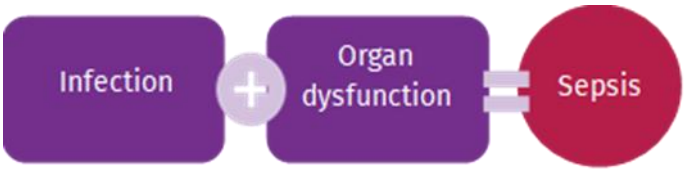
Queensland Health

Why use the Adult Sepsis Pathway?

Factsheet for Clinicians

Sepsis is a **medical emergency**. Using a sepsis pathway has been shown to assist with screening, treating and standardising sepsis care[1].

Sepsis occurs when the body is fighting infection but starts to attack itself causing organ dysfunction. Sepsis can impact all ages, and all types of patients.



The Adult Sepsis Pathway can be used for all adult patients (including maternity patients and adolescents aged 16 years and over), in tertiary, secondary and rural and remote sites across Queensland.

The pathway assists with:

1. identifying patients at risk of sepsis
2. distinguishing sepsis from other health concerns
3. escalation for urgent senior medical review when necessary
4. ensuring time-critical sepsis treatment

Development of the Adult Sepsis Pathway

Clinical Excellence Queensland's (CEQ) Sepsis Program was established to improve adult sepsis outcomes across Queensland. The Adult Sepsis Pathway is an evidence-based resource developed in conjunction with leading sepsis clinicians, and multiple stakeholders and consumers. The Adult Sepsis Pathway has been approved by The Queensland Sepsis Program (QSP) Steering Committee and aligns with the Australian Commission for Safety and Quality in Health Care (ACSQHC) Sepsis Clinical Care Standard.

The first 'Emergency Department Non-Pregnant Adult Sepsis Pathway' pathway was approved following an initial pilot study at the Gold Coast University Hospital and a broader trial in 13 sites across Queensland using a Breakthrough Collaborative Series (BTS). Results from the BTS concluded pathway use was associated with:

- 22.5% increase (57.1% to 69.9%) in appropriate antibiotic prescriptions[2]
- 15.7% increase (55.4% to 64.1%) in bundle compliance[1]
- 34.8% decrease (14.9% to 9.7%) in in-hospital mortality[1]

- 33.9% decrease (26.5% to 17.5%) in the need for ICU admission[1]

The sepsis pathway was also trialled across inpatient and maternity settings. Subsequently, the Queensland Sepsis Steering Committee recommended amalgamation of all adult pathways given the minimal clinical differences and benefits for streamlining patient care. This amalgamation is reflected in both the paper-based pathways and the Digital Sepsis Pathway Project which will uplift the adult sepsis pathway into ieMR.

Antimicrobial Prescribing and Administration Guidelines

The Adult Sepsis Pathway is available with or without antimicrobial prescribing and administration guidelines. Designed for the first dose of antibiotics for community acquired infections, antimicrobial guidelines are available for tropical regions with high MRSA prevalence, non-tropical regions with high MRSA prevalence and non-tropical regions with low MRSA prevalence. These guidelines have been developed to reflect the local epidemiology of antimicrobial-resistant infections across Queensland in accordance with the electronic Therapeutic Guidelines. The decision about which guidelines to use for your hospital, can be made in consultation with local Infectious Disease physicians and Antimicrobial Stewardship Program.

For more information and how to order

The factsheet on how to use the adult sepsis pathway, is available here.

To find out more about the Adult Sepsis Pathway including additional resources and how to order the pathway, click here to download the flow chart and order via WINC.

For more information, go to the QSP QHEPS page or contact: sepsis@health.qld.gov.au

References:

Venkatesh, B., Schlapbach, L., Mason, D., Wilks, K., Seaton, R., Lister, P., Irwin, A., Lane, P., Redpath, L., Gibbons, K., Ergetu, E., & Rice, M. (2022). Impact of 1-hour and 3-hour sepsis time bundles on patient outcomes and antimicrobial use: A before and after cohort study. The Lancet Regional Health - Western Pacific, 18, 100305. https://doi.org/10.1016/j.lanwpc.2021.100305

Wilks, K., Mason, D., Rice, M., Seaton, R., Redpath, L., Gibbons, K., Ergetu, E., Lane, P., & Venkatesh, B. (2023). Impact of 1-hour and 3-hour sepsis time bundles on antibiotic use in emergency departments in Queensland, Australia: a before-and-after cohort study. BMJ Open, 13(9), e072167. https://doi.org/10.1136/bmjopen-2023-072167