

Responding to NICE – Developing a Regional Sepsis Pathway

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INTRODUCTION

Following the release in February 2016 of updated International Consensus definitions and guidance for Sepsis, and the publication of alternative guidance by NICE in July 2016, NHS organisations have had to digest and incorporate these into local guidelines for clinical practice; and to consider whether and how to integrate these with existing guidance on NEWS, SIRS, Red Flag Sepsis and the Sepsis Six bundle.

A recent national survey demonstrates great variation in local approaches to sepsis guideline development in the light of the guidance. To improve the consistency of care for adult patients at risk of sepsis we wanted to agree a consistent approach across the Acute Hospital Trusts within the Oxford AHSN region.

METHOD

Through a series of meetings, correspondence, and local stakeholder consultation we pooled the knowledge and experience of clinicians in Oxford AHSN affiliated organisations to develop an Oxford AHSN Regional Sepsis Pathway.

Using templates developed by the UK Sepsis Trust we first agreed a simplified sepsis algorithm incorporating both red and amber sepsis criteria in keeping with the approach developed by NICE. Further discussion and simplification led to a second algorithm in which amber criteria were replaced by a standard clinical assessment in all sick or deteriorating patients.

RESULTS

Each of the organisations within the AHSN is now using one or other of the regional pathways.

Key principles in development of our regional sepsis pathway included integration into existing pathways for recognition and management of acutely ill and deteriorating patients; use of early warning scores; building on progress already made using Red Flag Sepsis, the Sepsis Six bundle, and Neutropaenic Sepsis Pathways; and a strong emphasis on operationalisability in our organisations. Use of the pathways is now being audited locally within organisations. Progress is being measured regionally via CQUIN, for process, and HES for patient outcome data.

TAKE HOME MESSAGES

- Reduced risks to patients with standardisation for rotating staff
- The benefit of working together and reducing variance throughout Trusts
- The opportunity to collect consistent regional data
- Benefits of shared learning and reducing workload locally

PRESENTED AT

- Patient Safety Collaborative National Conference 23rd May 2016

REFERENCES

- Singer M, Deutschman CS, Seymour C, et al. The third international consensus definitions for sepsis and septic shock (sepsis-3). *JAMA* 2016;315(8):801-10.
- NICE guideline [NG51] Sepsis: recognition, diagnosis and early management. July 2016

Generic Sepsis Screening & Action Tool

To be applied to all non-operated adults and young people over 12 years with symptoms of infection, or who are clearly unwell with any abnormal observations

1. Does patient look sick?
 YES (NEWS 2 or increased in a single parameter) / NO

2. Could this be due to an infection?
 YES (at least one of: TBC, but does not include abscess, Pneumonia, Urinary tract infection, Abdominal pain or distension, Central venous or other infection/abscess, Device-related infection, Meningitis, Other (specify: _____)) / NO

3. ANY red flag criteria?
 YES (any of: Objective evidence of new altered mental state, Heart rate > 100 per minute, Systolic BP < 90mmHg (or SBP < 60 from normal), Respiratory rate > 25 per minute, New O₂ requirement to keep SpO₂ > 92% (88% in COPD), Non-branching rash / vesicles / ulcers / exanthema, Not aseptically inserted OR (in U.O. < 48 hrs) OR (in lactate > 2mmol/l if available), Severe immunosuppression e.g. suspected neutropenia) / NO

4. Assess further for possible sepsis
 Organise early clinical assessment (use SBAR)
 Send bloods (incl. full blood count, U&Es, CRP, LFTs, clotting, WBC)
 Full clinical assessment (Record time clinical assessment)
 Consider other investigations (e.g. CXR, urine/urine & MSU, etc.)
 Treat (include bacterial infections promptly)
 Monitor observations at least hourly (Time complete, Initials)
 Review blood results within 1 hour
 All or lactate > 2 (if infection screen positive) YES / NO
 (Consider the make and model of the patient's device)
 Treat all bacterial infections promptly.
 If sepsis criteria are met, then discharge with appropriate antibiotic regime (2020/2016)

Treat Urgently for Sepsis NOW (see overview)
 This is time critical. Immediate action is required.

Sepsis Six Pathway

To be applied to all adults and young people over 12 years of age with suspected or confirmed Red Flag Sepsis

Make treatment escalation plan, review CRP status, Inform SpR/Consultant (use SBAR) patient has Sepsis

Action (complete ALL within 1 hour)	Time complete	Initials	Reason not done/variance
1. Oxygen Aim to keep saturations 94-98% (88-92% if at risk of CO ₂ retention e.g. COPD)			
2. Blood (± other) cultures At least 1x peripheral blood & line cultures, CRP & urinalysis (± CSF, urine culture, etc) Source control – call surgeon/radiologist?			
3. IV antibiotics According to Trust protocol Consider allergies prior to administration			
4. IV fluids Consider 500ml stat if low BP or lactate > 2mmol/l. Repeat if clinically indicated – max 30ml/kg			
5. Check serial lactates If lactate > 4mmol/l consider referral to Critical Care and recheck after each "10ml/kg challenge"			Not applicable - initial lactate < 2
6. Monitor urine output Consider if urinary catheter required Commence hourly fluid balance chart			

if after delivering Sepsis Six there is:
 • further clinical deterioration
 • persistent systolic BP < 90 mmHg
 • lactate not reducing
 or if patient critically ill at any time
Discuss with Critical Care / Outreach team

Space available for local short antimicrobial guideline/escalation policy