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Measuring performance in emergency care

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Why measure performance?

- “These indicators are an important part of the Government's commitment to improve the quality of clinical and other performance information that patients receive. Patients and the public have a right to know how well different NHS organisations are performing. Different NHS organisations also need to know how well they are doing in comparison with others, so that successes can be shared and weaknesses can be identified and acted upon.”



Performance measures and pre-hospital care

- Universally centred around response times
- In the UK:
- 75% of category A (life-threatening) calls within 8 minutes
- 95% of urgent calls within 19 minutes
- Other systems have also used resuscitation (ROSC) rates



Advantages

- Easy to measure
- Can be universally applied
- Time matters to patients

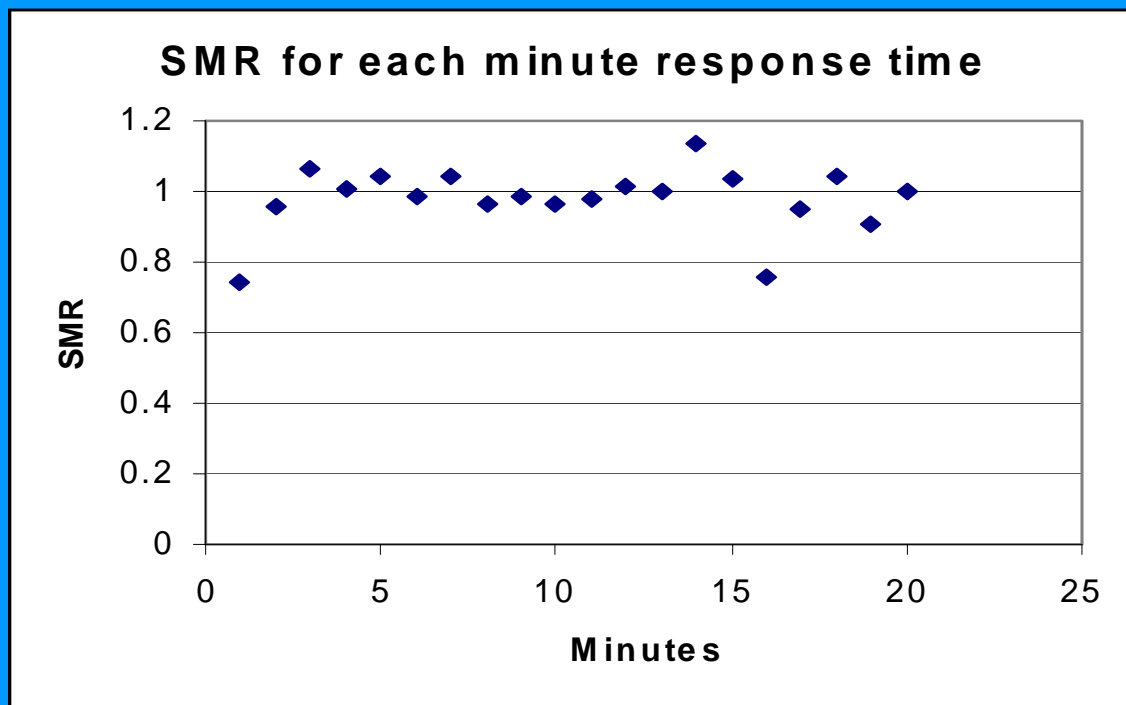


Disadvantages

- Difficult to measure – interpretation of clock start/stop times
- Open to manipulation
- Lacks validity – with the exception of cardiac arrest the relationship between response time and survival is not proven



Mortality v response time





Disadvantages (2)

- Gives no indication of what care was given to the patient
- No indication of what happened to the patient - outcomes
- Proxy measure relevant to a group of rare events applied to entire population



ROSC as a measure

- Differences in definitions
- Differences in case selection and inclusions
- May still have a poor outcome



Risks





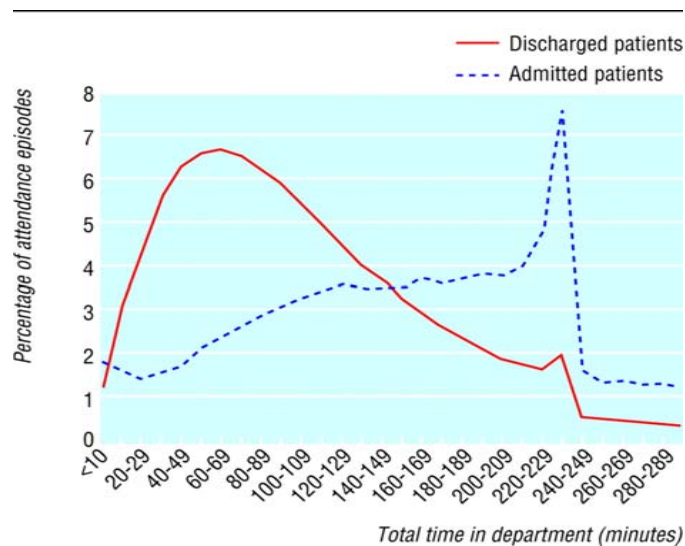
Other emergency care performance measures

- ED waiting times – in the UK 98% of attenders should not wait more than 4 hours from arrival to admission, transfer or discharge
- This target is achieved but how?



4 hour waiting...

Distribution of total time in emergency department for episodes resulting in admission or discharge



Locker, T. E et al. BMJ 2005;330:1188-1189





Measures and targets

- People will always find a means of meeting a target
- Focus becomes on target itself rather than overall care
- Different targets for different services results in conflict rather than co-operative care



Outcome of targets

Telegraph.co.uk

Patients forced to wait hours in ambulances parked outside A&E departments

Ambulance chiefs have warned that lives are being put at risk "on a daily basis" by long delays allowing patients into Accident and Emergency units.



Can we do better?

- Moving towards more patient focussed measures
- New ambulance clinical performance measures for selected patient groups
- Currently confined to process measures in pre-hospital phase



Category A indicators for:

- Stroke
- Pre-hospital ST elevation MI (STEMI)
- Cardiac arrest (presumed cardiac origin)
- Asthma
- Hypoglycaemia



M1 Aspirin	Patient refusal
M2	Contraindication to drug
M3 Initial pain score	Patient refusal
M4 Subsequent pain score (assumed intervention)	Patient unable Patient unconscious
M5 Analgesia given M5i Morphine alone M5ii Entonox alone M5iii Morphine and Entonox	Patient refusal Patient not in pain/pain resolved Contraindication to drug(s)



Data set

- Number of positives for each indicator (numerator)
- Number of exclusions in each exclusion category for each indicator
- Number of patient in sample drawn from each clinical diagnosis category (denominator)



Continuing work

- Now developing indicators for less urgent cases
- More challenging as heterogeneous group of conditions and acuities
- Less well defined management pathways
- Need to consider e.g satisfaction, appropriateness of destination etc



System indicators

- Being developed to measure emergency care system performance rather than individual services
- Co-operative
- Using routinely collected data
- Developed using a delphi exercise



Outcomes indicators

- Mortality rates for serious emergency conditions for which a well-performing EUCS could improve chances of survival
- Case fatality rates for SEC for which a well-performing EUCS could improve chances of survival



Process indicators

- Arrivals at EDs referred by any EUCS service and discharged without treatment or investigation
- Time from first contact to clinical assessment (admission, definitive care)
- Admission rates for acute exacerbations that could be managed outside hospital



Emergency Conditions

- Meningitis
- Anaphylaxis
- Myocardial Infarction
- Fractured neck of femur
- Asthma <65 years
- Cardiac arrest
- Pregnancy or birth related
- Serious head injuries GCS <9



Urgent conditions

- COPD
- Acute mental health crisis
- Non-specific chest pain
- Elderly falls
- Non-specific abdominal pain
- Deep Vein Thrombosis
- Cellulitis
- Pyrexial child



Progress

- Currently being tested in 4 UK settings
- Evaluate ability to detect system change
- Provide benchmarks
- Assess information systems



Summary

- Recognition that current performance measures are inadequate
- Work underway to try and develop valid and reliable alternatives
- International problem
- Any others???



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