

Still failing deteriorating patients ?

Let's measure your hospital's system !



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on behalf of the METHOD study investigators

CONCLUSION

- A proposed template can be helpful for benchmarking (inter)national RRSs
- Consider the importance of clinical frailty in relation to outcomes

BACKGROUND

- “Rapid response systems (RRSs) are one of the first organisation-wide, patient-focused systems to be developed since 1995 to prevent potentially avoidable deaths and serious adverse events such as cardiac arrests.” (Hillman 2014 MJA).
- Preventing Cardiac Arrests seems straight forward, but what else can patients expect from this expensive intervention? Can we measure performance across complex systems? Are we fair to young and old patients? And can we compare our work with that of the neighbouring hospital?
- We set up the international Benchmarking audit ‘Medical Emergency Teams, Hospital Outcomes in a Day’ Study (METHOD) in 2014. In 2016 we have repeated the study.

METHODS

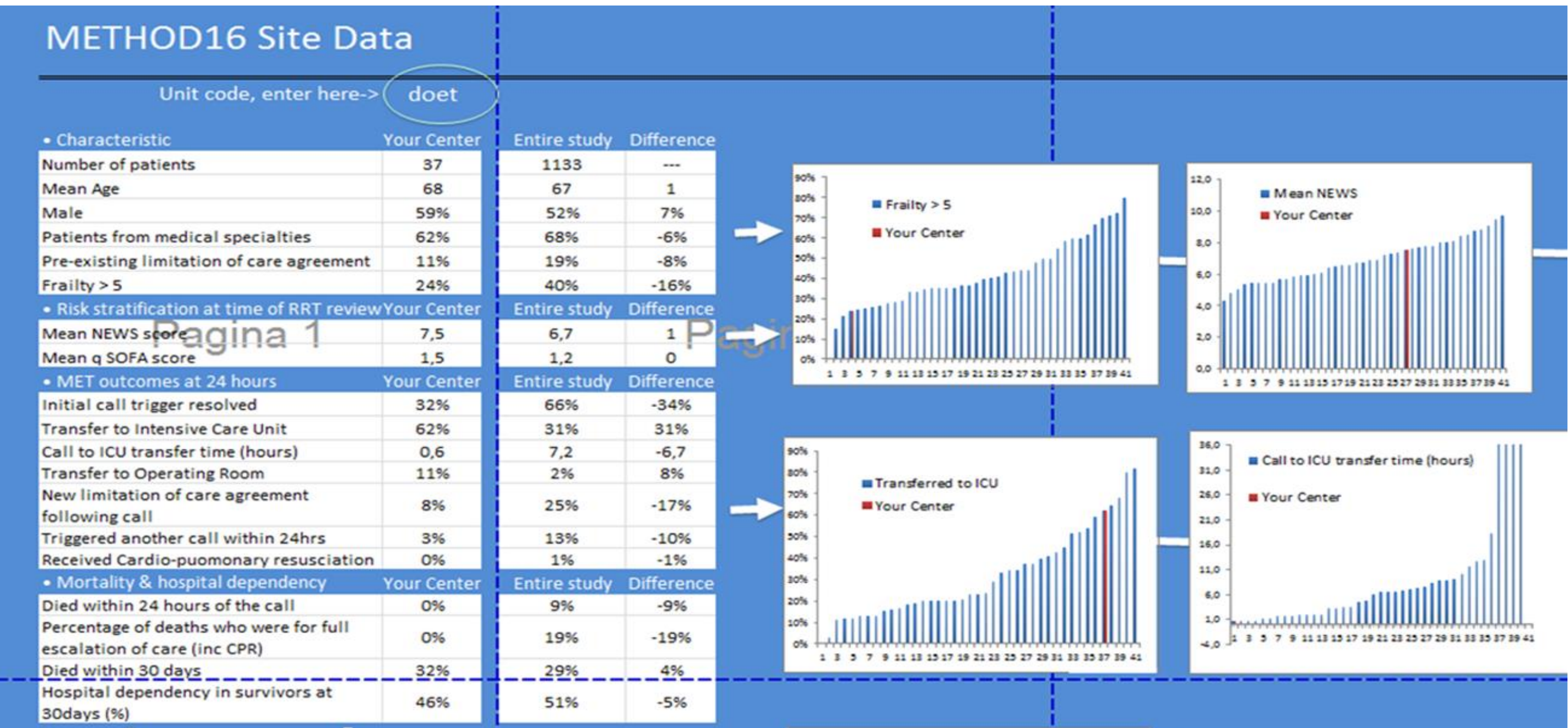
- RRTs from around the world were invited to take part in an international service evaluation.
- In the multi-national prospective observational cohort study in 2014, centers with existing RRTs collected data over a seven day period, with follow up of all patients at 24 hours following their RRT call. Investigators also collected data concerning the triggers and interventions provided.
- In the 2016 study we additionally collected data, with follow up of all patients at discharge or 30 days following the event triggers (whichever came sooner); moreover we collected a bedside assessment on the level of patient’s frailty using a Clinical Frailty Scale.

RESULTS 1

- In a 2014 study, results described 1188 RRT activations from 51 hospitals in 5 countries; 24% of patients were admitted to the ICU, 10% died, and 25% had new limitations in therapy implemented.
- In a 2016 study, results described 1133 RRT activations from 43 hospitals in 8 countries. Results showed it is feasible for clinicians to assess clinical frailty score of a patient at the time of an RRT call. Also, higher frailty scores were associated with increased mortality and dependency on formal care services at 30 days.

RESULTS 2

Outcomes	Total	UK	Non-UK	p-Value
Number Studied	1188	973	215	
Transfer to ICU	284 (24%)	217 (22%)	67 (31%)	p=0.008
To ICU in <4h ^a	146 (51%)	97 (45%)	49 (73%)	p=0.0001
NEWS score of ICU patients	7.1 (1.4)	6.9 (2.6)	7.5 (3.2)	n.s.
Died ICU within 24h of transfer	23 (8.1%)	17 (7.8%)	6 (8.9%)	n.s.
Transfer to OR	40 (3.4%)	27 (2.8%)	13 (6.0%)	p=0.044
To OR in <4h	15	9	6	n.s.
Died within 24h	120 (10.1%)	103 (8.4%)	17 (8.4%)	n.s.
Died on ward within 24h ^a	97 (10.7%)	86 (11.3%)	11 (7.4%)	p=0.0001
Died with CPR	7	5	2	n.s.
Ward deaths with full care status ^a	37 (38.1%)	36 (41.9%)	1 (9.1%)	p=0.03
NEWS, patients remaining on ward	6.2 (2.8)	6.2 (2.8)	6.5 (2.9)	n.s.
New limitation of care	307 (26%)	238 (24%)	69 (32%)	p=0.029
Trigger resolution	709 (59%)	575 (59%)	134 (62%)	n.s.
Repeat MET call	175 (14.7%)	138 (14.1%)	37 (17.2%)	n.s.



DISCUSSION

- Use Maureen Bisognano’s simple questions (“Do you know how good you are? How do you perform compared to the best? Where is the variation ? Do you improve fast enough ?”)
- “Every system is designed to get the results it gets” (ref: Paul Batalden, Dartmouth College)
- Use a clinical frailty scale in advanced directive dialogue with patient and family

