



Sepsis Service Improvement: A multi-disciplinary approach to improve sepsis care

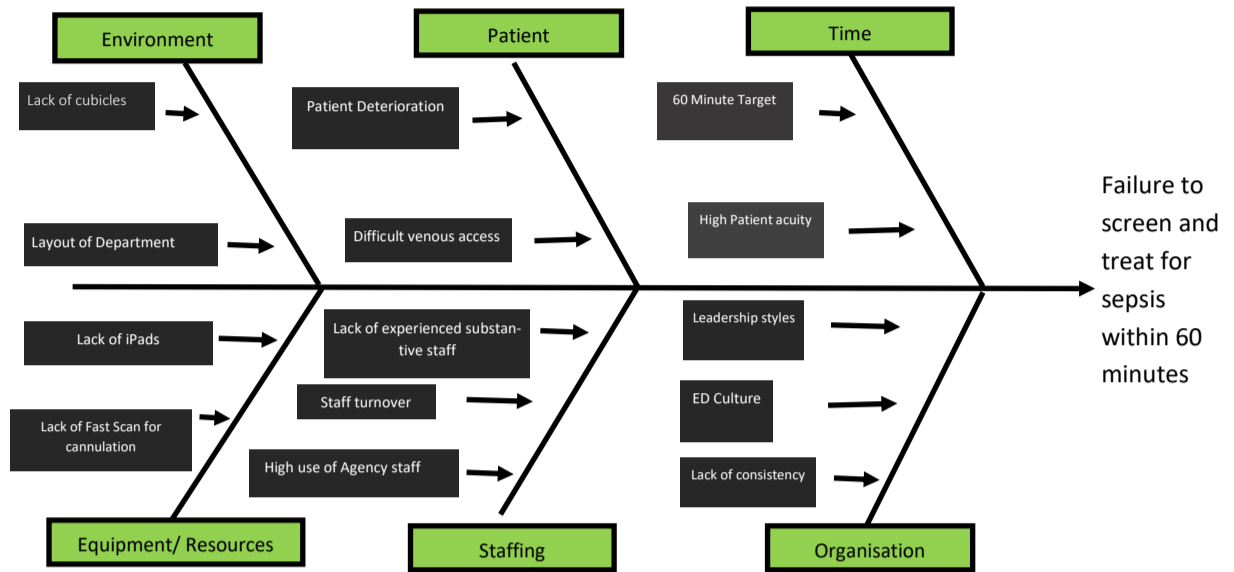
Background

People with suspected sepsis are assessed using a structured set of observations to stratify risk of severe illness or death (NICE, 2019)

Sepsis without prompt structured treatment can result in serious complications, which can lead to a knock on effect through the wider health system. The National Early Warning Score (NEWS) has been shown to identify patients at risk of deterioration. In the context of infection, a NEWS 5 or more should always prompt a screen for sepsis, including an immediate check for any Red Flags. It's vital we listen to patients and their relatives (Sepsis Trust, 2019).

Following an unannounced visit the Trust was issued with a section 31 notice that stated that "the registered provider must implement an effective system to manage patients presenting with possible signs of sepsis and in line with clinical guidelines such as Sepsis: recognition, diagnosis and early management NICE guidelines (NG51) (CQC, 2019).

Barriers to Compliance in the completion of Sepsis Screens in Adult patients.



Aims:

- ◆ To improve sepsis care within ED to meet the 90% standard.
- ◆ To ensure that every patient with suspected sepsis receives treatment within 60 minutes of diagnosis.

Improvements and Innovations

Oversight

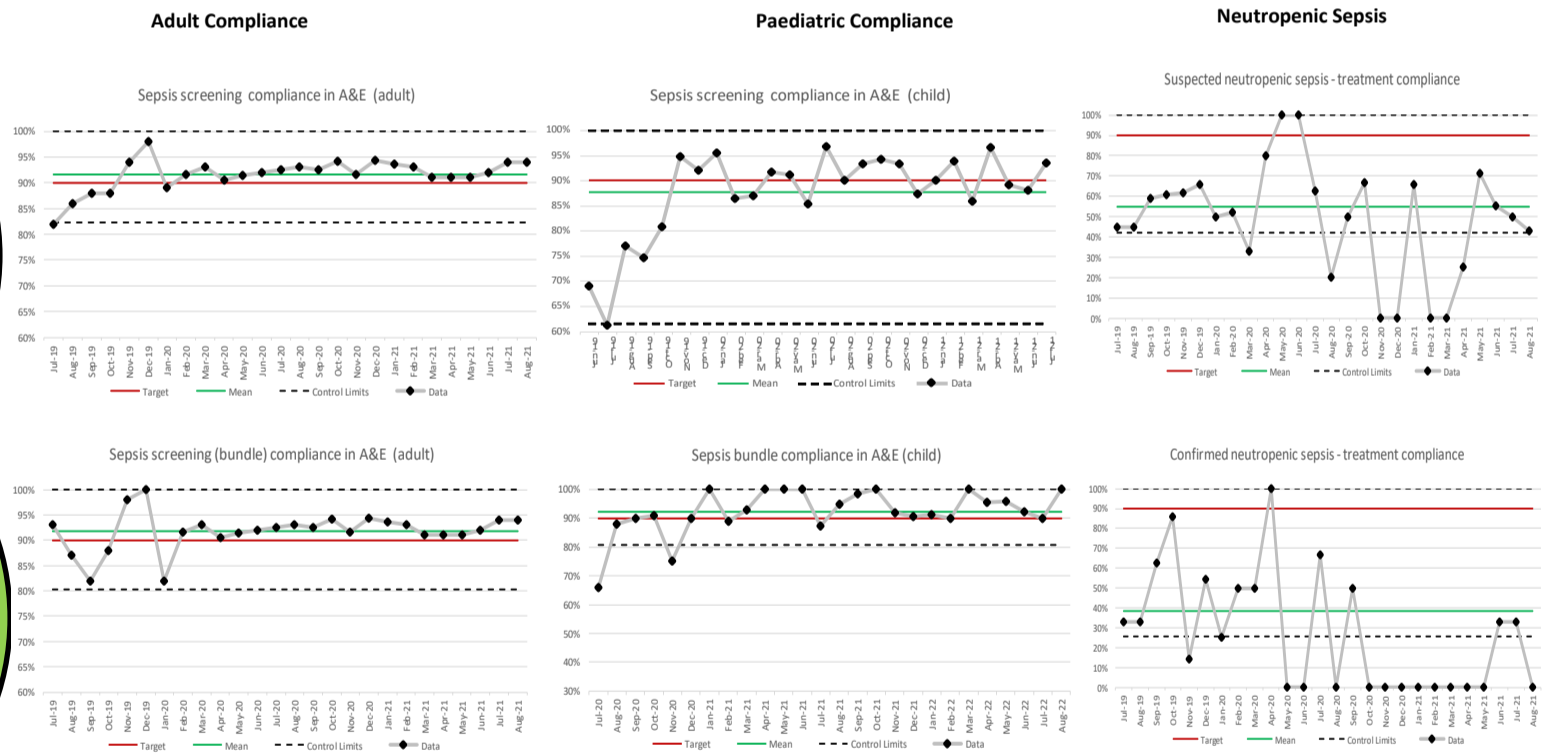
The Trust set up weekly focus group meetings to oversee the improvements to Sepsis practice in ED. This was chaired by the Lead nurse for acute medicine and senior clinicians. Multiple PDSA cycles were plotted to plan improvements to practice.

Training

Skills shortfalls were addressed by implementing practice based teaching as scenario based Simulation training and enhanced cannulation utilising Fast Scan. All registered nurses have been supported to achieve IV competencies. Classroom teaching has been introduced to enhance A-E assessment skills and this supports a new sepsis workbook e-learning and quiz.

Leadership

The department introduced a variety of measures to improve assurance including 1 hourly virtual ward rounds of patients with NEWS score of 5 or more and further 6 hourly ward rounds which provide closer scrutiny of acutely unwell patients. Safety Huddles incorporate important safety messages and lessons learnt. The NIC and EPIC ensure that there are defined roles to ensure clear lines of accountability. A further assurance check is provided by the Sepsis Practitioner who audits all missed screens and conducts harm reviews with escalation of areas of concern



Results:

The Sepsis Practitioners have conducted weekly audits of approximately 30 patients at a time against the 90% standard as well as conducting deeper dive harm reviews to highlight any shortfalls in care and this was discussed at the weekly focus groups to improve practice.

This has shown a steady increase in compliance as evidenced in the accompanying graphs. Neutropenic sepsis compliance is measured against different metrics using door to needle time rather than the first NEWS of 5 which can make diagnosis and treatment more challenging in a busy ED environment.

Paediatric data is also less reliable due to having less numbers to convert to a percentage which makes the figures more labile.

Adult standard 90% compliance	2019	2020	2021
Sepsis screening within one hour	84%	90%	94.3
Receive the Sepsis 6 care bundle within one hour	88%	91%	97.5
Paediatric standard 90% compliance	2019	2020	2021
Sepsis screening within one hour	55%	91%	93.4%
Receive the Sepsis 6 care bundle within one hour	66%	92.70%	90%
Neutropenic Sepsis compliance (door to needle time)	2019	2020	2021
Suspected neutropenic sepsis compliance	45%	62.5%	47.54%
Confirmed neutropenic sepsis compliance	33%	66.6%	30.7%

Next Steps : The continued compliance above the 90% standard has demonstrated that for a NEWS of 5 triggered sepsis, the current measures are effective. However further work is required for those patients presenting with neutropenic sepsis whose trigger, for screening and treatment, is their clinical presentation where an early warning score does not meet their needs. Further work will focus on improving compliance based upon door to needle time and employing the same methodology but with an emphasis on immuno-compromised patients.

Conclusion.

The introduced measures have demonstrated a direct correlation with improved compliance in sepsis screening and treatment and provides assurance that patient safety is paramount. This has received formal confirmation with the lifting of the Section 31 notice by the CQC.

The improvements have now become embedded into everyday practice with increases in compliance showing a sustained level that will allow for the changes in practice to be rolled out to other sites and specialties.