Trainee led Sepsis quality improvement project: Improving time to antibiotic administration and usage of the Sepsis-Six bundle

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INTRODUCTION: Sepsis – A LEADING CAUSE OF MORBIDITY AND MORTALITY, CLAIMS AROUND 37,000 LIVES PER ANNUM IN THE UK ALONE(1). In 2004 the Surviving Sepsis Campaign introduced the Sepsis resuscitation bundle in order to better manage this fatal condition(2).

AIM: To improve the identification and management of Sepsis by using manageable interventions led by trainees. We have initiated two PDSA (Plan-Do-Study-Act) cycles. The first one was conducted to quantify and reduce the delay between prescription and administration of the first dose of IV antibiotics in patients clinically identified as having severe Sepsis. The second cycle has begun with the aim of raising awareness, improving education and rolling out the Sepsis-Care-Bundle.

METHOD AND RESULTS

PDSA Cycle One
Retrospective audit 01/May-22/May 2014.
Inclusion Criteria: All patients started on IV antibiotics with clearly documented severe Sepsis
The time of prescription, administration and indication for antibiotics were retrieved from medical notes and drug charts

RESULTS: 58% of patients who met the inclusion criteria received the first dose of IV antibiotics within the first hour of prescription

PDSA Cycle Two
Education and training
We have presented at the weekly Grand Round, furthered our reach to involve Intensivists, A/E Consultants, Matrons and have presented at the monthly Antibiotic Stewardship meeting.

RE-AUDIT POST-INTERVENTION
RESULTS
01/Oct-25/Oct 2014
82% of patients had received the first dose of antibiotics in severe Sepsis within the first hour.

CONCLUSION
It is clear that such Trainee-Led projects have a positive impact on patient safety and delivery of a cost effective service. In particular, our audit has shown that administering antibiotics promptly can be achieved with little effort. This reinforces the view that small changes can lead to a significant improvement.

We also found that involving "SEPSIS CHAMPIONS", enthusiastic trainees who are committed to the cause, to lead and take ownership, is successful at ensuring continuity and development of the project. A process which started with one junior doctor has now expanded to include five junior doctors, two Registrars, three Consultants and one ITU nurse specialist.

References: