Emergency Department (ED) Adult Sepsis Pathways
Frequently Asked Questions (FAQ)

Contents

Below you'll find answers to common questions asked about the adult sepsis pathways.

Why is sepsis a problem?

Sepsis and septic shock are major healthcare problems, affecting millions of people around the world each year and killing as many as one in four (and often more). In Australia, more than 5000 people die of sepsis each year, which is greater than the annual national road toll and contributes to more deaths than breast, prostate or colorectal cancer. The incidence of sepsis is projected to rise as the population becomes older with co-morbid conditions increasing the risk of becoming septic. Since 2015/16 sepsis episodes have increased by approximately 5,500, equating to an average annual increase of 9%, which is greater than the average annual increase of hospital admissions from all causes of approximately 6%.

What is Queensland doing about sepsis?

Clinical Excellence Queensland's (CEQ) Queensland Sepsis Program was established to reduce the impact of sepsis (mortality and morbidity) in Queensland by:

- supporting clinicians in the early recognition and treatment of patients with sepsis
- increasing clinician knowledge and awareness of sepsis
- increasing the level of community knowledge and awareness of sepsis.

How did the ED sepsis pathways come about?

The Queensland Sepsis Steering Committee established a pathway development working group consisting of clinical experts, including representatives from emergency medicine, emergency nursing, infectious diseases, intensive care, quality improvement, recognition and responding to clinical deterioration, human factors and Patient Safety and Quality Improvement Service (PSQIS).

Adult and paediatric ED sepsis pathways were initially developed and piloted at the Gold Coast University Hospital (GCUH) ED before being introduced at 16 tertiary and secondary ED's via the Queensland Sepsis Collaborative in late 2018. The pathways were adapted for use in rural and remote hospital EDs and introduced in 85 facilities commencing in April 2019.

Both the adult and paediatric pathways have been subject to extensive consultation, pilot testing and evaluation. The pathways have recently been reviewed and updated following a survey of users.

Which sepsis pathway should I use?

The adult and paediatric ED sepsis pathways are now available for use by tertiary, secondary and rural and remote public emergency departments throughout Queensland.

Adult or paediatric pathway?

The adult ED sepsis pathway should always be used for patients from 18 years of age. Patients from 16-18 years can use either the paediatric or adult ED sepsis pathways, at the discretion of the treating clinician and Hospital and Health Service (HHS). The paediatric ED sepsis pathway should be used for children younger than 16 years. For paediatric specific questions, see paediatric ED Sepsis Pathway FAQ.

Rural and remote or secondary and tertiary adult sepsis pathway?

Both pathways include identical sepsis screening and recognition tools, and treatment bundle. Regional antibiotic prescribing and administration guidelines are available for use, as advised by your local infectious diseases (ID) consultants or Antimicrobial Stewardship (AMS) experts (see below - Which antibiotic guideline should we use?). The Rural and Remote pathway differs in that it prioritises early escalation to facilitate transfer to specialist services.

Which pathway should we use for immunocompromised patients with an oncology diagnosis presenting with fever?

If you suspect neutropaenic sepsis, refer to local guidelines if available, otherwise continue screening on the adult ED sepsis pathway.

Which antibiotic guideline should we use?

Four versions of the adult ED sepsis pathway are available for use, including the three regions, plus a 2-page version which does not have the antibiotic prescribing and administration guidelines attached.

The sepsis antibiotic prescribing and administration guidelines available for your ED have been developed considering eTG guidelines and the antibiograms for three regions in Queensland, and include:

- Region A - Low MRSA,non-tropical
- Region B - High MRSA, non-tropical
- Region C - High MRSA, tropical (facilities north of Mackay).

All antimicrobial recommendations should be derived from an understanding of the local epidemiology of antimicrobial-resistant infections including MRSA. The decision about which guidelines to use is made in consultation with local ID consultants or AMS services for your hospital. Queensland Pathology provides

Local Antibiograms annually to assist clinicians with this choice – available online: https://qheps.health.qld.gov.au/pathology-queensland/services/antibiograms

Where your ID/AMS experts choose to use the adult ED sepsis pathway that does not include antibiotic guidelines, antibiotic prescribing is based on eTG Guidelines or your hospital's local sepsis guidelines.

How to use the adult ED sepsis pathway

The pathways have been revised and simplified following stakeholder feedback. For details on how to use the pathway refer to the attached the Adult ED Sepsis Pathway fact sheet and the Adult Sepsis ilearn module.

Do all patients who screen with high or moderate risk criteria have sepsis?

The pathway's screening criteria supports nursing staff and junior doctors to escalate the patient for urgent review with senior medical officer.

Not all patients screened with high or moderate risk criteria will have sepsis. Within this group of patients, many will have an infection which may be time sensitive. A smaller group will have true 'sepsis'.

The intent of the pathway is for patients who meet **high risk** criteria to be treated as having sepsis until proven otherwise, which is decided following an immediate senior medical review. Those with moderate risk for sepsis should also be reviewed by a senior medical officer within a short time frame.

When implementing the pathway, local discussion and agreement should take place to ensure a shared understanding between nursing and medical staff about the screening process.

Will all patients with high or moderate risk criteria benefit from urgent antibiotics?

Not all patients with high or moderate risk criteria will benefit from urgent antibiotics. Within this group of patients, a small and currently unidentifiable cohort will benefit from antibiotics within one hour (as soon as practically possible). A further (much larger) group will have infection with a time-sensitive element where antibiotics delivered within 1 to 3 hours are important and will probably affect morbidity, mortality and length of stay. Urgent assessment and decision-making by a senior clinician is key.

Some patients who screen as high or moderate risk for sepsis will not have infections or will not have infection with a time-sensitive element.

What changes were made to the pathway after the pilot and consultation period?

The pathway was approved by the Queensland Sepsis Steering Committee (QSSC) and piloted at Gold Coast University Hospital in 2017-18. Following feedback from the pilot the pathway working group made amendments to the pathway. The amended version was approved for use by hospitals participating in the Queensland Sepsis Collaborative (the Collaborative) hospitals with Level 4-6 EDs according to the Clinical Services Capability Framework. Sixteen hospitals participated in the Collaborative between August 2018 and March 2020.

The pathway was also adapted for use in a rural and remote context. The rural and remote ED sepsis pathway was trialed in 85 EDs between June 2019 and July 2020. Following widespread testing the pathways have undergone a further review prior to being approved for use in EDs throughout Queensland by the QSSC following endorsement by the Emergency Department Strategic Advisory Panel (QEDSAP).

Review process
A survey of users (including the Collaborative participants and rural and remote project participants) was conducted. The sepsis pathway working group (working group) with additional key stakeholders from the Collaborative was reconvened to review the survey feedback and recommend changes.

A desktop review comparing the sepsis and meningococcal disease pathways was performed by a subgroup of the working group to identify gaps in the sepsis pathway that could lead to lack of or delayed recognition or treatment of meningococcal disease, should the meningococcal disease pathway be retired. The recommended changes were presented to the full pathway working group for consideration.

Pathway Changes
Pathway changes focussed primarily on process flow and human factors, to improve the usability of the document. Changes included wording simplification, improved decision flow, reduced documentation requirements, and alignment with the paediatric pathway.

Meningococcal disease pathway review
With the acute management of suspected meningococcal disease pathway due for review, a small subgroup of the working group and other key stakeholders compared documents to identify if adaption of the adult ED sepsis pathway would support management of meningococcal sepsis.

Inclusion of specific symptoms e.g. petechial rash, photophobia, hypotension, neck stiffness from the meningococcal disease pathway in the initial screening criteria were considered, however the working group agreed that patients presenting with meningococcal sepsis who had developed any of the above symptoms would be unwell therefore would meet at least one of the existing screening criteria. The working group agreed patients with meningococcal disease would not be missed using the current screening criteria with minimal changes to the initial screening criteria to include altered level of consciousness as a sign of clinical deterioration.

Once screened, the working group noted patients with meningococcal sepsis with any of the above central nervous system symptoms would be identified in the later stages of screening. In acknowledgment of the need for extreme urgency required for treating this condition, an additional instruction has been added to the 'Actions to be commenced' box at the top of page 2 advising meningococcal sepsis is to be treated within 30 minutes of recognition which reflects the instruction on the existing meningococcal disease pathway.

Neutropaenic sepsis
Given the likelihood that neutropaenic sepsis patients will be screened using the sepsis pathway it was necessary to include this advice in the amended sepsis pathway. It is not intended that the sepsis pathway be used in lieu of existing febrile neutropaenia guidelines. Most sites are likely to have existing guidelines and these should be used where available.

A new criterion was added to the top initial screening box advising if neutropaenic sepsis is suspected, to refer to local guidelines if these are available, otherwise continue screening on the pathway. In the event local guidelines are not available, further advice regarding the timing of treatment has been added to the 'Actions 1-4' to be commenced in box at the top of page 2, indicating treatment is to be started within 30 minutes of recognition of neutropaenic sepsis. This is in recognition of the emergent nature of the condition and in accordance with other febrile neutropaenia guidelines.

What is the review process?

Clinical pathways are reviewed every 24 months or as required when clinical evidence changes, or an emergent issue arises that requires a change to the clinical pathway content.

When will an adult digital sepsis pathway become available?

Plans for an adult digital sepsis recognition, assessment and clinical management support tool within the integrated electronic medical record (ieMR) are in progress. The solutions will support clinicians working in EDs and Inpatient areas at digital sites.

How do I order printed sepsis pathways?

All Statewide clinical pathways are available and ordered through WINC using your local ordering processes. This is to ensure high quality documents are being produced and the latest versions are always available.

Order the ED adult sepsis pathways using the WINC codes below. If your organisation does not have a WINC account, you will need to create an account to be able to place an order. Local HHS Guidelines should be followed to determine how to place the order.

WINC Code	Form ID	Description in WINC Catalogue / Comments
1NY37704	SW890	ED Adult Sepsis Pathway T&S (no antibiotic guidelines attached) - v1.00 SW890 (Pack/100)
1NY37705	SW891	ED Adult Sepsis Pathway T&S AB guidelines - Region A: Low MRSA, Non-Tropical - v1.00 SW891 (Pk/100)
1NY37706	SW892	ED Adult Sepsis Pathway T&S AB guidelines - Region B: High MRSA, Non-Tropical - v1.00 SW892 (Pack/100)
1NY37707	SW893	ED Adult Sepsis Pathway T&S AB guidelines - Region C: High MRSA, Tropical - v1.00 SW893 (Pack/100)
1NY37708	SW929	ED Adult Sepsis Pathway R&R (no antibiotic guidelines attached) - v1.00 SW929 (Pack/50)
1NY37709	SW930	ED Adult Sepsis Pathway R&R AB guidelines - Region A: Low MRSA, Non-Tropical - v1.00 SW930 (Pack/50)
1NY37710	SW931	ED Adult Sepsis Pathway R&R AB guidelines - Region B: High MRSA, Non-Tropical - v1.00 SW931 (Pack/50)
1NY37711	SW932	ED Adult Sepsis Pathway R&R AB guidelines - Region C: High MRSA, Tropical - v1.00 SW932 (Pack/50)
1NY37712	SW1050	Adult Sepsis Discharge Sheet - v1.00 SW1050 (Pack of 100)