Maine Quality Counts presents...

Brown Bag Forum Webinar Series

Operational Excellence: Building Value & Continuous Improvement through LEAN Applications to Health Care

February 24th
12PM – 1PM

Remember to dial in for webinar audio!
1.866.740.1260, Access Code: 6223374#
Who We Are

Maine Quality Counts (QC) is a member-driven nonprofit organization working to improve the health of everyone in Maine by improving the way health care is delivered.
What We Do

We bring together the people who give, get and pay for health care and provide the tools and leadership they need to make sure Mainers receive care that is truly patient-centered.
How We Work

We’re driven by a spirit of collaboration. We work with over 70 partners from health care, government, civil society and the community to achieve shared quality improvement goals. More than 130 members, both organizations and individuals, inform and contribute to our success.
Become a QC Member

www.mainequalitycounts.org/join

• Members-only networking events
• Exclusive webinars with national experts
• Discounted registration for QC 2015
Find More Information

Our Website: www.mainequalitycounts.org

Facebook.com/MaineQualityCounts

@MEQualityCounts

Youtube.com/MaineQualityCounts
Featuring Keynote Speaker
Atul Gawande, MD, MPH

Early bird registration closing February 28th!

www.mainequalitycounts.org/QC2015
Important Webinar Notes

Your phone line is muted to minimize background noise.

To ask questions or share comments, you can:

- Use the **Raise Your Hand button** to let us know you have a question. When we call on you, press *7 to unmute your line.
- **Or**
- Type your question or comment into the **chat box** on the lower left-hand side of the screen.
After Today’s Webinar

• You’ll receive links to the slides and recording of today’s session this afternoon

• All QC Learning Community webinars are archived on our website: http://www.mainequalitycounts.org/qclc/archive
Today’s Presenter

Suneela Nayak, MS RN, Value Improvement Clinical Quality Specialist, MaineHealth

Suneela facilitates improvement initiatives related to MaineHealth system wide quality improvement goals and opportunities. Suneela holds a Six Sigma Black Belt and is an experienced clinician, educator, and improvement consultant for collaboratives throughout the MaineHealth system.
Upcoming QC Learning Community Webinars

March 3, 12:00PM – 1:00PM
Dementia in Maine: An Overview & An Introduction to Available Resources

March 19, 12:00PM – 1:00PM
Keep Them Rocking at Home: Thriving in Place

Find more information and register: www.mainequalitycounts.org/QCLC
Operational Excellence: Building Value and Continuous improvement through LEAN applications to Healthcare

February 24\textsuperscript{th} 2015

Vice President Value Improvement: Miriam Leonard
Clinical Quality Specialist: Suneela Nayak
Value Improvement Program Manager: Jordan Peck
Poll Question Placeholder
Learning Points

• What are healthcare applications of Operational Excellence and Lean Daily Management?

• How can implementation of Lean Daily Management result in cultural transformation?
Venice, Italy
The Arsenal of Venice
(1300-1500s)

Pre-industrial economy

• Different areas produced prefabricated ship parts (munitions, rope, armaments)
• Parts assembled into a ship in as little as one day.
• An exclusive forest owned by the Arsenal Navy, provided wood supply.

The Arsenal anticipated the modern concept of factory by centuries
A recent history of improvement

**FIGURE 2.4** Important Events in Performance Improvement

- Frederick Winslow Taylor: Father of scientific management
- Henry Ford: Mass production
- Walter A. Shewhart: Grandfather of quality movement
- Kaoru Ishikawa: Father of TQM, fishbone
- Genichi Taguchi: Cost of variation
- W. Edwards Deming (U.S.):
  - TQM
  - JIT
- Harlan Cleveland: Knowledge hierarchy
- Donabedian: Avedis
- Shigeo Shingo: Poka-Yoke and SMED
- Eliyahu M. Goldratt: TOC
- Russell L. Ackoff: Systems thinking
- Virginia Mason Institute: Teaching the Virginia Mason Production System
- ThedaCare Institute for Healthcare Value: Teaching lean and daily management
- Institute for Healthcare Improvement
- James Womack: The Machine that Changed the World
- Robert S. Kaplan: Balanced scorecard
- W. Edwards Deming
- If Japan Can, Why Can’t We?
- Six Sigma
- Baldrige Award
- ISO 9000
- AHRQ
- IOM report
- To Err is Human
- 100k Lives
- SCM
- Virginia Mason Institute
- ThedaCare Institute for Healthcare Value
- 2002 ThedaCare and Virginia Mason Begin Exploring Lean
- 2008 Founding of: Virginia Mason Institute
- 2013 PenBay Begins Operational Excellence
- 2014 SMHC and LHC Begin Operational Excellence
- 1900
- 1925
- 1950
- 1975
- 2000
- 1300
A recent history of improvement

**FIGURE 2.4** Important Events in Performance Improvement

- **1300**: Henry Gantt introduces Gantt charts
- **1900**: Frederick Winslow Taylor introduces scientific management
- **1925**: Henry Ford introduces mass production
- **1925**: Walter A. Shewhart introduces the concept of statistical process control
- **1945**: W. Edwards Deming introduces the concept of quality in Japan
- **1950**: Genichi Taguchi introduces the Taguchi method
- **1960s**: Kaoru Ishikawa introduces the fishbone diagram
- **1975**: Joseph M. Juran introduces the Quality Trilogy
- **1980s**: TQM, JIT, and Six Sigma are introduced
- **1990s**: Avedis Donabedian introduces the Hierarchy of Care
- **2002**: ThedaCare and Virginia Mason begin exploring Lean
- **2008**: Founding of: Virginia Mason Institute teaching the Virginia Mason Production System AND ThedaCare Institute for Healthcare Value teaching Lean and daily management
- **2013**: PenBay begins Operational Excellence
- **2014**: SMHC and LHC begin Operational Excellence

*Source: Healthcare Operations Management, McLaughlin and Hays, 2008, Health Administration Press*
Integrating a Culture of Continuous Improvement

- Focus on where the work is done
- Work as a team
- Bring quality to the unit
- If all units improve care, the whole system improves care

**LEAN**
*Eliminating Non-Value Added Activities*
- Specify Customer Value
- Identify the Value Stream
- Create Process Flow
- Create Pull System
- Seek Perfection

**Microsystems**
*Whole = sum of the parts*
- Focus on where the work is done
- Work as a team
- Bring quality to the unit
- If all units improve care, the whole system improves care

**TQM/CPI**

**Six Sigma**
*Reducing Process Variation*
- Consistent Repeatable Processes
- Process Design / Redesign
- Defect Prevention
- Statistical Analysis
- Voice of the Customer
Lean Applications to Healthcare

Lean principles hold promise of

– reducing or eliminating wasted time, money,

– creating systems that are efficient, effective, and truly responsive to the needs of patients at the heart of it all
Today: Abundant Resource – but few blueprints

...how ThedaCare, transformed culture by redesigning their system of daily management

Introducing Value Stream Maps to a broad audience

...convincing argument that a revolutionary new kind of healthcare - lean healthcare -is urgently needed and eminently do-able...
Lean Applications to Healthcare

- Healthcare slowly beginning to embrace the Lean Thinking Culture

- Growing agreement that lean principles can reduce the waste that is pervasive in the US health care system.
Lean techniques focus on

- Understanding what is going on where the **Customer** uses services (at the gemba, daily)
- **Standard Work** (for leaders and for staff)
- Empowering staff to identify and solve problems: **continuously improve** quality

**Improving Value**, reducing waste
How is Value Created?

- Problems are **opportunities** (for learning, adding value)
- Front line leaders are **coaches**, helping others get comfortable identifying and improving problems
- Leadership creates **management systems** to support real time engagement with work
What is Operational Excellence?
Daily Management

• A disciplined, daily process of gathering data and assessing performance to key metrics in real-time

• Assessment is done with the intent to take immediate corrective action

• Identifying and solving daily issues in real time

Continuous Improvement
Continuous Improvement

“Teaching frontline staff to apply a standard process to solving problems encourages, excites, and engages them in ways I never imagined”

John Toussaint, CEO Thedacare Center for Healthcare Value

Leaders roles shift to encouraging and coaching staff to continuously identify and solve problems
Standard Work

- Traditionally, approaches to “Standard Work” in healthcare have been minimal.

- In Lean healthcare environments, **Standard Work** embraced as fundamental to improvement.
Operational Excellence Model

Leaders

- Visit units/departments **daily** (no fly zone)
- Are catalysts for rigorous Daily Standard Work
- Encourage use of tools
- Ensure accountability
Operational Excellence Model

Front Line Team
- Engages, takes responsibility for daily work
- Chooses KPIs, tracks and reports data every day
- Demonstrates follow through
- Provides feedback to leaders on how they can help

Leaders
- Accountable for following through on requests
- Ensure staff gets needed support (barriers removed)
Operational Excellence Model

Daily Management System

Standard work for Leaders

Standard work front line
Operational Excellence Model

Improvement experts are engaged in education, projects and events.
Operational Excellence Framework

Daily Management System

- Standard work for Leaders
- Standard work front line

Project Work and Education

Improvement Events

Operational Excellence
Who Does It?

**Staff** is responsible for data collection, analysis and visual presentation *every day*

**Staff and leaders** are responsible for reviewing data and engaging in problem solving *every day*

**Leaders** are responsible for providing appropriate resources to support front-line staff to solve problems *every day*
How does it happen?

**Daily Management**

1. Daily Huddles
2. Operational Excellence Walks
3. KPI Boards, Mutual Accountability
4. Improvement Events
How does it happen?

Daily Management

1. Daily Huddles
2. Operational Excellence Walks
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4. Improvement Events
The Daily Huddle

Leaders gather to understand the state of the system

- Review summary display of key metrics across Organization (snapshot of current state)
- Identify concerns over past 24-48 hours
- Select accountability for specific action items

Source: Toussaint, FHSM 29:13 2014
Walks

Daily Management

1. Daily Huddles

2. Operational Excellence Walks

3. KPI Boards, Mutual Accountability

4. Improvement Events
Operational Excellence Walks

Why Walk?

…to go where value is created

• Go to the place (Gemba) where patients and families use services

• Engage with front line staff to understand, coach, help remove barriers
Daily Walks

What do leaders do on a Walk?

• Get report on progress toward goals from each unit/department

• Sustain emerging **cultural expectations**
  – Staff are responsible for their work
  – Leaders are supportive of their improvements

Source: Toussaint, FHSM 29:13 2014
Daily Walks

What do leaders do on a Walk?

• Get report on progress toward goals from each participating unit/department

• Sustain emerging cultural expectations
  – Staff are responsible for their work
  – Leaders are supportive of their improvements

Staff are excited to share accomplishments, and explain challenges

Source: Toussaint, FHSM 29:13 2014
KPI Boards

Daily Management

1. Daily Huddles
2. Operational Excellence Walks
3. KPI Boards, Mutual Accountability
4. Improvement Events
What do we see on a Walk?

Key Performance Indicator (KPI) Board
Example of KPI Letter

**Goal**

Green = MET GOAL  
Red = MISSED GOAL  
Blue = NOT SCHEDULED

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<th>1</th>
<th>3</th>
<th>4</th>
<th>5</th>
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<td>9</td>
<td>10</td>
<td>11</td>
<td>12</td>
</tr>
</tbody>
</table>
KPI Data Monitoring

1. Run Chart
   Daily Performance Graph WITH GOAL

2. Pareto of Causes
   when performance tracks below the goal

3. Action Plans address the CRITICAL FEW most frequently occurring issues
Focused Problem Solving

A systematic, data driven, visual approach identifies and solves key problems causing below target performance.

Standard problem solving methods lead to true root cause solutions resulting in improved and sustainable performance.
Op Ex Daily Walks: Must Do’s

• Data updated BEFORE start

• “I don’t know” is not OK

• Presentation by EXCEPTION: discuss highlights and misses
Op Ex Daily Walks: Must Do’s

• START on-time and STAY on-time

• Foster a BLAMELESS but ACCOUNTABLE environment

• All observe “NO FLY ZONE”

Underpinnings of Cultural Transformation
KPI Examples

• Proper supplies in exam/patient rooms every time
• Staff get to scheduled meal breaks
• Supply/storage closet is standardized
• Post-op neurological assessments completed 100% of the time
• Routine diabetes quality metrics completed for patients 100% of the time

“It is a series of hits, not a home run!”

John Sook, Lean Enterprise Institute Chairman and CEO
KPI Examples

- Discharge cycle time
- Time patients wait before being seen
- Late food trays
- Availability of same day appointments
- Timely Charge Entry

ThedaCare successfully implemented > 20,000 in 2011
How does it happen?

Daily Management

1. Daily Huddles
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4. Improvement Events
Improvement Events

Address the issue once. Make recommendations. Implement them.

**PLAN**
- Pre-Work (30 Days Prior)
  - Team Selection
  - Data Gathering
  - Set Scope
  - Plan Agenda
  - Gather Materials

**DO**
- Event Week (3 – 5 Days)
  - Training
  - Data Analysis
  - Idea Generation
  - Implementation
  - Report Out

**CHECK**
- Follow Up (30 Days After)
  - Newspaper Items
  - Monitor KPI’s
  - Gemba Walks
  - Operator Feedback
  - Customer Feedback

**ACT / ADJUST**
- Sustain (60 Days+)
  - Daily Management
  - 5S Audits
  - Standard Work
  - Visual Controls

**EVENT WEEK**
- Day 1
  - Team Training
  - Current State Observations
- Day 2
  - Future State Design
  - Stakeholder Review
- Day 3
  - Implementation
- Day 4
  - Implementation
  - Pilot Runs
- Day 5
  - Full Scale Run
  - Report Out
What makes Daily Management successful?

Align **KPIs** to system strategy/mission and activities

- Use disciplined problem solving
- High level of management interaction
- Takes place at the point of care

“Successful alignment is an inch thick and a mile deep”.
John Toussaint MD
Factors for Success

Key Performance Indicators
• Team aligns KPI with strategic aims
• Selects what is most important to fix (early wins = “buy in”)
• Are able to impact changes
• Measure data daily

Front Line Leaders
• Take ownership of daily standard work
• Demonstrate commitment (coaching, removing barriers)
• Manage schedules for staff success
• Create infrastructure to select new KPI’s
Factors for Success

Leaders

- Seek to understand and support success
- Balance big picture priorities with daily challenges
- Set expectations for **daily** accountability
- Provide ongoing support and education of Lean tools
- Commit to Standard Work
  - No fly zone
  - Daily Huddle and Walk
  - Timely follow up on action items

...are Stewards of Cultural Transformation
“The real secrets to lean success aren’t to be found in successful implementation of tools and techniques, systems or even principles. …It really gets to basic thinking, the thinking each individual brings to each task, each team to each challenge, the organization to the achievement of its aims”.

John Sook, Lean Enterprise Institute Chairman and CEO
Key Concepts in Lean Thinking: Culture

• Set of values and beliefs that cause people to behave in certain ways
• With results, values and beliefs are reinforced
• This self-reinforcing cycle creates new culture
• Backdrop against which Lean tools and techniques are implemented
Summary

Operational Excellence is a Management System:

• Sustainably engages staff
• Aligns organization to achieve continuous improvement in Safety, Quality and Experience
• Improves value by reducing or eliminating waste
• Transforms culture to one that is truly efficient and responsive to patients and staff
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Questions?
Operational Excellence: Building Value and Continuous improvement through LEAN applications to Healthcare

Thank-you!