Implementation of Paediatric Sepsis 6

Ms Clare Rees мр FRCs (Medical Lead), Claire Fraser RNc BSc (Nurse Lead), Duncan Shepherd BSc (Data Analyst) Rhiannon Follett вд (QI Lead), Great Ormond Street Hospital for Children NHS Foundation Trust

What we said we would do

In July 2016, a project team was set up to implement the Sepsis 6 protocol to improve the early identification and management of sepsis. The project underwent a diagnostic phase and launched in September 2016. The Steering Group was led by a Paediatric Surgery Consultant with representation from intensive care, microbiology, infectious diseases, resuscitation services, clinical site practitioners, frontline nursing and medical teams, parent representatives and the quality improvement team.

How we did it

- GOSH Sepsis 6 evidence based protocol adapted from the National Paediatric Sepsis 6, developed by UK Sepsis Trust, and NICE Guidelines
- Ward-based training and simulation for nursing and medical teams
- Data collection and development of dashboards
- Sepsis 6 was rolled out trust-wide at the end of January 2017 with Sepsis awareness week including lunch time lectures, information stands and simulation exercises
- Sepsis champions (nursing and medical) recruited from all specialities
- Sepsis app created for staff to complete Sepsis 6 electronically
- Electronic alert for sepsis developed for electronic patient status at a glance boards



Measure of Improvement

Using SPC charts and audit data to measure results of the project

Process Measures:

Paediatric Sepsis 6

1] Give high flow oxygen

Obtain IV/IO access and take blood tests

3] Give IV or IO antibiotics (PTO for guidelines)

Give 10-20ml/kg isotonic fluid over 5-10 mins

Repeat as necessary, monitor urine output

Own team Consultant (Consider CSP/ICON)

5] Involve sentor dinicians early

6] Consider Inotropic support early

Blood gas and lactate (+/- FBC, U&E, CRP if able)

Blood glucose – treat hypoglycaemia (2mls/kg 10% glucose)

Aim to restore normal physiological parameters, U/O >0.5mls/kg/h

Line Infection

Surgical Site

☐ Intra-abdominal

□ Urinary tract Infection

Hospital number

No. of patients triggering the Sepsis 6 Bundle

Great Ormond Street NHS

Extreme tachycardia/tachypnoea

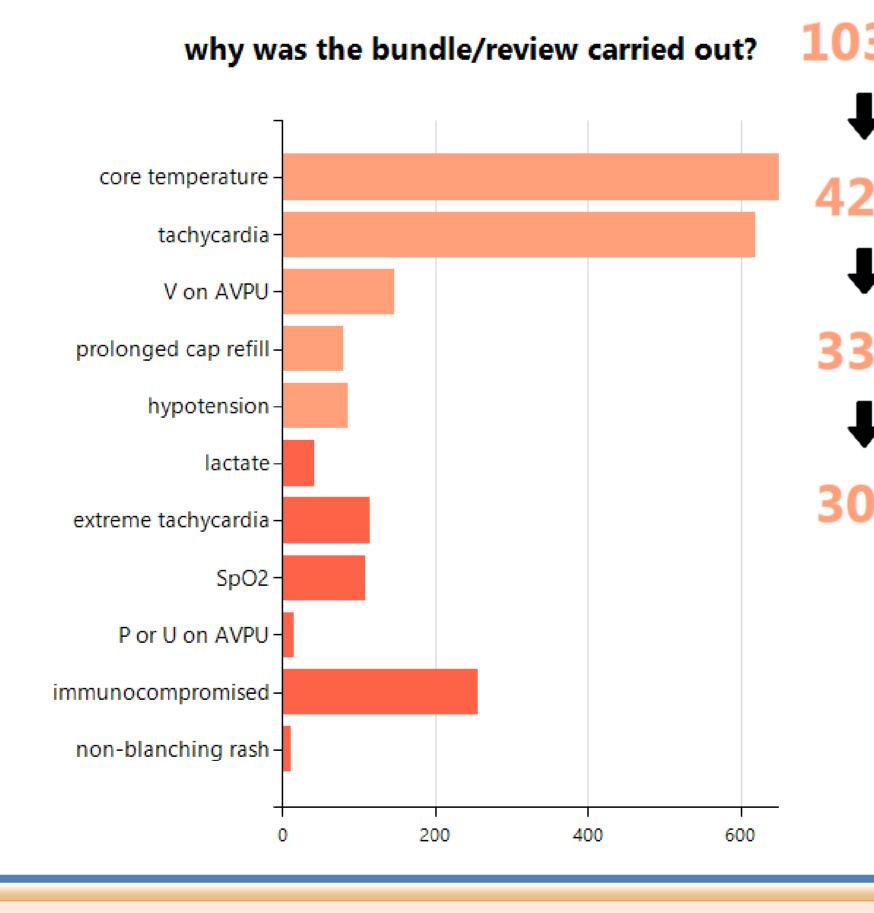
Hospital for Children

- Completeness of nursing observation sets
- ICU admissions due to sepsis

THINK Could this be Sepsis?

• Time taken to administer antibiotics when sepsis is suspected

Sepsis 6 Bundle Dashboard



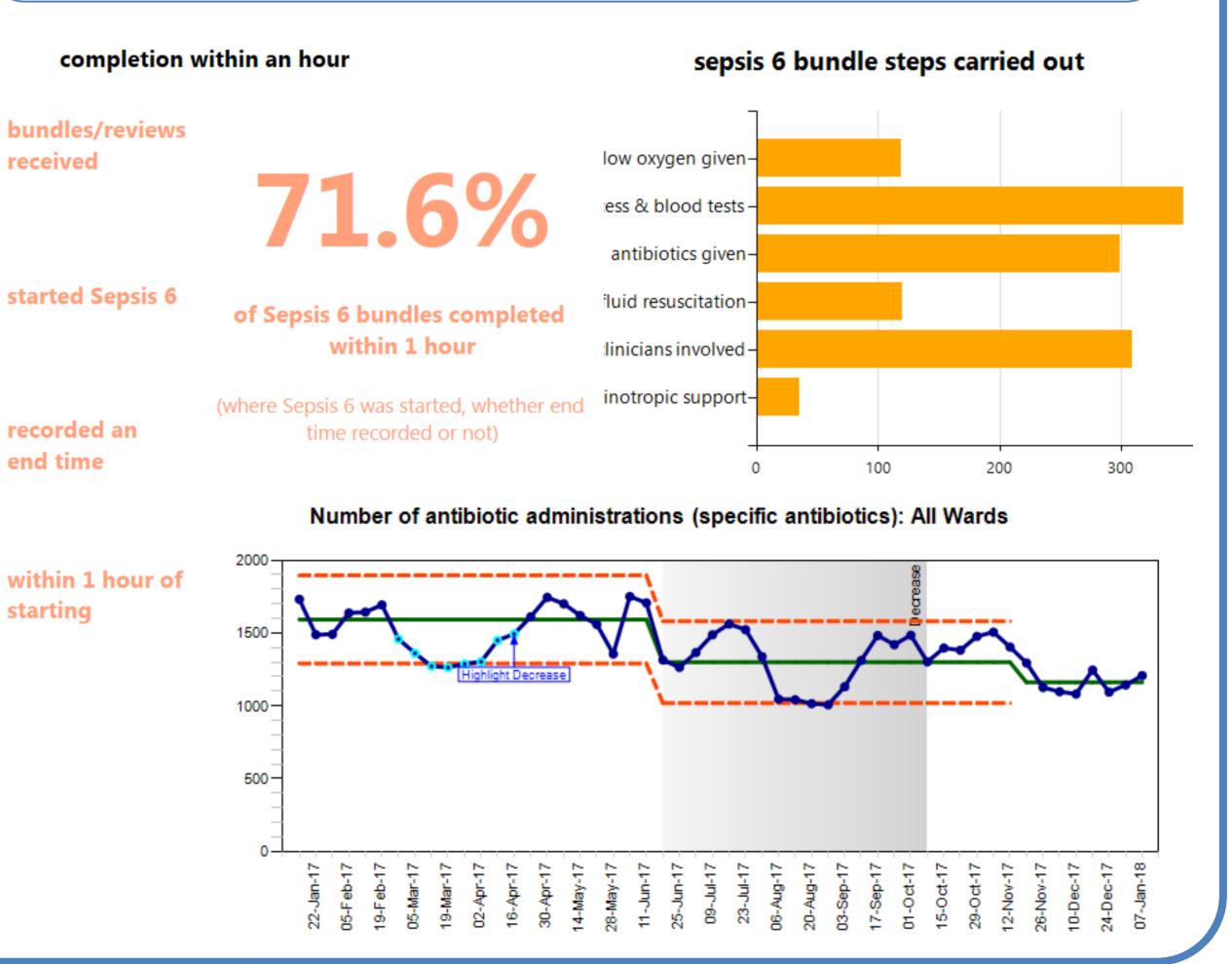
Measure of Improvement

Outcome Measures:

- Reduction in 3 day and 30 day mortality due to sepsis
- Percentage compliance with the Sepsis 6 Bundle

Balancing Measures:

Impact on antibiotic stewardship



How this benefits patients

Early recognition and treatment of sepsis saves lives. Research shows that for every hour's delay in treatment of a septic patient, mortality increases by 7%. This project aims to ensure that all staff, patients and families have awareness of the signs of sepsis and know how to escalate their concerns so that all children receive the treatment they need in a timely manner.

Staff quote:

"Sepsis 6 means that I don't need to ask permission to do what I know is right... We could never have delivered the treatment so quickly before this protocol. It is so clear and makes it really easy to do the right thing...."

What's going to happen next?

- Ongoing training and simulation for new and current medical and nursing staff
- Compliance monitoring to ensure early recognition and timeliness of treatment
- Participation in national CQUIN
- Shared learning with other hospitals
- Integration of sepsis platform within EPR system launching next year

