Implementation of the surviving sepsis resuscitation bundle in the acute setting of a district general hospital

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1) Background

- Surviving Sepsis Campaign bundles significantly improve survival rates in septic patients.¹
- The three hour resuscitation bundle includes:
  - Measuring lactate level.
  - Obtaining blood cultures prior to administration of antibiotics.
  - Administering broad spectrum antibiotics.
  - Administering 30ml/Kg crystalloid to patients who are hypotensive or have a lactate level ≥4mmol/L.²
- An audit in 2012 demonstrated only 2.6% compliance with the three hour resuscitation bundle in the acute setting of our district general hospital. Compliance implies achieving all the specified goals above.
- In order to improve compliance in 2013 a ‘sepsis profile’ was created on our computer system.

2) Aim

- To re-audit compliance with the three hour resuscitation bundle at our district general hospital in 2013 to determine whether the new computer based sepsis profile improved our compliance rate.

3) Sepsis profile

- A new requesting tool on our computer system (ICE).
- When selected, the user is given options to request a full septic screen including:
  - FBC, CRP, U&E, LFT
  - Blood lactate
  - Blood cultures
  - MSU
  - Sputum
  - Swabs
- Once the required tests are selected patient identification labels are automatically printed. The appropriate samples can then be collected.
- The sepsis profile acts as a prompt to remind staff to complete all the specified goals within the three hour resuscitation bundle.

4) Methods

- A retrospective audit undertaken during a five day period in July 2013 (Sunday – Thursday).
- Patients admitted through Accident and Emergency (A&E) and the Acute Medical Admissions Unit (MAU) who met the criteria for sepsis or septic shock were included (n=38).
- Medical records were reviewed to determine compliance with the three hour resuscitation bundle.
- Compliance rates were compared to the rates in 2012 (n=38).

5) Results

- Data from 38 patients in 2013: A&E (n=27) and MAU (n=11).
- Overall compliance improved from 2.6% in 2012 to 15.8% in 2013.

6) Conclusions

- Compliance with the three hour resuscitation bundle in the acute setting at our district general hospital still remains poor, however rates have improved following implementation of the sepsis profile.
- Results were influenced by department and time of day.

7) Limitations

- Small sample size and time period.
- Between audits there was a change in doctors and nurses working in the relevant departments.
- The re-audit was undertaken only two months after implementation of the sepsis profile.

8) Recommendations

- More education needs to be done to ensure timely recognition and improve management of septic patients.
- A multidisciplinary team discussion to consider:
  - A new triage system to help identify septic patients earlier.
  - Creating a ‘sepsis pack’ which would include a resuscitation bundle checklist and the appropriate equipment such as blood culture and lactate bottles.

References