Ten Lessons in Ten Years of Quality & Safety

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#SPSPDetPat
Most complex of human endeavours
Don’t teach your grandmother to sook eggs...

10 Things I/we have learned in 10 years of SPSP

TO SUCK EGGS HERE
1. The power of embarrassment
1. The power of embarrassment

- Signs of sepsis < 2 days
- 2% of emergency admissions (~500)
- 71% had an EWS
- 34% had severe sepsis
- 21% blood cultures
- 32% IV Antibiotics
- 70% IV fluids

Scottish Defect Rate was 18-74%

Sense of Urgency / Build a social movement
What are you thinking?

1 + 1 = 2
2 + 2 = 4
3 + 3 = 7
4 + 4 = 8
5 + 5 = 10

Adverse Events or Always Events
Rogers’ adopter categories

2. Importance of reliability
Correlation ≠ Causation

Per capita cheese consumption correlates with
Number of people who died by becoming tangled in their bedsheets

- Bedsheet tanglings
- Cheese consumed

Source: tylervigen.com
Association does not imply causation

Per capita consumption of mozzarella cheese correlates with Civil engineering doctorates awarded

Correlation: 95.86% ($r=0.958648$)

Data sources: U.S. Department of Agriculture and National Science Foundation
3. Quality and safety is not a project
People can be harmed in other ways
4. Improvement methodology works everywhere & for everything

- End of life care
- Saving lives and giving hope
Palliative Care

Run Chart of Referral to Service Start Times for Patients Waiting for BIS
January 2015 - April 2016

- Changes to internal referral process
- More staff
- Home visits/weekly "huddles"
- Increase due to internal referrals

- Median 19.5 days
- Median 9.5 days
- Project start

Patients in chronological order Jan 2015 - April 2016
5. Different terminology but different meanings
A Model for Improvement: Juran’s trilogy
6. What matters to them?
↓ Experience
↓ Outcomes
↓ Empathy
↑ Errors
↑ Tests
↑ Procedures
↓ Professionalism

Bodenheimer, Silkay. From the Triple to Quadruple Aim. Annals of Family Medicine, 2015
Lessons from Aviation
7. If you build it they will come

- Give power away / listen to understand / joy at work
8. Pebble in your shoe
Staff-centredness & the Shark Fin of Innovation
Scotland HSMR – 9.5% reduction (2011)
The gentle art of asking instead of telling... (Edgar Schein)

Never doubt that a small group of thoughtful, committed, citizens can change the world. Indeed, it is the only thing that ever has.

Margaret Mead
Made in Scotland...

#SPSPDetPat

**Sepsis Driver Diagram**

**Outcome**

- To improve the recognition and timely management of Sepsis in acute hospitals
- Outcome: To reduce mortality and morbidity from sepsis

**Primary drivers**

- Reliable Recognition & Assessment
  - Reliable Sepsis screening (NEWS + suspicion of infection)
  - Ensure reliable communication across clinical teams of at risk patients
  - Ensure timely rescue of deteriorating patient by competent teams
  - Facilitate reliable triage and assessment of patients who have been identified as potential sepsis by Primary Care or Scottish Ambulance Service

- Reliable Care Delivery
  - Ensure reliable delivery of Sepsis Six within 1 hour
  - Source Control
  - Ensure reliable escalation of septic patients to higher level of care
  - Improve Antimicrobial stewardship

- Education & Awareness
  - Education on burden of illness & current performance
  - Provide training to staff on clinical knowledge and improvement skills

- Culture of safety and Quality Improvement
  - Executive Sponsorship
  - Clinical Leadership
  - Multidisciplinary team working
  - Develop measurement frameworks to guide improvement

- Patient & Family Centred Care
  - Raise awareness on signs & symptoms
  - Involve patients & families in treatment process and care planning
Sepsis mortality

Unanticipated consequences of Sepsis Improvement
9. Prevention is better than cure...

Unanticipated consequence: The deteriorating patient

- The FOUR R’s
  - RECOGNISE (Anticipate)
  - RESCUE
  - REVIEW
  - REFER

Therefore they grow within the organisation
My ideal life journey
Real world
Recognise a deteriorating patient
National Early Warning Score System (NEWS)

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<th>PHYSIOLOGICAL PARAMETERS</th>
<th>3</th>
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<tr>
<td>Respiration Rate</td>
<td>≤8</td>
<td>9 - 11</td>
<td>12 - 20</td>
<td>21 - 24</td>
<td>≥25</td>
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<tr>
<td>Oxygen Saturations</td>
<td>≤91</td>
<td>92 - 93</td>
<td>94 - 95</td>
<td>≥96</td>
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<td>Any Supplemental Oxygen</td>
<td>Yes</td>
<td>No</td>
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<tr>
<td>Temperature</td>
<td>≤35.0</td>
<td>35.1 - 36.0</td>
<td>36.1 - 38.0</td>
<td>38.1 - 39.0</td>
<td>≥39.1</td>
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<td>Systolic BP</td>
<td>≤90</td>
<td>91 - 100</td>
<td>101 - 110</td>
<td>111 - 219</td>
<td>≥220</td>
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<tr>
<td>Heart Rate</td>
<td>≤40</td>
<td>41 - 50</td>
<td>51 - 90</td>
<td>91 - 110</td>
<td>111 - 130</td>
<td>≥131</td>
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<tr>
<td>Level of Consciousness</td>
<td>A</td>
<td>V, P, or U</td>
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Cardiac arrest rate

Total rate of Cardiac Arrest for 15 hospitals which have reported consistently from Mar '13 to Jul '19

- Baseline Median: 1.84
- Current Median: 1.30
- Reduction from Baseline: 29%
Validation of Early Warning Score in Paediatric Ambulance Patients: The VESPA Study
10. Capacity building at local and national levels
Improvement Science works internationally
Sepsis Collaborative
Brazil

52% reduction in lethality
295 lives saved
The Future: The world with a Scottish Accent
TEAM
TOGETHER EVERYONE ACHIEVES MORE

Multidisciplinary and the Patient
“Plant trees you’ll never see”

Thank you