smacc GOLD
19 – 21 MARCH 2014 | GOLD COAST, AUSTRALIA

Time Critical - Count 9

A new tool to aid the recognition of altered respiratory rate in unwell and deteriorating patients.

Stacey-Jo Webster[1], Blair Graham[2], Simon Mardel[2]

1. University of Manchester, United Kingdom
2. University Hospitals South Manchester, United Kingdom

Stacey-Jo.webster@student.manchester.ac.uk

UHSM Your Hospital

MANCHESTER 1824

Follow our progress...

@timecritcal

Time Critical
Critical illness recognition simplified

smacc GOLD
19 – 21 MARCH 2014 | GOLD COAST, AUSTRALIA

BACKGROUND

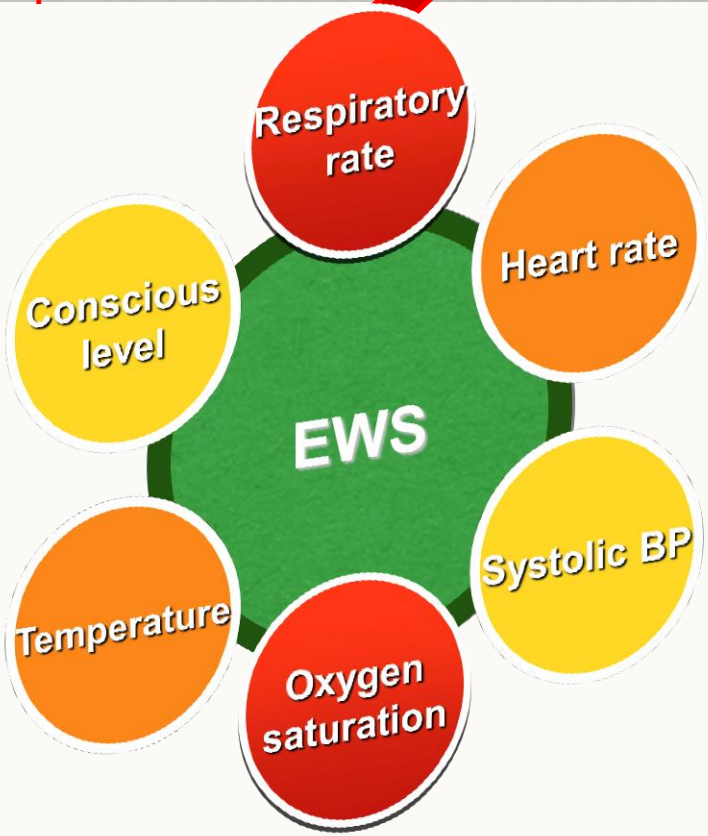
- Early recognition of critical illness is crucial to preventing avoidable death or harm. Early Warning Scores (EWS) aim to use physiological derangement to identify these patients [1]

- Of all the vital signs used in EWS, respiratory rate is the most sensitive indicator of critical illness yet it is frequently omitted[2]
- Failure to recognise critical illness may contribute to 6000 deaths each year in the UK alone[3]

1. http://bit.ly/1bzO1lC 2. http://bit.ly/1jZB1Wd 3. http://bit.ly/Mlx9De

EWS COMPONENTS

Components of EWS



The accuracy of Respiratory rate is completely dependent on the method used by the recorder

Inaccurate recording is likely to impact adversely on the sensitivity of EWS systems.

We identified a need to standardise and simplify respiratory rate recording.

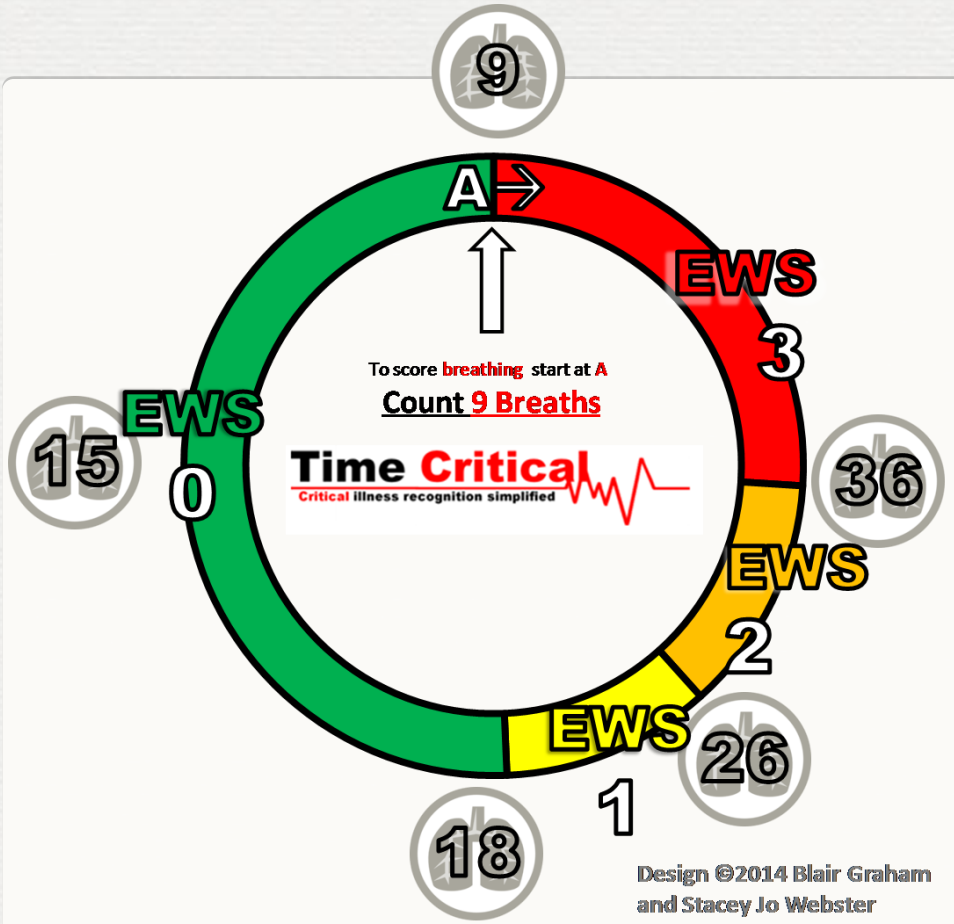
AIMS

- To **develop an innovation** that will improve the ease and compliance of calculating the respiratory rate and recognising critically ill and deteriorating patients
- To **evaluate and implement** in both developed and resource poor settings

...

smacc GOLD
19 – 21 MARCH 2014 | GOLD COAST, AUSTRALIA

…Introducing COUNT 9



Count 9 is our unique clock face that allows easy calculation of the respiratory component of a patients MEWS

UHSM Your Hospital

MANCHESTER 1824

Follow our progress...

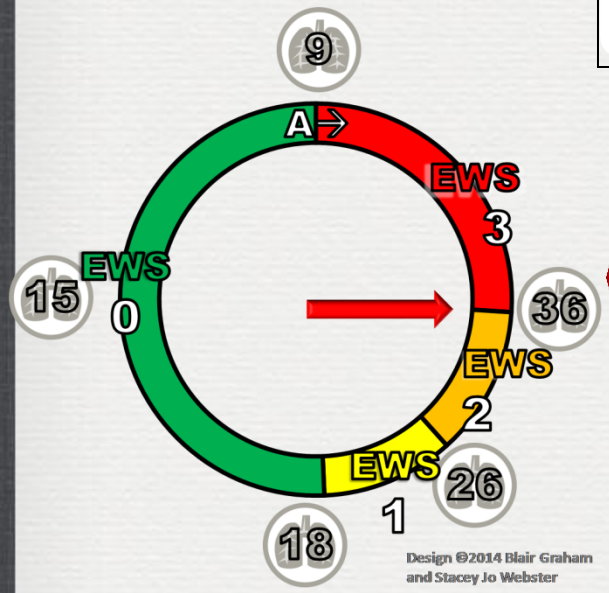
@timecritcal

Time Critical
Critical illness recognition simplified

… The Easy way to score respiration rate…

To score **breathing** start at **A**

Count 9 Breaths



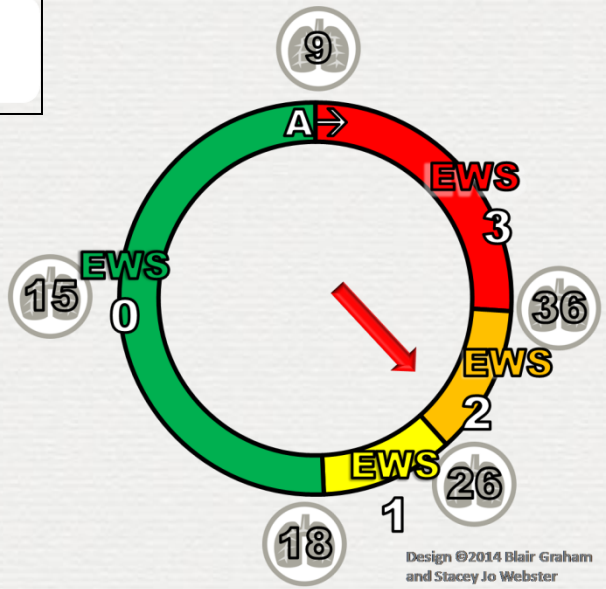
Worked Example:

Start A

Count 9 breaths

RR = 36

EWS = 3



Worked Example:

Start A

Count 9 breaths

RR = 27

EWS = 2

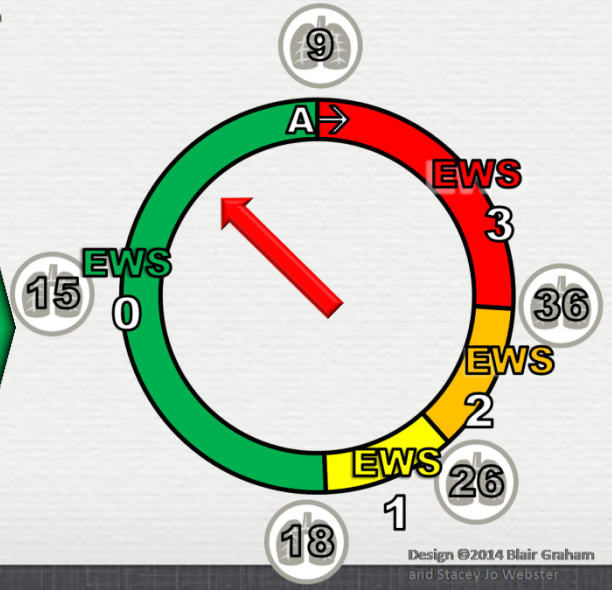
Worked Example:

Start A

Count 9 breaths

RR = 10

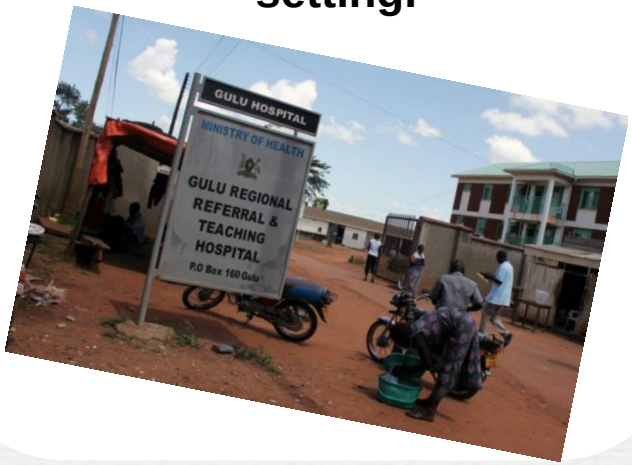
EWS = 0



Current Projects

Pilot work in the United Kingdom may see the clock trialled at University Hospital South Manchester.

We're also planning on piloting in a resource poor setting in Northern Uganda, to investigate how the clock influences respiratory rate recording in a resource constrained setting.



UHSM Your Hospital

MANCHESTER 1824

Follow our progress...

@timecritcal

Time Critical

Critical illness recognition simplified

CONCLUSION

- Accurate recording of EWS allows for prompt recognition of critically ill and deteriorating patients
- Respiratory rate is the first vital sign to show derangement yet least often recorded
- Count 9 is an innovative, intuitive yet cost effective solution with the potential to save lives

Acknowledgements We would like to thank Nathalie May for her help with this presentation, and our partners at UHSM and the Man- Gulu link who are working with us to make time critical a reality.

UHSM Your Hospital

MANCHESTER 1824

Follow our progress...

@timecritcal

Time Critical

Critical illness recognition simplified