Sepsis Best Practice: Lessons Learned

Pat Posa RN, BSN, MSA, FAAN
Quality Excellence Leader
St. Joseph Mercy Hospital
Ann Arbor, MI
Patricia.posa@stjoeshealth.org

Kathleen M. Vollman RN, MSN, CCNS, FCCM, FAAN
Clinical Nurse Specialist/Educator/Consultant
ADVANCING NURSING LLC
kvollman@comcast.net
Northville, Michigan
www.vollman.com
Objectives

• Review PDSA and how to do small tests of change
• Develop a test of change for your organization to improve sepsis program
Gap Analysis: 4 Tiers

- **Strong Action**
  - Sepsis coordinator/50% of job
  - Real time data collection & rounding
  - Nurse driven protocol for initiation of care

- **Intermediate Action**
  - Identify broad spectrum antibiotics
  - Placement in Pyxis
  - Order set
  - Education
  - Timely formal feedback to the team

Additional Items: Turn around time for lab (lactate)
Building Resiliency Into Interventions

- Forcing functions and constraints
- Automation and computerization
- Standardization and protocols
- Checklists and independent check systems
- Rules and policies
- Education and information
- Vague warnings – Be more careful!

Strongest

StRENGTH OF INTERVENTION

Weakest
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PDSA and Test of Change
Introducing Tests of Change

• Goal
  – Test potential improvements to the unit’s care processes that have the potential to transform care in large and small ways

• Why It’s Important
  – Small-scale tests of change can help determine whether an idea could result in sustainable improvement
  – Used for action-oriented learning
Principles for Tests of Change

• Test to evaluate if a new idea or innovation will work
  – Adopt
  – Adapt
  – Abandon
• Test small (N = 1)
  – One nurse
  – One shift
  – One patient
  one change-of-shift report
• Engage those interested in testing
  – “Nurse friendly”
  – “Curious Team Member”
Principles for Tests of Change

• Don’t wait for a committee approval
• Go to the committee after you have tested and have some data to support the new changes
• Form a hypothesis and collect some data (quantitative and qualitative)
• Revise - it takes many tests to build innovations
How to Do It:
Plan-Do-Study-Act (PDSA)

PDSA is at the core of the Institute for Healthcare Improvement’s Model for Improvement
The PDSA Cycle for Learning and Improvement

ACT
- Set objective
- Ask questions and make predictions (why)
- Plan to carry out the cycle and data collection (who, what, where, when)

PLAN
- Carry out the plan
- Document problems and unexpected observations
- Collect and begin data analysis

STUDY
- Analyze the data
- Compare data to predictions
- Summarize what was learned

DO
- What changes are to be made?
- Next cycle?
Plan-Do-Study-Act (PDSA)

Step 1: PLAN

Plan the test or observation, including a data collection plan

- State the test objectives
- Make predictions about what will happen and why
- Develop a plan to test the change
  - Who?
  - What?
  - When?
  - Where?
  - What data needs to be collected?
Plan-Do-Study-Act (PDSA)
Step 2: DO

Try out the test on a small scale

- Carry out the test
- Document problems and unexpected observations
- Collect and begin analysis of the data
Plan-Do-Study-Act (PDSA)\(^1\)
Step 3: STUDY

Set aside time to analyze the data and study the results

- Complete the data analysis
- Compare the data to your predictions
- Summarize and reflect on what was learned
Plan-Do-Study-Act (PDSA)  
Step 4: **ACT**

*Refine the change, based on what was learned from the test*

- Determine what modifications should be made
- Prepare a plan for the next test (adapt change, another test, implementation cycle?)
  - Adopt (standardize/hold the gains)
  - Adapt (Do-modify/try again)
  - Abandon (new plan)
Your Turn, Try a Test of Change
Planning Worksheet

<table>
<thead>
<tr>
<th>SMALL TEST OF CHANGE</th>
<th>WHAT do you need to test this idea?</th>
<th>WHO will be involved in the tests?</th>
<th>HOW will you inform participants?</th>
<th>WHERE will the test occur?</th>
<th>WHEN will the test occur?</th>
<th>HOW will you know it is successful?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

When will you compare what happened to your prediction?
When will you decide what to do next?

<table>
<thead>
<tr>
<th>SMALL TEST OF CHANGE</th>
<th>What did you predict will happen?</th>
<th>What happened?</th>
<th>What did you learn?</th>
<th>What are the next steps?</th>
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<td>Get lactate with each blood culture</td>
<td>Inform staff that with every blood culture you obtain a lactate</td>
<td>Physician and staff nurse</td>
<td>Discuss at shift change/huddle</td>
<td>In the MICU</td>
<td>Week of June 13th</td>
<td>Review all patients who got blood cultures during that week to see if lactate also ordered</td>
</tr>
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<td>Get lactate with each blood culture</td>
<td>Will see more lactates drawn because done when get a blood culture</td>
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Table Exercise: Develop a Small Test of Change

- Look at your data: sepsis bundles (process measures) sepsis mortality (outcome measures)
- Gap Analysis/4 Tiers: what evidence based interventions are you not doing?
- Process data: how well are you implementing all of the bundle strategies
- Review evidence based practices and processes previously shared

- Identify one small test of change you would like to implement to improve your 3hr bundle sepsis compliance
- Complete Test of Change worksheet
- Share with group
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