are in need of improvement, breakthrough thinking, innovation and/or spread</td>
<td>the <strong>Model for Improvement (MFI)</strong> could best serve the <em>Gemba</em></td>
</tr>
</tbody>
</table>
In short, the choice of a quality system, approach or model should be driven by the objectives of the organization, its culture and its Gemba!

The decision should NOT be driven by how popular a particular approach is or even if it has been used successfully in other settings.

Exercise
Understanding your Gemba

1. Form small groups (about 8-10 people).

2. Each individual should write down what they think the Gemba of their unit or department is and then identify the Gemba of the entire organization (don’t talk to anyone while doing this).

3. Next, note some of the areas that support the Gemba. Use the worksheet provided on the next page.

4. As a group, discuss your individual ideas about Gemba and note similarities and differences within your group’s responses.
### Gemba Exercise Worksheet

<table>
<thead>
<tr>
<th>The <em>Gemba</em> of my unit or department is…</th>
<th>The <em>Gemba</em> of my organization is…</th>
<th>Units and departments that support the <em>Gemba</em> are…</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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</tbody>
</table>

### Exercise: Selecting an Approach

Now, combine your knowledge of *Gemba* with the review of the approaches described earlier in the Expedition and complete the worksheet on the next page.

**Use the following questions to guide your work:**

1. Can you evaluate your current approach or model to QI in light of what you have learned?
2. If not, what more do you need to learn about the different approaches to decide how to proceed?
3. Does your current approach or model allow you to successfully achieve your *Gemba*?
4. What are some of the advantages and disadvantages of each approach for your organization?
What will work best for your Gemba?

<table>
<thead>
<tr>
<th>Quality Approach</th>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Six Sigma</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lean</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Model for Improvement</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Session #5
Discussion Topics

- Review where we have been on this Expedition and starting the next journey
- Define concepts
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  - Creating the foundation for Sustaining our approach
- The Keys to Excellence
  - Constancy of purpose
  - Having a theory (not tools)
  - Building capacity & capability
Building an *Integrated Approach to QI*

- If you use different approaches, models or theories of QI, have you brought these various approaches together to form a unified theory of change?

- Or, do you have silos or camps that support fragments or only parts of the various approaches with a big focus on tools and methods?

- If you have selected one approach to drive your QI journey, have you established sufficient structures and process that will enable it to be sustained over time?

- Does everyone in your organization, and we mean everyone from the macro to the micro levels and throughout the Board, fully understand the approach(es) that you use and can they explain your approach(es) to others?

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**Drivers of Integration**

*Structure ... + Process ... + Culture* = *Outcome*

*Added to Donabedian’s original formulation by R. Lloyd and R. Scoville.*

Another Perspective

Q \times A = E

Quality of a Solution  Acceptance of a Solution  Effectiveness of a Solution

Working Definition of Sustaining

• Does the healthcare organization sustain its results and/or changed processes beyond initial improvements?

• Note that “sustain” does not equal permanence!

• National Health Service (UK) Definition of Sustainability:

1. Sustainability is when new ways of working and improved outcomes become the norm.

2. The thinking, attitudes and systems surrounding them are transformed

3. Evolves and perhaps continues to improve over time.
Sustainability Framework

Institutionalizing Process (Vital Behaviors)

1. Develop the Infrastructure for Sustainability
2. Make a prediction about whether the change will be Sustained
3. Ensure you have capability & reliability of the Change
4. Continuous ongoing control measurement both for the change and for the sustain process
5. Redesign sustainability support processes if something falls out of control

Institutionalizing Process address...

- The Nature of the CHANGE – Is the change easy to implement and ready to be sustained?
- The Nature of the SYSTEM – Is the system capable of sustaining the gains?
How Can We Foster Adoption of Successful Change Ideas?

A very integrated approach to sustainability...
Stages of Adoption

People who adopt new ideas go through these five stages!

1. Awareness
2. Persuasion
3. Decision
4. Implementation
5. Confirmation

Diffusion of Innovations

A theory for understanding how people respond to innovation…

… and how to use those responses to drive needed change.

An Early Adopter!

Rogers’s Adopter Categories

Poll Question #2

Our current quality improvement strategy/model provides an integrated approach to QI that is sustainable.

- Strongly Agree
- Agree
- Not Sure
- Disagree
- Strongly Disagree

Session #5

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- Review where we have been on this Expedition and starting the next journey
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  - Having a theory (not just tools and methods)
  - Building capacity & capability
The Journey To Organizational Excellence

Excellence
Sustainability
Capability
Capacity

The Aim!
How good? By when?

To build a sustainable approach to QI and an infrastructure that produces highly reliable levels of excellence by (fill in the date).
Key Terms

Capacity
- The ability to receive, hold or absorb
- The maximum or optimum amount of production
- The ability to learn or retain information.”
- The power, ability, or possibility of doing something or performing
- A measure of volume; the maximum amount that can be held

Capability
- The power or ability to generate an outcome
- The ability to execute a specified course of action
- The sum of expertise and capacity
- Knowledge, skill, ability, or characteristic associated with desirable performance on a job, such as problem solving, analytical thinking, or leadership
- Some definitions of capability include motives, beliefs, and values

A Few Key Questions for Building Capacity and Capability

- Will you involve everyone or just a few targeted groups?
- What is your sequence for development and deployment?
- What methods do you plan to use to build capacity and capability?
- Do you have a model or framework to guide your journey?
- How will you make sure all this “sticks?”

Adapted and expanded from a conversation with Tom Nolan, Associates in Process Improvement on material he presented at the IHI Strategic Partners Roundtable, April 17-18, 2006.
The Keys to Excellence

Constancy of purpose

Having a theory

Building capacity & capability

The Sequence of Improvement

Make part of routine operations

Sustaining improvements and spreading changes to other locations

Test under a variety of conditions

Implementing a change

Testing a change

Theory and Prediction

Developing a change

Act

Plan

Study

Do

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“Quality begins with intent, which is fixed by management.”

W. E. Deming, *Out of the Crisis*, p.5

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**Final Homework**

Describe ONE (1) thing that changed about the way you do your work as a result of your participation in this Expedition

+ Resources to share

Please post to the listserv [improvementapproaches@ls.ihi.org](mailto:improvementapproaches@ls.ihi.org)

by the end of the day today!
Follow up

• The listserv will remain active.
  —To use the listserv, address an email to improvementapproaches@ls.ihi.org

• A manual with instructions to receive Continuing Education Credits will be sent with the follow-up email for today's session.

• Please take 5 minutes to complete the Expedition evaluation survey.

Thank You!

The Expedition Faculty

Please let us know if you have any questions or feedback following today’s Expedition webinar

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