Implementing an Electronic Early Warning Scoring System

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There is no acceptable clinical compromise for digital data.
Core principles

- Ergonomic (low physical workload)
- Intuitive (low mental workload)
- Efficient (at least as fast as paper)
- Real-time data is shared in the right way...
- ...with the right people

- So that on their worst day they won’t let you take away
Collate equipment

Arrive at bedside

Attach equipment

Measure and document observations

Leave patient bedside

Avg: 30s (0 – 6min)

Avg: 5 min (2 – 20min)

n=129

10% notes missing

22% transcribe observations
Questions

○ What does the user want to do?
○ How do we enhance best practice?
○ What are the current workarounds?
Who are the users to consider?

- Nurses?
- Doctors?
- Managers?
- Anyone who interacts with the system in any way
Safer Hospitals Safer Wards

INTEGRATED DIGITAL CARE RECORD

Success Story
Safer Hospitals, Safer Wards Technology Fund

Oxford University Hospitals NHS Trust
January 2015

NHS England administers the Safer Hospital, Safer Wards Technology Fund on behalf of the Department of Health.
Version 1: Testable prototype

- Focus
  - The graphical chart is integral to the task
- UI efficiency
- Output
  - Rapid interface iteration
Version 2: Prototype stand

- **Focus**
  - Physical ergonomics
  - Resilience to failure

- **Outcomes**
  - Stand specifications for external supplier
  - More detailed usability testing possible
“I thought SEND was easy to use”
Version 3: Roll-out version

○ Focus
  ○ Advanced features
  ○ Refinement in light of testing
“I thought SEND was easy to use”

Strongly disagree 1

2

3

4

5

Strongly agree

114 clinical staff

77.8 SUS score
7000
Registered users across 3 hospitals

12,300
Patients

395,000
Observations sets

19,750hrs saved
3 minutes per observation set
(and that’s only documentation time)
Repeating the process

There is no acceptable clinical compromise for digital data

- For each new change
- For each new user group
- For each new environment
There is no acceptable clinical compromise for digital data.