Clinical Practice Guidelines:
Medical/Diabetic emergency: Hypoglycaemia

<table>
<thead>
<tr>
<th>Policy code</th>
<th>CPG_ME_DHO_0119</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date</td>
<td>January, 2019</td>
</tr>
<tr>
<td>Purpose</td>
<td>To ensure consistent management of patients with hypoglycaemia.</td>
</tr>
<tr>
<td>Scope</td>
<td>Applies to Queensland Ambulance Service (QAS) clinical staff.</td>
</tr>
<tr>
<td>Health care setting</td>
<td>Pre-hospital assessment and treatment.</td>
</tr>
<tr>
<td>Population</td>
<td>Applies to all ages unless stated otherwise.</td>
</tr>
<tr>
<td>Source of funding</td>
<td>Internal – 100%</td>
</tr>
<tr>
<td>Author</td>
<td>Clinical Quality &amp; Patient Safety Unit, QAS</td>
</tr>
<tr>
<td>Review date</td>
<td>January, 2022</td>
</tr>
</tbody>
</table>

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 QAS paramedics 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.


This work is licensed under the Creative Commons Attribution-NonCommercial-NoDerivatives V4.0 International License

You are free to copy and communicate the work in its current form for non-commercial purposes, as long as you attribute the State of Queensland, Queensland Ambulance Service and comply with the licence terms. If you alter the work, you may not share or distribute the modified work. To view a copy of this license, visit http://creativecommons.org/licenses/by-nc-nd/4.0/deed.en

For copyright permissions beyond the scope of this license please contact: Clinical.Guidelines@ambulance.qld.gov.au
Glucose is an essential metabolic fuel for the brain and a constant supply is critical for normal neurological function. **Hypoglycaemia** is defined as a BGL < 4.0 mmol/L and this can occur in any patient, regardless of a history of diabetes.[1] Intravenous glucose is the recommended first line management strategy in patients unable to swallow oral glucose and treatment should aim to achieve a BGL of 4.0–8 mmol/L. If there is no improvement in conscious state following such an increase in BGL, other causes for the ALOC should be considered.

**Clinical features**

**Automatic features (warning signs)**
- Diaphoresis, hunger, tingling around the mouth, tremor, tachycardia, pallor, palpitations and anxiety.
- These warning signs may be lost in patients with repeated or prolonged hypoglycaemia.[2]

**Neurological features**
- *Consider hypoglycaemia in all patients who have an ALOC.*
- Lethargy, change in behaviour, headache, visual disturbance, slurred speech, dizziness, ALOC, seizures, coma.
- Patients may present with signs/symptoms mimicking intoxication or stroke.

**Clinical features (cont.)**

**Other considerations**
- Chronic, poorly controlled diabetics may be relatively hypoglycaemic despite having a BGL > 4.0 mmol/L.[2]
- Signs of hypoglycaemia may be masked in patients taking beta blocker medications.[3]

**Risk Assessment**
- Caution is required if the patient is agitated, aggressive or violent.
- Consideration should be given to the possibility of an accidental, or intentional hypoglycaemic agent medication overdose.
**Additional information**

- Ensure primary causes of hypoglycaemia are considered as these often require detailed medical assessment.
- Patients on oral hypoglycaemia agents may later develop recurrent hypoglycaemia and therefore transport to hospital is recommended.[5]
- Diabetes Service Referral is to be considered for all patients (irrespective of whether transported or not) who present with diabetic-related complications (e.g. hypo/hyperglycaemia). Established referral pathways operate in all QAS LASNs.
- A patient may suspend their own insulin pump if part of a personal diabetes management plan.
- Insulin pumps settings are not to be suspended/adjusted by paramedics.

---

**Note:** Officers are only to perform procedures for which they have received specific training and authorisation by the QAS.

---

**Diagram Description:**

- **Can patient safely take oral glucose?**
  - **Y:** Oral Glucose, Diabetes Service Referral
  - **N:** IV access achieved?
    - **Y:** Consider: Glucose 10% [5], Diabetes Service Referral
    - **N:** Is BGL > 4 mmol/L?
      - **Y:** Transport to hospital * Pre-notify as appropriate
      - **N:** Consider: Glucagon, Diabetes Service Referral

* If available, advise patient to consume complex carbohydrates (e.g. a sandwich) following oral glucose.