Clinical Practice Guidelines:
Medical/Diabetic emergency: Hypoglycaemia

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Date	August, 2022
Purpose	To ensure consistent management of patients with hypoglycaemia.
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.
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Diabetic emergency: Hypoglycaemia

August, 2022

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

Autonomic 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 greater than 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

- Diabetes Service Referral must be considered for all patients (irrespective of whether transported or not) who present with diabetic related complications, e.g. hypo/hyperglycaemia. A patient may suspend their own insulin pump if part of a personal diabetes management plan.
- Insulin pump settings must not be suspended/adjusted by attending clinicians.

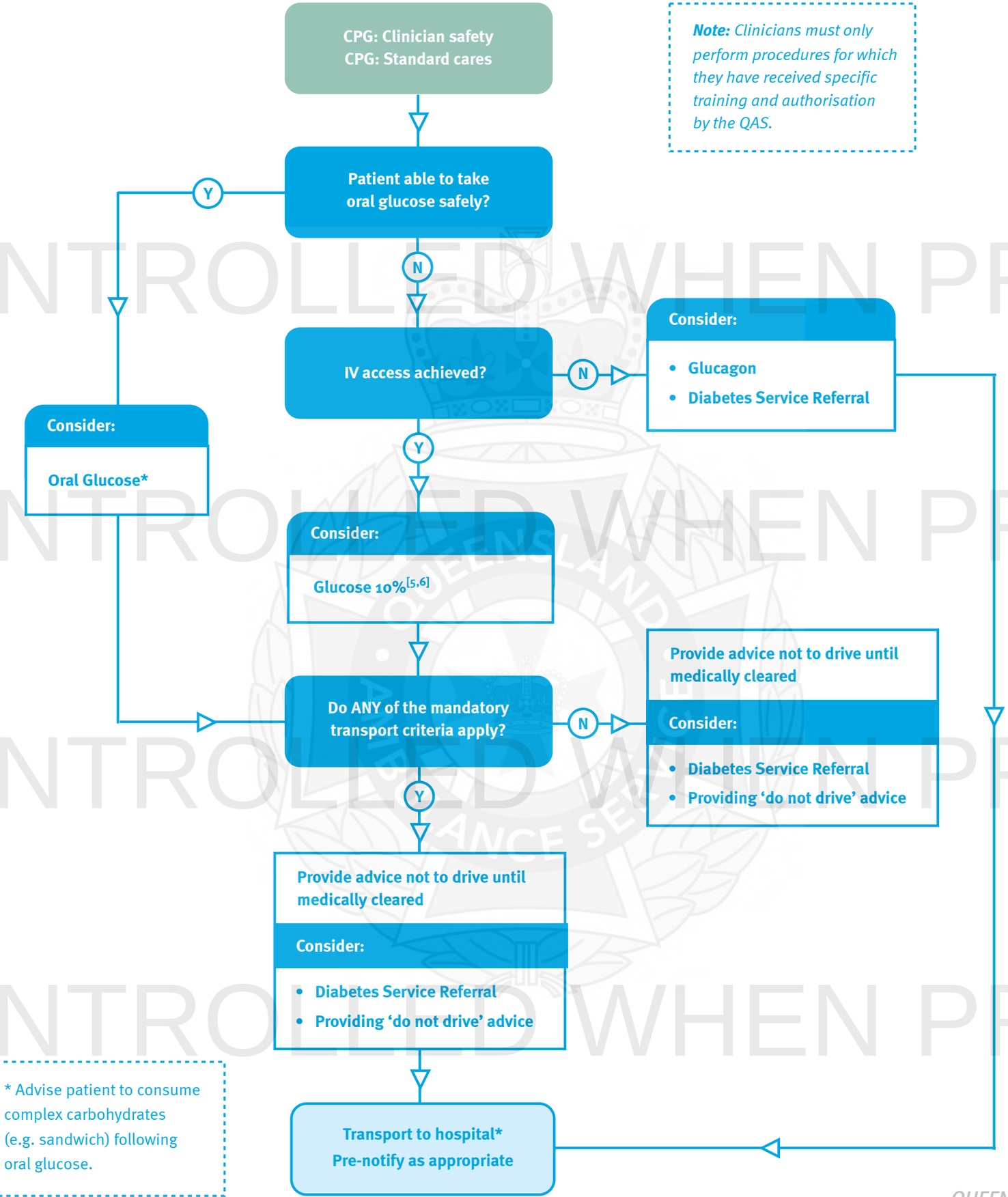
Mandatory transport criteria

If the patient has ANY of the following, they must be transported to hospital.

- Newly diagnosed diabetes
- No previous diagnosis of diabetes
- Pregnant
- Patient recovered but unable to be monitored by a responsible adult for 4 hours, or patient unable to self-care
- Not returned to normal mental state within 10 minutes of IV glucose, or incomplete recovery to normal conscious state
- Intentional overdose of glucose lowering agent
- Severe hypoglycaemia episode within previous 48 hours
- Risk of prolonged or recurrent hypoglycaemia
  - Unwitnessed onset or prolonged episode
  - Patient taking long acting oral hypoglycaemic agent that causes hypoglycaemia
  - Unable or unwilling to consume long acting carbohydrate
- Seizure
- Suspected cause of hypoglycaemia due to illness that requires further investigation
- Injury sustained from hypoglycaemic episode requiring further investigation

Fitness to drive considerations

In alignment with the *National Driver Medication Standards*[4], patients that experience a severe hypoglycaemic event (defined as an episode requiring intervention from a bystander or paramedic to resolve) should be advised to not operate a motor vehicle until they have been cleared to drive by a general practitioner or endocrinologist. In instances where the patient is provided this advice and attempts to drive, the Queensland Police Service should be notified. All instances where advice not to drive has been provided to patient's must be clearly documented on the eARF.



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

* Advise patient to consume complex carbohydrates (e.g. sandwich) following oral glucose.

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