



Clinical Practice Guidelines: Medical/Cellulitus

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Purpose	To ensure consistent management of a patient with cellulitus.
Scope	Applies to Queensland Ambulance Service (QAS) clinical staff.
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Cellulitis is an acute bacterial infection of the skin that involves the dermis and underlying subcutaneous tissue.^[1] In clinical practice, this is characterised by a demarcated erythematous area with associated oedema, warmth and tenderness on palpation. Typically, cellulitis occurs following bacteria invasion through the physical skin barrier resulting in subsequent infection.^[2,3]

There are over 24,000 emergency department presentations annually in Queensland attributed primarily to cellulitis, many of which are potentially preventable.^[4,5] Identifying cellulitis and differentiating it from other skin conditions such as erysipelas and dermatitis can be difficult in the pre-hospital environment.

The severity of cellulitis can be broadly classified into three categories, ranging from localised erythema in a hemodynamically well patient to fulminant sepsis with necrotising fasciitis.

Mild Cellulitis:

This category of cellulitis refers to the presence of small area of erythema with associated warmth, swelling and tenderness. Patients in this classification present systematically well and have well controlled or no significant comorbidities.

Moderate Cellulitis:

Broadly, this form of cellulitis is used to describe the progression of the infection to induce a minor systemic inflammatory response (fever, tachycardia). Patients at risk of further progression have poorly controlled comorbidities which negatively affect their response to treatment.

Severe Cellulitis:

This category describes evidence of severe swelling and tenderness with a large body surface area involved (larger than the patient's handprint). Features may also include the discharge of fluid or pus and in some extreme instances, evidence of necrotising fasciitis. Patients presenting with cellulitis of this severity are usually hemodynamically challenged, displaying evidence of sepsis.

Clinical features



- Marked area of erythema with associated warmth, swelling and tenderness
- Reported rapid spread of erythema in affected area
- Discharge of clear or yellow fluid and/or pus
- Fevers/chills
- Evidence of sepsis (typically late sign)



Risk Assessment

When attending patients presenting with cellulitis paramedics should perform a holistic examination, considering both social and physical determinants of health. Patients should be assessed with reference to the following considerations:

- Presence of high-risk comorbidities (cirrhosis, diabetes, lymphoedema, immunosuppression, peripheral vascular disease, chronic venous insufficiency)
- Previous history of cellulitis
- Evidence of deficits to skin integrity (broken skin including animal or human bites, eczema, psoriasis, ulcers)
- Social factors (inability to self-care, intravenous drug use, obesity, poor personal hygiene).



Additional information *(cont.)*

- Necrotising fasciitis is an infrequent life-threatening progression of cellulitis characterised by severe pain disproportionate to the apparent severity of the infection, that requires emergent surgical debridement.^[6]
- Paramedics should transport all patients that present with cellulitis that involves the face (periorbital region) or the skin over joints.



Additional information

- There are many conditions that mimic cellulitis that have similar prodromal symptoms. Consequently, instances of misdiagnosis are common. If there is evidence of a continual pruritus (itch) and no pain on physical examination, contact dermatitis or allergic reaction should be considered.
- Cellulitis typically presents unilaterally on the lower extremities but can affect other areas of the body.

