Overview

- Background
  - AAP Pediatric Septic Shock Collaborative (PSSC)
- Defining the current state/local problem
- Context
  - Seattle Children’s and CBW infrastructure
- Implementation and PDSA
- Next steps

Background: PSSC

The Division of Emergency Medicine at SCH joined the AAP Pediatric Septic Shock Collaborative (PSSC) in Dec 2013.
SCH paper-based identification tool

Pre-existing order set

Current state A3
Initial Aims

• Aim 1: To develop and implement an electronic identification tool for children presenting to the ED with fever and concern for infection.
• Aim 2: To implement a CSW pathway and PowerPlan for patients with sepsis in the ED and inpatient setting and assess compliance with treatment elements, including time to critical therapies. (Sepsis algorithm and PowerPlan will be followed for 90% of patients that have the sepsis pathway activated; time to critical therapies (IVF, Antibiotics) as well as length of stay (ED and inpatient) will decrease by 20%)
• Aim 3: To ensure appropriate escalation of care and PICU involvement in care. (Eligible patients will follow escalation of care in the ED including PICU consult 90% of the time)

Clinical Standard Work

Clinical Standard Work (CSW) has 3 components:

- Documented approach to diagnosis, management and treatment
  ▶ Based in evidence
  ▶ Team consensus when evidence not available

The care is hard-wired, making it easy to do the right thing

Outcomes are measured and owned by someone, who assures the continual improvement of the care for this condition

CSW Production Process

- Clinical Nurse Specialists begin to incorporate nursing work flow, clinical documentation, and policies and procedures
- Develop clinical content through literature review and consensus generation
- Incorporate content into electronic systems
- Ensure providers in web-based training
- Internal communication — Grand Rounds, Nursing Grand Rounds, Resident education, Outreach education
- Evaluation of go-live and pathway usability issues
- Transition with operational and clinical leaders
- Daily management system
- Quarterly check-ins with leaders
- Near real-time knowledge management pathway reports evidenced pathway owners
Sepsis: Current State

- CSW Hem/Onc Sepsis Pathway
- PSSC & Sepsis Pathway
- CSW Sepsis & HOBSI pathways (PDSA)

Sepsis Collaborative

2013

- SCH specific clinical questions developed
- Literature review from PSSC updated through independent search
- Electronic power plans created, old order sets removed, reorganization among pre-existing plans with similar content
- Process simulation in the ED
- Internal communication
- Web-based training
- Evaluation of go-live and pathway usability issues

IMPROVE

- Misinterpretation/underuse of ED screening tool → Revision
- Insufficiency of initial inpatient phase → Inpatient New Sepsis
- Review/revision of Hem/Onc Suspected Infection Pathway → Pathway merge
- Inclusion of BMT patients → Individualized antibiotic plans
- IPAD collaboration
- Inpatient screening
- Patient/Family experience

Sepsis Pathway

PSSC over time

2013

- ED joins PSSC
- Paper trigger tool and sepsis algorithm in ED

2015

- CSW Septic Shock Pathway and order set v.1
- ED trigger tool converted to electronic nursing Powerplan

2016

- Revision of ED Septic Shock Score Trigger
- New Sepsis Septic Shock Inpatient Phase
- Hem/Onc Neutropenic Fever pathway is short & appealing
- Inclusion of BMT patients

2017+

- Sepsis Collaborative Bundles
- Prevention
- Recognition
- Diagnostic Evaluation
- Resuscitation → Care Pathway
- De-escalation
- Patient & Family engagement
- Optimize Performance
Pathway: Patient flow chart

Pathway: ED Suspected Sepsis

ED “trigger tool” and Sepsis Score

Inclusion Criteria
- Any patient with clinical concern for sepsis/septic shock
  - Sepsis score of 3 or greater
  - AND ED attending/fellow assessment with concern for sepsis/septic shock

Exclusion Criteria
- None
Order set: ED phase

Pathway: Inpatient Admit

Pathway: Inpatient New Sepsis

Intended for patients who are treated for suspected sepsis in ED but do not meet ICU admit criteria.

Increased vital sign frequency and RISK RN follow up.

Intended for patients who develop new or evolving sepsis while admitted to any clinical service.

Same time goals as ED; performed in setting of RRT.

Huddle within 60 minutes to determine disposition.

Increased data flow feasibility.

Serve best when an RRT gathered in setting of Sepsis.

Huddle within 60 minutes to determine disposition.
Order set: Inpatient New Sepsis phase

Pathway: ICU

Emphasis on continuous reassessment and monitoring response to therapies.

Defines ICU to inpatient transfer criteria.

SCH status: Functional “time zero” can be modified.
Next steps

• IPSO collaborative
  • Refinement of population definitions for data extraction
  • Development of inpatient screening tool
  • Involvement of patient and family experience team
  • Expansion to community sites, pre-hospital providers

• Ongoing PDSA cycles/improvement efforts
  • Tiered response system?
  • New phase for HemOnc clinics?

Thank you!

Pathway available at:
www.seattlechildrens.org/healthcare-professionals/gateway/pathways

Additional questions?
Email us!
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