In 2016 the Emergency Care Clinical Network conducted its eighth annual cycle of evidence-based quality improvement projects. All the projects were led by frontline emergency clinicians and used evidence with the aim of reducing unwarranted variation in clinical practice and improving patient care. The Alfred Hospital focused on improving the identification and management of sepsis.

Why this project was important to our emergency department
- Current practice indicated untimely treatment of patients presenting with sepsis.
- We had a high mortality rate of sepsis cases compared with other conditions in our hospital.
- Audit data indicated there were delays to intravenous antibiotic administration.
- There was no standardised approach to escalation of sepsis patients.

What we did
- Developed and implemented an emergency department (ED) sepsis guideline.
- Developed and implemented an antibiotic administration resource.
- Implemented a sepsis team call-out page to notify department leaders of sepsis patients.
- Identified a flawed blood culture collection guideline, equipment and process and developed a new process and equipment that was rolled out across the organisation.
- Liaised with pharmacy, ICU and hospital-wide deteriorating patient committee members in all phases of the project.
- Conducted formal and informal education sessions on the identification and management of sepsis and local changes to practice.
- Reviewed the antimicrobials kept in resuscitation trolleys to reflect those most commonly and urgently required in acute sepsis management.

Our results
- Proportion identified at triage/first nursing contact was not reported.
- Proportion with IV antibiotics given within 1 hour of ED presentation increased from 27% to 67%.
- Proportion with IV fluids initiated within 1 hour of ED presentation was essentially unchanged (63% vs 66%).
- Proportion with lactate measured increased from 30% to 63%.
- Mortality was reduced from 14% to 4% (note, small numbers).

Impact on patients, staff and the health system
- Better early recognition and escalation of at-risk patients has improved care outcomes.
- We now have a standardised approach to care based on evidence.
- A multidisciplinary team approach to sepsis interventions has reduced patient risk.
- The project was the winner of the Alfred Health Chairperson of the Board Award for Patient and Safety and Quality Improvement Project, 2016.

What we learnt about improving quality of care
- Pre-intervention data is very powerful in motivating change in staff.
- A team leader for each discipline is key to success.
- Sustainability requires an ongoing commitment to communication and feedback.