

Critical Hypoglycaemia Management at Guild Lodge



A Review

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Introduction

Hypoglycemia is characterized by a blood sugar level less than 4 mmol/L or the presence of related symptoms. It can occur as a result of medication, dietary habits, and physical activity. If suspected, the diagnosis should be quickly established & treatment should not be delayed.

Grades of hypoglycaemia:

- Mild - conscious & orientated (safe swallow)
- Moderate - conscious & confused (safe swallow)
- Critical/Severe - unconscious or very aggressive (unsafe swallow)

Risk factors:

- Diabetic medicines:
 - Insulin
 - Sulphonylureas (SU)
 - Rapid-acting insulin
- Starvation / Food malabsorption
- Increased Physical Activity
- Alcohol consumption
- Early pregnancy / Breastfeeding

Hypoglycaemic management/interventions:

- Oral glucose / Quick acting carbohydrate
- Glucose Gel (orally if safe swallow)
- Glucagon (administered intramuscularly)
- IV Glucose

Background

At Guild Lodge the two patient groups most at risk are diabetics on insulin & SU, or those who severely restrict their diet. Currently there are 17 patients at increased risk.

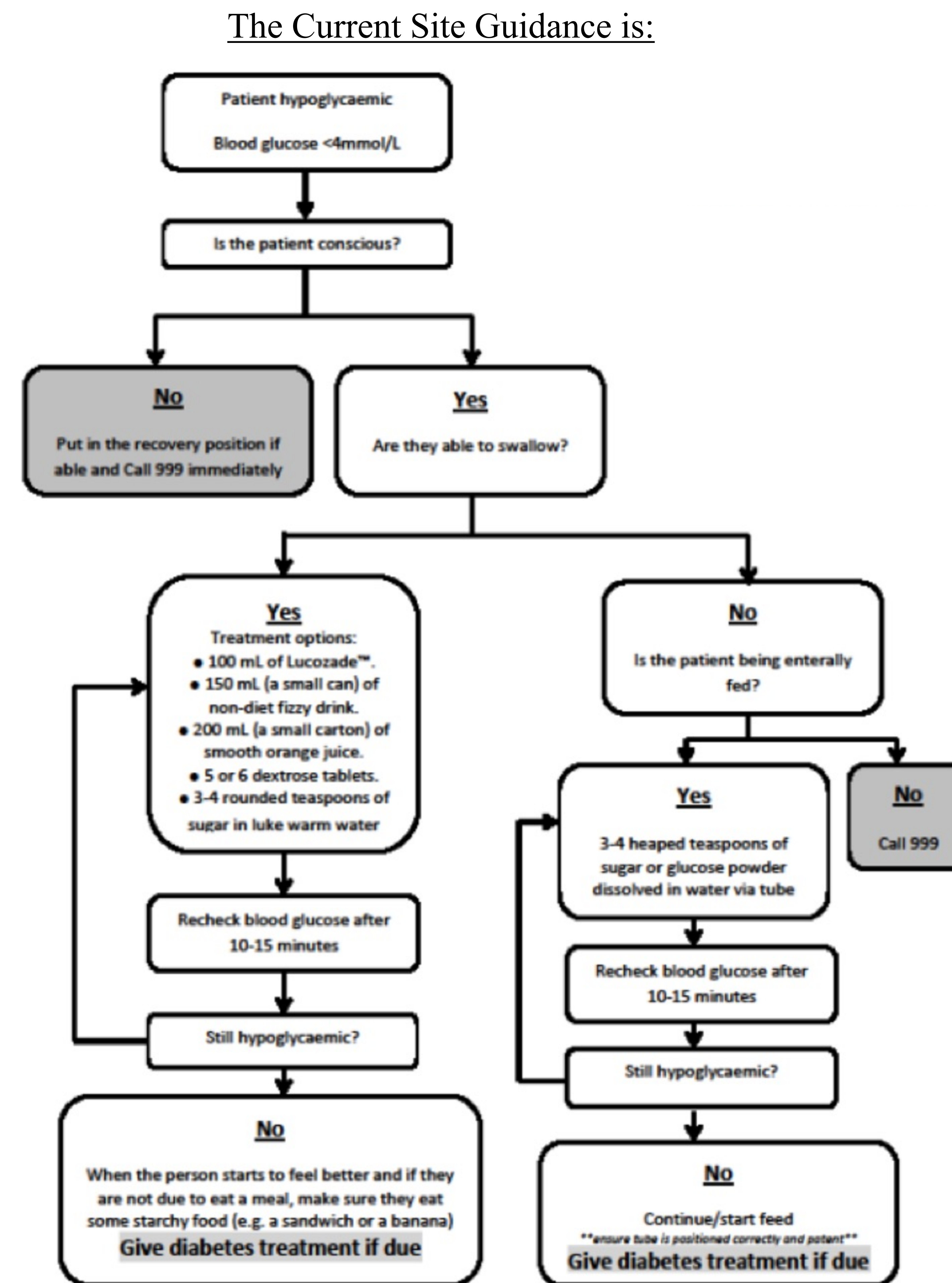
Patients at risk of Hypoglycaemia	
Diet Restriction	5
Insulin	3
Sulphonylureas (SU)	9
Total	17

*Data accurate on 20/03/2023

In Practice

At Guild Lodge, the current acute hypoglycaemia algorithm recommends oral glucose or Glucose Gel for the management of mild or moderate hypoglycaemia.

However, if a patient becomes unconscious, the algorithm recommends urgent transfer to an acute trust for treatment. Here there is potential following prolonged hypoglycemia for detrimental patient outcomes.



Current NICE guidance is summarised as:

- A conscious patient who can swallow, should be treated with oral fast-acting carbohydrate.
- Hypoglycaemia which does not respond, should be treated with glucagon or IV glucose.
- Hypoglycaemia causing unconsciousness is an emergency & should be treated initially with glucagon, followed by IV glucose infusion.

Discussion

In conscious patients, oral glucose is effective. However, in unconscious patients without IV access, glucagon is the preferred option, despite the theoretical risk of rebound hypoglycemia.

Glucagon serves as an interim solution while waiting for the patient to regain consciousness and accept oral glucose. Diabetics would be more likely to accept oral glucose than those restricting their diet.

The use of glucagon could be potentially life-saving, especially in cases of severe hypoglycemia with no venous access. Preventing prolonged periods of hypoglycemia and improving patient outcomes.

In the context of psychiatric patients who may experience hypoglycemia due to dietary restrictions, it's important to consider a patient's ability to provide consent for glucose treatments. It may also be beneficial to incorporating specific management for recurring hypoglycemia in a patient's care plan.

Recommendations

- The Hypoglycaemia treatment policy to be reviewed and consider the glucagon incorporation.
- Staff training – surrounding hypoglycaemia management and glucagon administration.
- Glucagon is stocked on wards identified with patients at risk or centrally (“Hypo Box”).

Conclusion

Glucagon is effective treatment option for severe hypoglycaemia, especially without IV access.

At Guild Lodge, this could be a potentially lifesaving treatment in unconscious patients awaiting an ambulance, especially for service users on insulin.

Of note, glucagon can be less effective in patients with depleted glycogen reserves; those who have fasted for a prolonged period or taking an SU.

However, the potential morbidity and mortality associated with prolonged hypoglycaemia favours a single dose of IM glucagon as a bridging intervention while awaiting IV access.

