HRET HIIN Virtual Event
Foundations for Change Fellowship

Wednesday, February 28 Call #4
11:00-12:00 p.m. CT
Welcome and Introductions

Mallory Bender, Program Manager, HRET
<table>
<thead>
<tr>
<th>Time</th>
<th>Session Title</th>
<th>Presenter(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:00-11:05</td>
<td>Welcome and Introduction</td>
<td>Mallory Bender, HRET</td>
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<tr>
<td>11:05-11:15</td>
<td>Action Period Discussion</td>
<td>Kathy Duncan, IHI</td>
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<tr>
<td></td>
<td>• What are your ideas for a test?</td>
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<td></td>
<td>• Open School: Choosing Measures</td>
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<tr>
<td>11:15-11:45</td>
<td>How will we know that a change is an improvement?</td>
<td>Kathy Duncan, IHI</td>
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<tr>
<td></td>
<td>• Explain why measurement is important in improvement.</td>
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<td></td>
<td>• Develop effective measures for your own personal improvement project.</td>
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<td></td>
<td>• Identify 3 kinds of measures: Process measures, outcome measures, and balancing measures.</td>
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<tr>
<td>11:45-11:55</td>
<td>Next Steps</td>
<td>Kathy Duncan, IHI</td>
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<tr>
<td></td>
<td>• Design and define your measures</td>
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<tr>
<td>11:55-12:00</td>
<td>Bring It Home</td>
<td>Mallory Bender, HRET</td>
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<tr>
<td>State/Region</td>
<td>People</td>
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<td>Alabama</td>
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<td>Arizona</td>
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<td>Colorado</td>
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<td>Dallas-Fort Worth</td>
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<td>Delaware</td>
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<td>Florida</td>
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<td>Foundation for Health Communities</td>
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<td>Georgia</td>
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<td>Great Plains QIN</td>
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<td>Health Quality Innovators</td>
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<td>Hospital Association of Rhode Island</td>
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<td>Idaho</td>
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<td>New Hampshire</td>
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<td>New Mexico</td>
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<td>North Dakota</td>
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<td>Oklahoma</td>
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<td>Puerto Rico</td>
<td>36</td>
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<td>Tennessee</td>
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<td>Virginia</td>
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<td>Wyoming</td>
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<tr>
<td>West Virginia</td>
<td>3</td>
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</tbody>
</table>
Kathy D. Duncan, RN, is a Director for the Institute for Healthcare Improvement (IHI) where she oversees the development and execution of multiple areas of safety and quality improvement related content.

Lauren H. Macy is an Improvement Advisor for the Institute for Healthcare Improvement (IHI) supporting Collaboratives aiming to reduce parental stress in NYC (Early Years Collaborative) and improving end of life conversations across 20 health care organizations in Massachusetts. Additionally, she is director for IHI’s Improvement Coach Professional Development Program– teaching both the science of improvement methodology and coaching techniques.
<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>January 17</td>
<td>Set Up for Success</td>
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<tr>
<td>January 31</td>
<td>What are you trying to accomplish?</td>
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<td>February 14</td>
<td>What changes can we make that will result in improvement?</td>
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<td>February 28</td>
<td>How will we know that a change is an improvement?</td>
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<tr>
<td>March 14</td>
<td>Testing Vs. Implementation</td>
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<td>March 28</td>
<td>Practical Strategies</td>
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<td>April 11</td>
<td>Implementation</td>
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<td>May 9</td>
<td>Transitioning to Adoption</td>
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<td>June 6</td>
<td>Essential Tool Kit</td>
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<tr>
<td>July 11</td>
<td>Celebration and Wrap up</td>
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**Wednesdays 11:00- 12:00 PM CT**
Poll: At which point is your project?

A. Team formed
B. Team formed + aim statement
C. Team formed + aim statement + driver diagram
D. Team formed + aim statement + driver diagram + change ideas identified
E. Team formed + aim statement + driver diagram + change ideas identified + testing
Action Items for Action Period
What are your ideas for a test?

I would love to hear about it. Please post to discussion group or send to kduncan@ihi.org
Examples from Group Discussions
• Assignment for Call #4:
  – QI 102 Lesson 3 Choosing Measures

What did you think? Anything new?
Objectives for Today

• Explain why measurement is important in improvement.

• Identify 3 kinds of measures:
  – Process measures,
  – Outcome measures
  – Balancing measures.

• Develop effective measures for your own personal improvement project.
How will we know that a change is an 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?

Act
Plan
Study
Do

How do you know a change is an improvement?
The Value of Measuring

“You measure what you value. Conversely, you value what you measure.”

Brent James
The Value of Measuring

“You measure what you value. Conversely, you value what you measure.” Brent James

“Measurement is the first step that leads to control and eventually to improvement. If you can’t measure something, you can’t understand it. If you can’t understand it, you can’t control it. If you can’t control it, you can’t improve it.” H. James Harrington
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“Without data, you are just another person with an opinion.”  
*W. Edwards Deming*
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All measures have limitations, but the limitations do not negate their value for learning.
Why You Are Measuring?

Improvement
- Purpose: to bring new knowledge into daily practice
- Tests: Many sequential, observable tests
- Biases: Gather ‘just enough’

Research
- Purpose: to discover new knowledge
- Tests: One large ‘blind test’
- Biases: Control for as many biases as possible
- Data: Gather as much as possible

Measurement for Improvement is “for learning, not for judgment”
Numerical aims provide a reference point to evaluate performance
Used to guide improvement and test changes

Data tells a story
Annotated is best

Focus on the vital few
Is for learning not for judgment
Integrate into team’s daily routine
Measures should operationalize the aim

- Numerical aims provide a reference point to evaluate performance
- Used to guide improvement and test changes

- **Aim:** Reduce sepsis mortality rate 20% by January 31, 2018
  - For ED patients, screen and initiate, when positive, sepsis bundle 95% of the time within 1 hour of triage by December 31, 2017

- **Measures:**
  - Sepsis mortality rate
  - Door to identification of positive sepsis screen time
  - Door to initiation time of sepsis protocol
• Which of these measures align with the aim: Reduce CAUTIs for all acute care patients by 50% by December 31, 2017 (check all that apply)

a. # of urinary catheter days per month
b. # of patients admitted with urinary catheters
c. Removal of all urinary catheters in all surgical patients within 24 hours
d. Daily review of urinary catheter necessity
e. Number of PCP with urinary catheters
• Data tells a story
• Annotated is best

• Aim: For ED patients, identify and initiate sepsis bundle 95% of the time within 1 hour of triage by December 31, 2017

• Measure:
  – Door to identification of positive sepsis screen time
  – Door to initiation time of sepsis protocol

<table>
<thead>
<tr>
<th>Pt #</th>
<th>Door Time</th>
<th>Time to Positive Screen</th>
<th>Time to Protocol</th>
</tr>
</thead>
<tbody>
<tr>
<td>324535</td>
<td>12:50p</td>
<td>1:25p</td>
<td>3:02p</td>
</tr>
<tr>
<td>329534</td>
<td>8:15</td>
<td>8:20</td>
<td>8:55</td>
</tr>
<tr>
<td>328548</td>
<td>3:10</td>
<td>3:50</td>
<td>5:12</td>
</tr>
<tr>
<td>325647</td>
<td>5:55</td>
<td>6:00</td>
<td>6:34</td>
</tr>
</tbody>
</table>
Improving LOS for Patients Admitted from the ED

- Quick-look x-rays
- Work-up done on floor
- Bed ahead
- Individual responsible for bed control

Week

2/16/98 3/16 4/13 5/11 6/8

LOS (minutes)

160 180 200 220 240 260 280 300 320
- **Aim:** For ED patients, identify and initiate sepsis bundle 95% of the time within 1 hour of triage by December 31, 2017

- **Measure:**
  - Door to identification of positive sepsis screen time
  - Door to initiation time of sepsis protocol
Just because you can measure everything doesn't mean that you should.

— W. Edwards Deming —
Types of Measures to Evaluate Impact and Progress

**Outcome**
- Measures directly relate to the aim of an initiative.
- How is the system performing? What are the results?

**Process**
- Measures reflect how well processes in the work get done.
- Are the steps of the process performing as planned?

**Balancing**
- What happened to the system as we improved the outcome and processes? (unanticipated consequences)
• Check all of the Process Measures
  a. CLABSI rate
  b. Compliance with ventilator bundles
  c. % of time all preventative measures were documented on all high risk patients
  d. Door to balloon time
  e. Mortality rate
  f. Denial rate
Outcome Measure vs. Process Measure

example discussion

Outcome Measures

a. **CLABSI rate** – How many of our patients had a CLABSI?
b. **Mortality rate** - How many of our patients died?
c. **Denial rate** – How many of our claims were denied?

Process Measures

- Compliance with ventilator bundles- Were all the bundle elements met?
- % of time all preventative measures were documented on all high risk patients - How often did we document all the measures on the high risk patients?
- Door to balloon time How long did it take to facilitate a patient from door of ED to the insertion of a stent in the cath lab?
An Operational Definition...

...is a description, in quantifiable terms, of what to measure and the steps to follow to measure it consistently.
## Operational Definitions

<table>
<thead>
<tr>
<th>Concept</th>
<th>Operational Definition Possibilities... Your Team Decides!</th>
</tr>
</thead>
<tbody>
<tr>
<td>Readmission</td>
<td>• A patient coming back to the hospital within a month&lt;br&gt;• A patient coming back to the hospital within a month with the same condition/complaint&lt;br&gt;• A patient coming back to the hospital within 2 weeks with the same condition/complaint</td>
</tr>
<tr>
<td>Waiting times</td>
<td>• The time a patient walks in the hospital to the time they see a doctor&lt;br&gt;• The time a patient registers to the time they see a nurse&lt;br&gt;• The time a patient enters the exam room to when they see a doctor</td>
</tr>
<tr>
<td>Staff who have “patient contact”</td>
<td>• Any staff who are on the ward&lt;br&gt;• Any staff who enters a patient’s room&lt;br&gt;• Any staff has clinical responsibilities for a patient</td>
</tr>
</tbody>
</table>
Operational Definition

- State the measurement process to be used
- Define numerator and denominator
- Category of measure:
  - Outcome
  - Process
  - Balancing
- Is clear and unambiguous
- Identifies criteria

# Measurement Strategy Worksheet

<table>
<thead>
<tr>
<th>Measure Name</th>
<th>Operational Definition</th>
<th>Data Source</th>
<th>Data Collection</th>
<th>Baseline</th>
<th>Aim</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Schedule</td>
<td>Period</td>
<td>Short term</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Method</td>
<td>Value</td>
<td>Long term</td>
</tr>
</tbody>
</table>

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**Measure Name**: 
- Operational Definition: 
- Data Source: 
- Data Collection: Schedule, Method 
- Baseline: Period, Value 
- Aim: Short term, Long term
Example Family of Measures: Readmissions

• “AIM: Reduce readmissions related to colorectal surgery by 5% by December 31, 2017” –Lacy Phillips

• Outcome:
  –% of patients being readmitted within 30 days after colorectal surgery

• Process:
  –% of patients who at the time of discharge had a f/u visit scheduled in accordance with their risk assessment
  –% of patients successfully able to teach back discharge instructions one day prior to discharge

• Balancing:
  –Patient Satisfaction
Example Family of Measures: Sepsis

• “Aim: Increase sepsis bundle compliance by 37% from year-end average for 2016 (36%) by end of first quarter 2018.”
  – Anne Engleman

• Outcome:
  – % sepsis bundle compliance (# patients with sepsis getting the bundle/# of patients with sepsis)

• Process:
  – % of ED patients identified with 2 SIRS criteria with sepsis bundle initiated within 1 hour
  – % of ICU patients identified with 2 SIRS criteria with sepsis bundle initiated within 1 hour
  – % of patients identified with sepsis getting the bundle within 3 hours

• Balancing:
  – # of patients with unscheduled transfers to ICU in septic shock
  – # of RRT calls with false positive sepsis screens
Data Is Not Always Difficult to Collect!
## Measurement Dashboard Worksheet

<table>
<thead>
<tr>
<th>Measure Name</th>
<th>Operational Definition</th>
<th>Data Collection Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Be sure to indicate if it is a count, percent, rate, days between, etc.)</td>
<td>(Define the measure in very specific terms. Provide the numerator and the denominator if a percentage or rate. Be as clear and unambiguous as possible)</td>
<td>(How will the data be collected? Who will do it? Frequency? Duration? What is to be excluded?)</td>
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</table>

PROJECT PROGRESS SUMMARY TEMPLATE
Project Title

Fellow(s) name(s)
Fellowship Track (Accelerating Improvement or Foundations for Change)
Contact information
Hospital Name, City, State
Date
<table>
<thead>
<tr>
<th><strong>Aim</strong></th>
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<tbody>
<tr>
<td>(by when; what you want to improve; and how much improvement)</td>
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<tr>
<td><strong>Background</strong></td>
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<tr>
<td>(why this project and why now)</td>
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</table>
[Insert driver diagram]
What did you measure to know if you achieved your aim?

Generally 1-2 in number and often a raw count (number of..., a percent, or a rate)
Measure: Process

What did you measure to know how the parts/steps in the system are performing? (what data did you collect?)

Often related to your primary or secondary drivers. Generally, 3-5 in number.
What did you measure to know what happened to the system as we improved the outcome and process measures?

What are 1-2 unanticipated consequences or other factors that may be influenced by your work and how would you measure them?
Please list the changes you tested using PDSA cycles
[Insert Run Chart(s) (2) for your outcome (and process measures if you have them!).

**Remember:**
1. Run Charts only have one measure per chart
2. Time is on the x-axis
3. To plot the median line
4. Annotations using text boxes with arrows to help “tell the story” of the data]
Optional slide if you have a second run chart to share. Delete slide if this is not applicable to your project.

See instructions from previous slide.
Reflections

• Lessons learned: [1-2 examples]

• Barriers encountered: [1-2 examples]
What is your plan for overcoming barriers (or how you did): [1-2 examples]
Next Steps

• How will you support spread and sustainability? [1-2 examples]
• **Assignment for Call #4:**
  – QI 103 Lesson 2  Testing and Measuring changes with PDSA
  – Design and your measures

• **Suggested Tasks**
  – Monthly Office Call: March 7 11a CT Topic: Testing and Measures
  – [Self-Assessment submission](#) (if not completed)
• Additional Resources:
  – QI 105 Lesson 2  Change Psychology and the Human Side of Quality Improvement
  – QI 105 Lesson 3 Working with Interdisciplinary Team Members
  – Assignment for call 5:

  – 5

  — March 14
THANK YOU!