Clinical Practice Guidelines: Medical/Cellulitus

Policy code	CPG_ME_CELL_0722
Date	July, 2022
Purpose	To ensure consistent management of a patient with cellulitus.
Scope	Applies to Queensland Ambulance Service (QAS) clinical staff.
Health care setting	Pre-hospital assessment and treatment.
Population	Applies to all ages unless stated otherwise.
Source of funding	Internal – 100%
Author	Clinical Quality & Patient Safety Unit, QAS
Review date	July, 2025
Information security	UNCLASSIFIED – Queensland Government Information Security Classification Framework.
URL	https://ambulance.qld.gov.au/clinical.html

While the QAS has attempted to contact all copyright owners, this has not always been possible. The QAS would welcome notification from any copyright holder who has been omitted or incorrectly acknowledged.

All feedback and suggestions are welcome. Please forward to: Clinical.Guidelines@ambulance.qld.gov.au

Disclaimer

The Digital Clinical Practice Manual is expressly intended for use by appropriately qualified QAS clinicians when performing duties and delivering ambulance services for, and on behalf of, the QAS.

The QAS disclaims, to the maximum extent permitted by law, all responsibility and all liability (including without limitation, liability in negligence) for all expenses, losses, damages and costs incurred for any reason associated with the use of this manual, including the materials within or referred to throughout this document being in any way inaccurate, out of context, incomplete or unavailable.

Cellulitis

July, 2022

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

- 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.

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.

CPG: Clinician safety
CPG: Standard cares

MILD CELLULITIS
Mild soft tissue warmth, swelling and tenderness with no systemic features or significant comorbidities

Consider:

- **Marking demarcated area to monitor potential spread**
- **Non emergency department medical review (e.g. GP)**

MODERATE CELLULITIS
Moderate swelling and tenderness with systemic features (e.g. fever, tachycardia)

Consider:

- **Marking demarcated area to monitor potential spread**
- **Oxygen**
- **Antipyretic**
- **IV access**
- **IV fluids**

Transport to hospital
Pre-notify as appropriate

SEVERE CELLULITIS
Severe swelling or tenderness with significant systemic features (e.g. fever or hypothermia, tachycardia, tachypnoea)

Manage as per:

- **CPG Sepsis**

Note: *Clinicians must only perform procedures for which they have received specific training and authorisation by the QAS.*