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The correct citation for this document is:

Davey N.J., 2017, Measurement for Improvement Workshop, Wessex Safety and Improvement Conference 14 June 2017
Session Objectives

Aim

To learn more about measurement for improvement and have a go whilst you are here so that you can try out something new within a week of returning to work

Measure (Process)

• Know what you know
• Know what you don’t know

Measure (Outcome)

• Use of measurement with confidence to KNOW if your improvement efforts are making a difference to your patients
Where are you starting from?

How could I find out really fast?
Model for improvement

**AIM**
What are we trying to accomplish?

**MEASURES**
How will we know that a change is an improvement?

**INTERVENTIONS**
(Change ideas)
What change can we make that will result in the improvement that we seek?

ACT

PLAN

TEST

STUDY

DO

Langley et al. 1996
# 3 reasons for measurement

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Judgement</th>
<th>Research</th>
<th>Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aim</td>
<td>Achievement of target</td>
<td>New knowledge</td>
<td>Improvement of service</td>
</tr>
<tr>
<td>Testing strategy</td>
<td>No tests</td>
<td>One large test</td>
<td>Sequential tests</td>
</tr>
<tr>
<td>Sample Size</td>
<td>Obtain 100% of available, relevant data</td>
<td>‘Just in case’ data</td>
<td>‘just enough’ data, small sequential samples</td>
</tr>
<tr>
<td>Type of hypothesis</td>
<td>No hypothesis</td>
<td>Fixed hypothesis</td>
<td>Hypothesis flexible, changes as learning takes place</td>
</tr>
<tr>
<td>Variation (bias)</td>
<td>Adjust measures to reduce variation</td>
<td>Design to eliminate unwanted variation</td>
<td>Accept consistent variation</td>
</tr>
<tr>
<td>Determining if a change is an improvement</td>
<td>No change focus</td>
<td>Statistical tests (t-test, F-test, Chi^2) p-values</td>
<td>Run charts or Shewart control charts</td>
</tr>
</tbody>
</table>

Bob Lloyd, Institute of Healthcare improvement, Boston, 2006
Measures

Diagnostics
  • intelligence, segmentation...

Baseline
  • Process
  • Outcome
  • Balancing

Intervention (PDSA)
  • Has our idea had ANY impact?
Measures

Diagnostics
• intelligence, segmentation...

Baseline
• Process
• Outcome
• Balancing

Intervention (PDSA)
• Has our idea had ANY impact?
In this session

• Diagnostic phase
• Choose your measure
• Defining your measure
• Testing your measure
Diagnostics
A picture based on local intelligence (observe & count)

Initial data collection showed that 50% of patients were appropriately mobilised on day 1 post-op.
Baseline

• How am I doing?

MEASURES
How will we know that a change is an improvement?

Features of a good measure
• Easy
• Reliable
• Reproducible
• Meaningful
• Informing
Session Objectives

Aim

To learn more about measurement for improvement and have a go whilst you are here so that you can try out something new within a week of returning to work

Measure (Process)

• Know what you know
• Know what you don’t know

Measure (Outcome)

• Using measurement with confidence to KNOW if your improvement efforts are making a difference to your patients
Features of a good measure

- **Easy**
  - quick to do on regular basis

- **Reliable**
  - same if done again by same person on many occasions

- **Reproducible**
  - can be produced by other people

- **Meaningful**
  - Understand what I can learn from this measurement

- **Informing**
  - It will help me decide what to do next
Defining your measure
Making sure it’s reproducible....

Confidence in measuring ‘just enough data’
Plan for collecting data

• How to collect?
• Who to collect?
• When to collect?
• How much to collect?
• How much time to spend collecting it?

- Easy
- Reliable
- Reproducible
- Meaningful
- Informing
Measurement Resources

Guide to measurement for improvement, NHS Elect

7 Steps to measurement, Mike Davidge
http://www.youtube.com/watch?v=Za1o77jAnbw

NELA: Using Run Charts, Royal College of Anaesthetists
https://www.youtube.com/watch?v=vg9ats8fuGM&feature=youtu.be
More Measurement Resources

The Health Foundation Publications

Handover and transfers of care – step-by-step measurement guide
http://tinyurl.com/stepbystepmeasurement

Nikki Davey’s Measurement Blog – Key resources
http://www.qualityimprovementclinic.com/measurement-for-improvement/
We like to learn too!
Please provide feedback
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