This Current Awareness Bulletin is produced by the Yeovil Academy Library to provide staff with a range of sepsis-related resources to support practice. It includes recently published guidelines and research articles, as well as news and policy items.

**Cochrane Review**

*Corticosteroids for treating sepsis in children and adults*

Djillali Annane, Eric Bellissant, Pierre Edouard Bollaert, Josef Briegel, Didier Keh, Yizhak Kupfer, Romain Pirracchio, Bram Rochwerger
6 December 2019

Sepsis occurs when an infection is complicated by organ failure. Sepsis may be complicated by impaired corticosteroid metabolism. Thus, providing corticosteroids may benefit patients.

**Point of Care**

UpToDate®

*Sepsis syndromes in adults: Epidemiology, definitions, clinical presentation, diagnosis, and prognosis*


Evaluation and management of suspected sepsis and septic shock in adults

Literature review current through: Jan 2020. | This topic last updated: Nov 22, 2019.

Systemic inflammatory response syndrome (SIRS) and sepsis in children: Definitions, epidemiology, clinical manifestations, and diagnosis

Literature review current through: Jan 2020. | This topic last updated: Apr 10, 2019.
Journal Articles

Please click on the blue link (where available) to access the full text. You may need an OpenAthens username and password. To register for an OpenAthens account click here.

If you would like help obtaining any of the articles, please contact the Library.

NICE Healthcare Databases

1. New bacterial strain discovered in England and Wales linked to scarlet fever, sore throat and sepsis.
   Author(s):
   Source: Operating Theatre Journal; Oct 2019 (no. 349); p. 15-15
   Publication Date: Oct 2019
   Publication Type(s): Academic Journal
   Database: CINAHL

2. Fish oil–rich lipid emulsion modulates neuroinflammation and prevents long-term cognitive dysfunction after sepsis
   Author(s):
   Source: Nutrition; Feb 2020; vol. 70
   Publication Date: Feb 2020
   Publication Type(s): Journal Article
   FO diminishes the negative effect of polymicrobial sepsis in the rat brain by reducing inflammatory and oxidative stress markers.
   Database: BNI
3. Efficacy and safety of applying a neonatal early-onset sepsis risk calculator in China

**Author(s):** He, Yi; Chen, Jie; Liu, Zhenqi; Yu, Jialin

**Source:** Journal of Paediatrics and Child Health; Feb 2020; vol. 56 (no. 2); p. 237

**Publication Date:** Feb 2020

**Publication Type(s):** Journal Article

Available at *Journal of paediatrics and child health* - from Wiley Online Library Medicine and Nursing Collection 2020
Available at *Journal of paediatrics and child health* - from Academy Library - Yeovil (lib303095) Local Print Collection

In this pilot study, applying the EOS calculator in China, the EOS risk calculator and PCT showed good predictive value compared to CBC and CRP. Risk scores from the EOS risk calculator strongly correlated with EOS, and the EOS risk calculator offered increased predictive value when used in combination with blood biomarkers.

**Database:** BNI

4. Fluid resuscitation in patients with end-stage renal disease on hemodialysis presenting with severe sepsis or septic shock: A case control study

**Author(s):** Rajdev, Kartikeya; Leifer, Lazer; Sandhu, Gurkirat; Mann, Benjamin; Pervaiz, Sami; Habib, Saad; Siddiqui, Abdul Hasan; Bino, Joseph; Demissie, Seleshi; El-Sayegh, Suzanne

**Source:** Journal of Critical Care; Feb 2020; vol. 55 ; p. 157

**Publication Date:** Feb 2020

**Publication Type(s):** Case Study Journal Article

Available at *Journal of critical care* - from Unpaywall

There was no significant difference in in-hospital mortality, need for urgent dialysis, intubation rates, ICU LOS, or hospital LOS between the two groups. Subgroup analysis between ESRD patients who received ≥30 mL/Kg (N = 80) vs those who received <30 mL/Kg (N = 24) showed no significant difference in any of the secondary outcomes. Compliance with 30 mL/Kg fluids was low for all patients but significantly lower for ESRD patients. Aggressive fluid resuscitation appears to be safe in ESRD patients.

**Database:** BNI

5. Association of negative fluid balance during the de-escalation phase of sepsis management with mortality: A cohort study

**Author(s):** Dhondup, Tsering; Jong-Chie, Claudia Tien; Marquez, Alberto; Kennedy, Cassie C; Gajic, Ognjen; Kashani, Kianoush B

**Source:** Journal of Critical Care; Feb 2020; vol. 55 ; p. 16

**Publication Date:** Feb 2020

**Publication Type(s):** Journal Article

Available at *Journal of Critical Care* - from Unpaywall

There is not only a significant association between outcomes of patients who were resuscitated for sepsis and achieving negative fluid balance, but also the amount of daily or cumulative negative fluid balance is associated with lower mortality of these patients. Prospective clinical trials are needed to validate this finding.

**Database:** BNI
6. Performance of a quick sofa-65 score as a rapid sepsis screening tool during initial emergency department assessment: A propensity score matching study

**Author(s):** Lee, Jonghoo; Jae-Uk Song

**Source:** Journal of Critical Care; Feb 2020; vol. 55 ; p. 1

**Publication Date:** Feb 2020

**Publication Type(s):** Journal Article

Available at [Journal of Critical Care](https://www.journal-criticalcare.com) from Unpaywall

We found that qSOFA-65 was more likely to identify patients with sepsis on the initial ED visit relative to qSOFA or SIRS. This may have quality improvement implications in predicting sepsis.

**Database:** BNI


**Author(s):** Lissauer, D; Cheshire, J; Dunlop, C; Taki, F; Wilson, A; Smith, J M; Daniels, R; Kissoon, N; Malata, A; Chirwa, T; Lwesha, V M; Mhango, C; Mhango, E; Makwenda, C; Banda, L; Munthali, L; Nambiar, B; Hussein, J; Williams, H M; Devall, A J; Gallos, I; Merriel, A; Bonet, M; Souza, J P; Coomarasamy, A

**Source:** BJOG; Feb 2020; vol. 127 (no. 3); p. 416

**Publication Date:** Feb 2020

**Publication Type(s):** Journal Article

Available at [BJOG: An International Journal of Obstetrics & Gynaecology](https://www.bjog.org) from Wiley Online Library

Available at [BJOG: An International Journal of Obstetrics & Gynaecology](https://www.bjog.org) from Unpaywall

A clinically relevant maternal sepsis bundle for low resource settings has been developed by international consensus. Tweetable abstract A maternal sepsis bundle for low resource settings has been developed by international consensus.

**Database:** BNI


**Author(s):** Rudd, Kristina E; Johnson, Sarah Charlotte; Agesa, Kareha M; Shackelford, Katya Anne; Tsoi, Derrick; Daniel Rhodes Kievlan; Colombara, Danny V; Ikuta, Kevin S; Kissoon, Niranjan; Finfer, Simon; Fleischmann-Struzek, Carolin; Machado, Flavia R; Reinhart, Konrad K; Rowan, Kathryn; Seymour, Christopher W; Watson, R Scott; T Eoin West; Marinho, Fatima; Hay, Simon I; Lozano, Rafael; Lopez, Alan D; Angus, Derek C; Murray, Christopher J L; Naghavi, Mohsen

**Source:** The Lancet; Jan 2020; vol. 395 (no. 10219); p. 200

**Publication Date:** Jan 2020

**Publication Type(s):** Journal Article


Despite declining age-standardised incidence and mortality, sepsis remains a major cause of health loss worldwide and has an especially high health-related burden in sub-Saharan Africa. Funding The Bill & Melinda Gates Foundation, the National Institutes of Health, the University of Pittsburgh, the British Columbia Children's Hospital Foundation, the Wellcome Trust, and the Fleming Fund.

**Database:** BNI
9. Improving community recognition of sepsis using early warning scores

**Author(s):** Pope, Daniel Thomas

**Source:** Nursing Times; Jan 2020; vol. 116 (no. 1); p. 20

**Publication Date:** Jan 2020

**Publication Type(s):** Journal Article

Around 70% of sepsis cases originate in the community and, although the National Early Warning Score is mandatory in secondary care, its use has not been extended to primary and community care. Community NEWS scoring was introduced in an acute clinical team to improve patient outcomes and reduce patient mortality through better detection and treatment of sepsis. Staff confidence in recognising acute deterioration and sepsis increased from 77% to 92%, and community NEWS is now being rolled out to all community services in Wales.

**Database:** BNI

10. An Interdisciplinary Code Sepsis Team to Improve Sepsis-Bundle Compliance: A Quality Improvement Project

**Author(s):**

**Source:** Journal of Emergency Nursing; Jan 2020; vol. 46 (no. 1); p. 91

**Publication Date:** Jan 2020

**Publication Type(s):** Journal Article

Interprofessional teams can use existing knowledge, skills, and tools to improve sepsis-bundle compliance and mortality outcomes in patients with sepsis presenting to the emergency department.

**Database:** BNI

11. Sepsis induced cardiomyopathy: Pathophysiology and use of mechanical circulatory support for refractory shock

**Author(s):** Nabzdyk, Christoph S; Couture, Etienne J; Shelton, Kenneth; Gaston Cudemus; Bittner, Edward A

**Source:** Journal of Critical Care; Dec 2019; vol. 54 ; p. 228

**Publication Date:** Dec 2019

**Publication Type(s):** Journal Article

Sepsis remains a major cause of morbidity and mortality, and sepsis-induced cardiomyopathy (SCM) has been recognized as a relevant complication. In this article, the pathophysiology of SCM and the literature regarding the clinical care with a focus on the use of mechanical circulatory support for the rescue of patients with severe SCM are reviewed. Lastly, a pragmatic approach to the care of this complex patient population is provided using a representative case example.

**Database:** BNI

12. Hemodynamic profiles following digoxin use in patients with sepsis in the ICU

**Author(s):** Herasevich, Svetlana; Bennett, Courtney E; Schwegman, Alex R; Subat, Yosuf W; Gajic, Ognjen; Jayaprakash, Namita

**Source:** Journal of Critical Care; Dec 2019; vol. 54 ; p. 175

**Publication Date:** Dec 2019

**Publication Type(s):** Journal Article

Early digoxin administration in patients with sepsis and tachycardia is uncommon but associated with improvements of hemodynamic parameters. These preliminary results will help formulate future hypotheses for focused trials on utility, efficacy and safety of digoxin in sepsis.

**Database:** BNI
13. Comparison of the sepsis-2 and sepsis-3 definitions in severely injured trauma patients

**Author(s):** Eriksson, Jesper; Eriksson, Mikael; Brattström, Brattstrom Olof; Hellgren, Elisabeth; Friman, Ola; Gidlöf Andreas Gidlöf; Larsson, Emma; Oldner, Anders

**Source:** Journal of Critical Care; Dec 2019; vol. 54 ; p. 125

**Publication Date:** Dec 2019

**Publication Type(s):** Journal Article

The sepsis-3 definition identifies much fewer patients and is more strongly associated with adverse outcomes than the sepsis-2 definition. The sepsis-3 definition seems to be useful in the post trauma setting.

**Database:** BNI


**Author(s):** Barbash, Ian J; Kahn, Jeremy M

**Source:** Journal of Critical Care; Dec 2019; vol. 54 ; p. 88

**Publication Date:** Dec 2019

**Publication Type(s):** Journal Article

Existing sepsis policies may harm safety-net hospitals and widen health disparities. Our findings suggest that strategies to promote collaboration among hospitals may be an avenue for sepsis performance improvement in safety-net hospitals.

**Database:** BNI

15. David Oliver: Sepsis—what’s behind the "hype"?

**Author(s):** Oliver, David

**Source:** BMJ : British Medical Journal (Online); Nov 2019; vol. 367

**Publication Date:** Nov 2019

**Publication Type(s):** Journal Article

Available at BMJ - from BMJ Journals - NHS
Available at BMJ - from Academy Library - Yeovil (lib303095) Local Print Collection starts volume 360 (8135)
Available at BMJ - from Unpaywall

**Abstract:** Many deaths from genuine sepsis, defined in the letter as "life-threatening organ dysfunction caused by a dysregulated host response to infection," occur in frail older people with multimorbidity and would not have been preventable even with early and aggressive treatment. Perhaps the Surviving Sepsis campaign, as well as the national push to embed sepsis screening tools, protocols, and financial incentives for hospitals, has led to fear and anger among patients who see media stories about sepsis being missed, treatment delayed, or patients dying.

**Database:** BNI

16. Improving 3-Hour Sepsis Bundled Care Outcomes: Implementation of a Nurse-Driven Sepsis Protocol in the Emergency Department

**Author(s):**

**Source:** Journal of Emergency Nursing; Nov 2019; vol. 45 (no. 6); p. 690

**Publication Date:** Nov 2019

**Publication Type(s):** Journal Article

Available at Journal of Emergency Nursing: JEN : official publication of the Emergency Department Nurses Association - from ProQuest (Health Research Premium) - NHS Version

When the nurse-driven protocol and communication tool were implemented, compliance with time-sensitive sepsis bundled interventions improved significantly. The outcomes suggest nurse-driven protocols can improve sepsis outcomes.

**Database:** BNI
17. Sepsis Education Initiative Targeting qSOFA Screening for Non-ICU Patients to Improve Sepsis Recognition and Time to Treatment

Author(s): Raines, Kim, DNP, RN, CRNP, AGACNP-BC, CCRN; Berrios, Ronaldo A Sevilla, MD; Guttendorf, Jane, DNP, RN, CRNP, ACNP-BC, CCRN

Source: Journal of Nursing Care Quality; 2019; vol. 34 (no. 4); p. 318

Publication Date: 2019

Publication Type(s): Journal Article

The quick-Sequential Organ Failure Assessment (qSOFA) criteria are recommended for identifying non-intensive care unit (ICU) patients at risk for sepsis but are underutilized. Local Problem: We hypothesized that education on recognizing sepsis using qSOFA criteria and empowering nurses to trigger rapid response team (RRT) calls based on positive qSOFA scores would reduce time to recognition and time to intervention and improve treatment compliance in non-ICU patients.

Database: BNI

18. High-sensitivity troponin T is an important independent predictor in addition to the Simplified Acute Physiology Score for short-term ICU mortality, particularly in patients with sepsis

Author(s): Andersson, Peder; Frigyesi, Attila

Source: Journal of Critical Care; Oct 2019; vol. 53 ; p. 218

Publication Date: Oct 2019

Publication Type(s): Journal Article

Addition of hsTnT evaluation to SAPS 3 enhances the predictive capability of this model in relation to mortality. In sepsis, the hsTnT level may be an important prognostic marker.

Database: BNI

19. Validation the performance of New York Sepsis Severity Score compared with Sepsis Severity Score in predicting hospital mortality among sepsis patients

Author(s): Sathaporn, Natthaka; Bodin Khwannimit

Source: Journal of Critical Care; Oct 2019; vol. 53 ; p. 155

Publication Date: Oct 2019

Publication Type(s): Journal Article

The SSS had better discrimination and overall performance than the NYSSS. However, both sepsis severity scores were poorly calibrated.

Database: BNI

20. Clinical controversies in abdominal sepsis. Insights for critical care settings

Author(s): Martin-Loeches, Ignacio; Timsit, Jean Francois; Leone, Marc; de Waele, Jan; Sartelli, Massimo; Kerrigan, Steve; Luciano Cesar Pontes Azevedo; Einav, Sharon

Source: Journal of Critical Care; Oct 2019; vol. 53 ; p. 53

Publication Date: Oct 2019

Publication Type(s): Journal Article

This review evaluates and summarizes the current approach to current challenges in patient care and which are the future research directions.

Database: BNI
Library Resources

The books listed below are a selection of those that can be found at the library. To search the library catalogue in full, visit swims.nhs.uk.

**ABC of sepsis (2010)**
Daniels, Ron; Nutbeam, Tim

Daniels, Ron

In the News

**Behind the Headlines**

**New blood test could lead to better treatment for sepsis - NHS**
14 Nov 2019
Researchers in the US have developed a test for 5 proteins, which they say allows them to identify people with sepsis who have a high, medium or low risk of dying from the condition. They hope this will eventually help doctors identify the best treatments for individual patients.

**Air pollution linked to increased hospital admissions for kidney disease and symptoms**
28 Nov 2019
Air pollution by what is known as fine particulate matter has been linked to increased risks of several conditions, including heart attacks, strokes and breathing difficulties.

**Nursing Times**

**'Imperfect' data hiding the global prevalence of sepsis**
16 January, 2020
A national registry for sepsis patients is urgently needed in order to determine the true prevalence of the deadly condition, according to a charity leader, in the wake of new research.

This current awareness bulletin contains an inexhaustive selection of information that has not been critically appraised by library staff. It is therefore the responsibility of the reader to appraise this information for accuracy and relevance.

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