Engaging Physicians in Leading Quality Improvement

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Keck Medicine of USC
University of Southern California
Los Angeles
Disclosures

Carol Peden is a shareholder in Fidelity Health and a Fellow and Faculty of IHI. We have no other relevant financial relationships with the products or services described, reviewed, evaluated or compared in this presentation.

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OBJECTIVES OF THIS SESSION

1 - To understand how to develop a strategy and framework to create a program for physicians in leadership and quality improvement

2 - To understand how to implement a framework to enable physicians to lead quality and performance improvement projects

3 – To learn from success stories from our physician quality and improvement program, as well as lessons learned
Keck Medicine of USC

- **3 Hospitals**
- **619 Beds**
- **60+ Clinics**
- **4,000+ Employees**
- **1300 Faculty and Scientists**
- **9000 Clinical Trials**
- **900 Residents**
- **$1.6B Net Revenue**

Born in **2009**
<table>
<thead>
<tr>
<th>CMI</th>
<th>2.96 Keck Medical Center of USC</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.78</td>
<td>City of Hope</td>
</tr>
<tr>
<td>2.72</td>
<td>Sylvester Cancer Center</td>
</tr>
<tr>
<td>2.53</td>
<td>Univ. of Maryland Medical Center</td>
</tr>
<tr>
<td>2.50</td>
<td>Cleveland Clinic</td>
</tr>
<tr>
<td>2.46</td>
<td>Moffitt Cancer Center</td>
</tr>
<tr>
<td>2.43</td>
<td>Stanford Health</td>
</tr>
<tr>
<td>2.34</td>
<td>Mayo Clinic</td>
</tr>
<tr>
<td>2.27</td>
<td>UCLA Health (Ronald Reagan)</td>
</tr>
<tr>
<td>2.11</td>
<td>UCSF Medical Center</td>
</tr>
<tr>
<td>1.92</td>
<td>Johns Hopkins Medicine</td>
</tr>
</tbody>
</table>

We see some of the sickest patients in the nation.

Source: UHC, Q32016 – Q22017  
CMI = Case Mix Index
Innovation at Keck

Charles Heidelberger, first associate director for basic research at USC Norris Comprehensive Cancer Center and of 5-Fluorouracil, the most widely used cancer chemotherapy drug

First FDA-Approved High-Intensity Focused Ultrasound Surgical Ablation for Kidney & Prostate Cancer

First to Offer Bronchial Thermoplasty Outpatient Treatment for Severe Asthma

First to Treat Uncontrolled Epilepsy with FDA-Approved Responsive Neurostimulation System

First Implantable Artificial Retina to Restore Vision from Retinitis Pigmentosa

First to Establish Relationship of Cancer and Epigenetic DNA Methylation
Keck’s Revenue Growth – An Academic Start Up

• Revenue has tripled in 6 years – reached 1.6B in 2017
• 30% growth in the last 2 fiscal years
Los Angeles Health Care

• Significant Medi-cal (37% of LA County and 33% of CA) and Medicare patient population

• Los Angeles is one of the least consolidated health systems in the US

• Marked demographic diversity
Health Spending Per Capita Per State 2014 (most recent data)

Source: Kaiser Family Foundation https://www.kff.org/other/state-indicator/health-spending-per capita
From a For-Profit Hospital to an Academic Medical Center in a changing healthcare world

- Challenges!
- Culture
- Developing data infrastructure
- Little improvement infrastructure
- Rapid growth and developing systems
Who we are?

• Carol Peden, Physician – anesthesiologist and intensivist 30 years front-line clinical experience, IHI Fellow and Faculty, experience of designing and leading QI projects and curricula around the world.

• Felipe Osorno, MIT Chemical Engineer, 6 years in consulting at McKinsey, Lean and Six Sigma Trained, experience and passion in creating systems to empower frontline staff to improve value.

• Kaveh Houshmand Azad, MSc Industrial Engineering, 10 years of experience in healthcare performance improvement
Getting Physicians Engaged in Improvement

• Why this program for us now?
• Growth and Infrastructure
• Value in healthcare
• Transformational change
• The issues all healthcare organizations are facing
We are all facing similar challenges

- Changes in reimbursement models
- Rising supply and labor costs
- Waste in internal processes
- Variation among providers

Need for change
The Relationship Between Professional Burnout and Quality and Safety in Healthcare: A Meta-Analysis

Authors
Michelle P. Salyers, Kelsey A. Bonfils, Lauren Luther, Ruth L. Firmin, Dominique A. White, Erin L. Adams, Angela L. Rollins

Interventions to prevent and reduce physician burnout: a systematic review and meta-analysis

Colin P West, Liselotte N Dyrbye, Patricia J Erwin, Tait D Shanafelt

Summary
Background
Physician burnout has reached epidemic levels, as documented in national studies of both physicians in training and practising physicians. The consequences are negative effects on patient care, professionalism, physicians' own care and safety, and the viability of health-care systems. A more complete understanding than at present of the quality and outcomes of the literature on approaches to prevent and reduce burnout is necessary.

West et al Lancet 2016;388:2272-81
Salyers et al Journal of General Internal Medicine 2016
Strategies to reduce physician burnout

• Acknowledging and assessing the problem
• Recognizing the behaviors of leaders that can increase or decrease burnout
• Using a systems approach to develop targeted interventions to improve efficiency and reduce clerical work
• Cultivating community at work
• Using rewards and incentives strategically
• Assessing whether the organizations actions are aligned with the stated values and mission
• Implementing organizational practices and policies that promote flexibility and work-life balance
• Providing resources to help individuals promote self-care
• Supporting organizational science (Study the factors in your own institution that contribute to the problem, and invest in solutions.)

Achieving The Quadruple Aim

- Improved Patient Outcomes
- Lower Cost of Care
- Improved Care Giver Experience
- Improved Patient Experience
Why not a multidisciplinary team approach?

- Culture
- No medical school training (to date) in QI at USC
- Time
- Little established infrastructure
- Need to rapidly develop a cohort of leaders who could then work with their teams
Our System-Wide Strategy

- Culture of Improvement
- Data Availability and Transparency
- Building Capabilities
- System-Wide Improvement
- Specialty-Level Improvement
- Engaged Physicians
Designing the program

- Approach from both “Lean” and “Model for Improvement”
- Using background research and the team’s experience

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?

Lean Thinking

- Understanding what our customers value
- Using data, or sources of evidence for insight
- Empowering everyone to continuously improve processes
- Eliminating waste
- Utilizing a scientific method for problem solving
- Creating repeatable and reproducible standardized work

http://www.ihi.org/resources/Pages/HowtoImprove/default.aspx

Model for improvement developed by Associates in Process Improvement
Experience and Learning

https://www.rcoa.ac.uk/system/files/CSQ-ARB-2012_0.pdf

https://patientsikkerhed.dk/content/uploads/2016/02/psskatalog_uk_www.pdf

https://www.rcplondon.ac.uk/projects/learning-make-difference-ltmd
• “Early engagement of a physician leader – who can listen, engage, and lead other colleagues – to be an early adopter”

• “They must be equipped with the training and tools to lead others, require dedicated protected time, and the autonomy to coordinate and implement changes”

• “The engaged physician leader requires training in governance, leadership and medical economics ... and mentorship”
EPOCH Aim and Theory

Front-line clinical staff will be enabled to achieve improvements in care for patients undergoing Emergency Surgery which will lead to improved outcomes.

Evidence based interventions

Motivation and focus

Community of practice

Measurement & data feedback

QI skills training

MDT approach

EPOCH Trial: Enhanced Peri-Operative Care for High-risk Patients £1.5M /90 Hospitals
“Because historically we as surgeons would finish an emergency and often leave the operating theatre to write the operation notes, and then often the consultant would leave, and the registrar might come back to see what is going on, but often you would … find out the next morning where the patient had gone. Whereas this now, getting us into more of a culture of: ‘Is this patient high risk? Should they go to intensive care? What is our plan of management? Do we extubate?’ Those kind of things are conversations I think we should have’.” (Surgical Fellow Hospital 2)
How to make change happen
What does engagement really mean to physicians?

1. Respect for my competency and skills
2. Feeling that my opinions are valued
3. Good relationships with my medical colleagues
4. Good work/life balance
5. A voice in how my time is structured and used
6. Fair compensation
7. Good relationships with non-clinical staff
8. A broader sense of meaning in my work
9. A voice in clinical operations and processes
10. Opportunities to expand my skills and learn new skills

From: Increasing Physician Engagement: start with what’s important to physicians. 
How was our program developed?

SPONSORS

Health System Leadership

Value Improvement Office ("Lean Team")

Center for Health System Innovation

DESIGN

SELECTION

Department Chairs

Value Improvement Office ("Lean Team")

Center for Health System Innovation

DELIVERY
Why it was designed this way?

• To help clinicians understand the components of value
• To equip them with improvement science tools
• To provide leadership development
• To educate on change management concepts
• To provide basics on organizational strategy and goals
• To demonstrate how to use and investigate institutional data e.g. Vizient
• To help foster research and publication in quality improvement
• To support selection and development of a project on which to apply these skills
Program Structure

Day 1
- Quality and Lean
  Introduction
- System Thinking
- A3 and PDSA
- Project Selection

Day 2
- Value Stream Map
- Run Charts
- Root Cause Analysis

Day 3
- Change Management
- Innovation
- Stakeholder Analysis
- Leadership

Day 4
- Publication
- Benchmarking
- Sustainability

Adult Learning principles
Including game and simulations

1:1 coaching sessions

Data Support
Introduction to the program

- Selecting and scoping potential projects
- Selecting and calculating project metric(s)

- Forming project teams
- Mapping processes
- Root Cause Analysis

- Developing countermeasures
- Implementing countermeasures
- Communicating the project with other stakeholders
- Re-measuring project metrics
- Making necessary adjustments
- Finalizing the presentation

Cohort Selection


QIPI day 1
QIPI day 2
QIPI day 3
QIPI day 4

Ongoing coaching and data support

Sharing the result and learnings
Educating and Inspiring our Staff - QIPI

- Invited guest speakers to enrich the learning experience
- Fast paced learning and application of tools
- Creating a collaborative and positive off-site experience
- Opportunities for publications
Summary of successful projects

Dr. Jay Hudgins
Improve % of transfused cases vs. type and screen orders

Dr. Michael Johns
Improve Patient throughput in OHNS clinic

Dr. Benjamin Emanuel
Improve door time to CT/MRI time for stroke patients

Dr. Armand Dorian
Appropriate “Patient Status” Determination at time of Admission

Dr. Brittney DeClerck
Improving EMR Utilization/efficiency in dermatology clinics

Dr. Naomi Schechter
Improving patient transfers to Norris Radiation Oncology

Dr. Jehni S. Robinson
Improve patient cycle time in Family Medicine clinic
Recognitions and presentations

Congratulations! Your application has been selected as the winner of the 2017 Family Practice Management Award for Practice Improvement.
Other QI physician engagement projects at KMUSC

• Care Delivery Redesign
A multidisciplinary approach lead by healthcare administrators with engaged physicians, and supported by the Value Improvement Office

• Surgical Quality Improvement Officers
A physician led program, funded by the Department of Surgery with nominated surgical and anesthesiology leads, supported to work on their own improvement programs with financial compensation. QI Mentoring and data analytics support provided.
Recipe for Care Delivery Redesign

Steps:
1. Align on Burning Platform
2. Identify Key Opportunities
3. Gauge Readiness & Build Core Teams
4. Engage in Critical Review
5. Create Environment for Change
6. Facilitate Cross-Collaboration
7. Sustain, Share, & Expand

Key Ingredients:
- Physician Champions
- Mid-Level Providers
- Allied Health Professionals
- Ancillary Services
- Administrative Support
- Executive Engagement
- Data Transparency
- Shared Vision for Success
Steps

1. Align on Burning Platform
2. Identify Key Opportunities
3. Gauge Readiness & Build Core Teams
4. Engage in Critical Review
5. Create Environment for Change
6. Facilitate Cross-Collaboration
7. Sustain, Share, & Expand

Our Shared Challenge:

Q+S+A $

Key Ingredients at Work

Assess Current State and Benchmark
Engage Clinical Leaders in the “Why?”
Create A Shared Vision
Steps

1. Align on Burning Platform

2. Identify Key Opportunities

3. Gauge Readiness & Build Core Teams

4. Engage in Critical Review

5. Create Environment for Change

6. Facilitate Cross-Collaboration

7. Sustain, Share, & Expand

Key Ingredients at Work

- Use Data to Discover Gaps
- Identify Existing Improvements in Progress
- Select Focus Cohort
Steps

1. Align on Burning Platform
2. Identify Key Opportunities
3. Gauge Readiness & Build Core Teams
4. Engage in Critical Review
5. Create Environment for Change
6. Facilitate Cross-Collaboration
7. Sustain, Share, & Expand

Key Ingredients at Work
Assess Readiness for Change
Identify Champions in Key Areas
Ask Who Else Should Be Involved
Steps

1. Align on Burning Platform
2. Identify Key Opportunities
3. Gauge Readiness & Build Core Teams
4. Engage in Critical Review
5. Create Environment for Change
6. Facilitate Cross-Collaboration
7. Sustain, Share, & Expand

Key Ingredients at Work
Combine Clinical and Financial Data
Critically Review Every Day, Every Care Decision
Identify Process Failures Across Disciplines
Steps

1. Align on Burning Platform
2. Identify Key Opportunities
3. Gauge Readiness & Build Core Teams
4. Engage in Critical Review
5. Create Environment for Change
6. Facilitate Cross-Collaboration
7. Sustain, Share, & Expand

Care Delivery Redesign Committee

<table>
<thead>
<tr>
<th>Represented Areas (April 2016):</th>
<th>Additions (February 2017):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Case Management</td>
<td>Nursing</td>
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<tr>
<td></td>
<td>Clinical Documentation Improvement</td>
</tr>
<tr>
<td>Pharmacy</td>
<td>Perioperative Services</td>
</tr>
<tr>
<td></td>
<td>Occupational Therapy</td>
</tr>
<tr>
<td>Physical Therapy</td>
<td>Hospital Medicine</td>
</tr>
<tr>
<td></td>
<td>Social Work</td>
</tr>
<tr>
<td>Radiology</td>
<td>Critical Care</td>
</tr>
<tr>
<td></td>
<td>Palliative Care Services</td>
</tr>
<tr>
<td>Lab</td>
<td>IT</td>
</tr>
<tr>
<td></td>
<td>Research Sciences</td>
</tr>
<tr>
<td>Quality</td>
<td>VIO</td>
</tr>
</tbody>
</table>

Key Ingredients at Work
- Assemble Impacted Stakeholders
- Create Safe Space to Share
- Encourage Difficult Discussions
Steps

1. Align on Burning Platform
2. Identify Key Opportunities
3. Gauge Readiness & Build Core Teams
4. Engage in Critical Review
5. Create Environment for Change
6. Facilitate Cross-Collaboration
7. Sustain, Share, & Expand

Key Ingredients at Work
Share Findings from Critical Reviews
Identify Cross-Functional Teams
Launch Short- and Long-term Improvements
Steps

1. Align on Burning Platform
2. Identify Key Opportunities
3. Gauge Readiness & Build Core Teams
4. Engage in Critical Review
5. Create Environment for Change
6. Facilitate Cross-Collaboration
7. Sustain, Share, & Expand

Key Ingredients at Work
- Monitor and Share Performance
- Learn from Successes and Failures
- Create Organizational Awareness
Steps

1. Align on Burning Platform
2. Identify Key Opportunities
3. Gauge Readiness & Build Core Teams
4. Engage in Critical Review
5. Create Environment for Change
6. Facilitate Cross-Collaboration
7. Sustain, Share, & Expand

Key Ingredients at Work
Share Findings from Critical Reviews
Identify Cross-Functional Teams
Launch Short- and Long-term Improvements
Department of Surgery Quality Officers Program

• Supported and funded by Chair of Surgery
• Financial incentive
• Significant data and QI support
• One meeting a month of group
• Some QI training
• Focus on development of leaders
• Financial calculations to justify ROI
• Celebration of success
DOS Quality Officers Desired Outcome

1. Forum to share quality data & initiatives

2. Engage, mentor, & train officers on quality & performance improvement

3. Lead and implement quality & performance improvement project within the division and scale to other divisions
Performance Improvement Process

1 month
IDENTIFICATION OF PROJECT
Quality Outcomes
Regulations
Operational Inefficiencies
Cost
Research

2-4 months
INVESTIGATION

2 months
STRATEGY

3-6 months
IMPLEMENTATION

1 month
AUDIT/MODIFY/ITERATE

REPORT
Quality Outcomes
Research
Operational Inefficiencies
Cost

Value = Quality
Cost

Process for Performance Improvement (1 year Timeframe)
Using measurement and local data…to inform and drive improvement

- Process and Outcome data
- Creating a buzz, a campaign, energy – the wish to be part of something
- Initial QI training, follow up, regular review and sharing with stakeholders
- Basic training in QI techniques, data and support
Sample Project: Increasing Efficiency & Decreasing Length of Stay in Vascular Surgery

• Hypothesis
• Project identified by surgeons, engaged Attending and Division Chief
• Increasing identification and early management of avoidable delays will decrease length of stay – focus on patients with O/E ratio > 1 day
• Overlapping project between Surgical Quality Officers and Care Redesign
• Results
Current Process

Avoidable Delays Current Process

<table>
<thead>
<tr>
<th>Identification</th>
<th>Management/Removal of Barrier</th>
<th>Follow through</th>
<th>Current State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physicians</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AM DAILY ROUNDS</td>
<td>Plan of care and interventions discussed during rounds</td>
<td>Identified by MD</td>
<td>Communicate issue/delay with NP</td>
</tr>
<tr>
<td>Nurse Practitioner</td>
<td>Facilitates completion of action items identified during rounds</td>
<td>Process dependent on the presence of NP (No NP on Wednesday or Weekend)</td>
<td>Complete one-call escalation per pathway</td>
</tr>
<tr>
<td>Case Manager</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Per NP direction, work on discharge planning delays</td>
<td>Input all delays into KPAD</td>
</tr>
<tr>
<td>VIO/Quality Partner</td>
<td></td>
<td>Collects/aggregate data into presentation</td>
<td></td>
</tr>
</tbody>
</table>

Challenges:
- Consistent definition of delay
- Limited knowledge to remove barrier for identified delays
- How does the process continue on Wednesdays or weekends?
- Could the current state contribute to delays?
- How do you know when a delay is managed (feedback)?
- How are lessons learned communicated?
# Proposed New Process for Workflow

<table>
<thead>
<tr>
<th></th>
<th>During Daily Morning Rounds</th>
<th>Throughout the Day</th>
<th>Daily Follow-up Meeting</th>
<th>Daily</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><strong>Attending &amp; Fellow</strong></td>
<td><strong>Resident, Intern, &amp; NP</strong></td>
<td><strong>NP &amp; Intern</strong></td>
<td><strong>NP</strong></td>
</tr>
<tr>
<td></td>
<td>Facilitate daily rounds:</td>
<td>Continue to Identify</td>
<td>Review avoidable delays from the day</td>
<td>Review avoidable delays per report</td>
</tr>
<tr>
<td></td>
<td>□ Discuss plan of care</td>
<td>Collects avoidable delays</td>
<td>Escalate avoidable delays per flow</td>
<td>Validate appropriateness per definition of delay</td>
</tr>
<tr>
<td></td>
<td>□ Current GM-LOS per procedure</td>
<td>Documents into Patient Hand-Off Report</td>
<td>Confirm next steps</td>
<td>Enter into KPAD</td>
</tr>
<tr>
<td></td>
<td>□ Identify avoidable delays</td>
<td>□ Perform 1-Call Escalation to manage delay timely</td>
<td>□ Ensure documentation of delay and outcome into Patient Hand-Off Report</td>
<td></td>
</tr>
<tr>
<td></td>
<td>□ Perform 1-Call Escalation to manage delay timely</td>
<td></td>
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</table>
Surgical Quality Officers;
Reflection - what we will do differently in the next iteration

• Involve Anesthesiology
• Compensation linked to attendance
• Projects more clearly linked to organizational goals
• More formal time in QI training
• Less of a ‘research” approach to data, less retrospective analysis – more use of sampling and run charts
• Greater involvement of hospital QI department
• More celebration and promotion of success
We’ve shared our experience .... What does some of the research say....
Lessons from McLeod Hospital’s Transformation

• Ask doctors to lead – mantra is “physician-led, data-driven, evidence based”
• Ask doctors what they want to work on
• Make it easy for doctors to lead and to participate
• Recognition for doctors who lead
• Support for medical staff leaders with courage
• Opportunities to learn and grow

Gosfeld AG, Reinertsen JL (2010). Achieving Clinical Integration with Highly Engaged Physicians. Unpublished manuscript in “Medical Engagement too important to be left to chance” Clark J. The King’s Fund 2012


Consider Behavioral Economics

Using Behavioral Economics to Design Physician Incentives That Deliver High-Value Care

Ezekiel J. Emanuel, MD; Peter A. Ubel, MD; Judd B. Kessler, PhD; Gregg Meyer, MD, MSc; Ralph W. Muller, MA; Amol S. Navathe, MD, PhD; Pankaj Patel, MD, MSc; Robert Pearl, MD; Meredith B. Rosenthal, PhD; Lee Sacks, MD; Aditi P. Sen, PhD; Paul Sherman, MD; and Kevin G. Volpp, MD, PhD

Behavioral economics provides insights about the development of effective incentives for physicians to deliver high-value care. It suggests that the structure and delivery of incentives can shape behavior, as can thoughtful design of the decision-making environment. This article discusses several principles of behavioral economics, including inertia, loss aversion, choice overload, and relative social ranking. Whereas these principles have been applied to motivate personal health decisions, retirement planning, and savings behavior, they have been largely ignored in the design of physician incentive programs. Applying these principles to physician incentives can improve their effectiveness through better alignment with performance goals. Anecdotal examples of successful incentive programs that apply behavioral economics principles are provided, even as the authors recognize that its application to the design of physician incentives is largely untested, and many outstanding questions exist. Application and rigorous evaluation of infrastructure changes and incentives are needed to design payment systems that incentivize high-quality, cost-conscious care.

How do you get clinicians involved in quality improvement?

- Improving quality is part of doctors professional identity-tapping into this can be a powerful motivator for change
- Clinician led quality improvement can lead to greater standardization, more equitable care, greater quality control, improved patient satisfaction and better patient outcomes
- QI must be aligned with resource allocation, supported by professional training, commissioning and regulation and integrated into service management
- QI to be sustainable must be integrated with organizational direction and resources

www.health.org.uk
Seven Themes for Medical Engagement

1. Consider your organizations track record – emphasize why this program will succeed – how is it different?
2. Give doctors time and resources to actively engage
3. Explanations of the purpose of the program should be phrased to reflect priorities and concerns of clinicians
4. Evidence of efficacy – local evidence will help
5. External expertise where possible to add credibility
6. Local program champions (credibility with other clinicians)
7. Management involvement – in a position to support clinicians

*Medical Engagement in organisation wide safety and quality improvement programmes.*

*Parand et al Qual Saf Health Care 2010;19:e44*
Harness Passion

• What is their passion, what is their clinical desire?
• Is it to be the best gastroenterologist ever – how can you help them get there?
• To have the lowest mortality for sepsis – how can your QI work get them there?
• Ask how can I help you.. be the best doctor... have the best team.. save the most patients?
In Summary

• We have designed and led a number of programs which engage and develop physicians in improvement leadership

• We will modify the next round of these programs based on our experience and feedback

• We have seen tangible improvements, ROI and joy in work increase for physicians and their teams
THE KECK EFFECT

ENGAGED PHYSICIANS IMPROVING THE QUALITY OF OUR CARE

THANK YOU!