

# DIABETES TECHNOLOGY AND ADMISSION TO HOSPITAL



Dear Healthcare Professional,

This document is designed to provide information for both hospital staff and patients who use diabetes technology and may come into hospital. It can be completed by people with diabetes in advance or help guide conversations and assessments on admission. A minimum of four-times daily glucose testing +/- 3am glucose testing is recommended during the first 48 hours of their admission for all people with diabetes not on a continuous glucose monitor (CGM). Testing frequency can then be reviewed and reduced in line with local policy.

## Type of diabetes:

### Your patient takes the following diabetes medications:

**Basal (background) Insulin insert time and dose:**

e.g. Humulin I / Insulatard / Levemir / Glargine/ Tresiba

**Mixed insulin insert time and dose:**

e.g. Novomix 30 / Humalog Mix25 / Humulin M3

**Ultra rapid / Rapid acting insulin insert time and dose:**

e.g. Novorapid / Apidra / Humalog / HumalinS/ Fiasp / Lyumjev

Continuous subcutaneous insulin infusion (CSII)

Insulin pump (ensure rapid acting insulin in pump prescribed if continued)

**Sulfonylureas insert time and dose:**

e.g. Gliclazide / Glipizide. Sulfonylureas should be prescribed at mealtimes and stopped if the patient is not eating. To reduce the risk of hypoglycaemia, consider reducing doses, especially with evening meal if carbohydrate intake is reduced compared to home. Ensure not otherwise contraindicated.

**SGLT2i insert time and dose:**

e.g. Dapagliflozin / canagliflozin / Empagliflozin. SGLT2i should be stopped during acute illness due to increased risk of euglycaemic DKA. Ketones should be checked at least once daily despite glucose levels. Ketone testing frequency should be increased if any other risk factors or symptoms of DKA present.

**GLP-1 insert time and dose:**

e.g. Semaglutide / Dulaglutide / Liraglutide. GLP-1 should be discontinued if not eating and drinking. GLP-1 can otherwise be continued providing not otherwise contraindicated.

**Metformin insert time and dose:**

Metformin should be discontinued if not eating and drinking or risk factor for lactic acidosis present. Metformin can otherwise be continued providing not otherwise contraindicated and given with/ after food.

**DPP4i insert time and dose:**

e.g. Sitagliptin / Alogliptin / Linagliptin. DPP4i should be discontinued if not eating and drinking. DPP4i can otherwise be continued providing not otherwise contraindicated.

Other: .....

Please allow the patient to continue to have access to their usual glucose monitoring technology and refer to your local guidelines on the use of these technologies for informing diabetes management during admission to hospital.

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## Currently your patient is using the following technology for diabetes

- Continuous glucose monitor  
Provide continuous glucose readings from measurements taken from a subcutaneous sensor
- Insulin pumps
- Open loop  Hybrid closed loop (HCL)  
Deliver a constant infusion of rapid acting insulin via a cannula under the skin. There are two main types: patch and tethered



## Use of CGM in hospital

Due to the risk of inaccuracy during acute illness, capillary blood glucose (CBG) should be checked using the hospital meter at least twice daily for people using CGM in hospital. This should be discussed with anyone using CGM and explained that regular CBG monitoring is necessary for safety reasons. Nursing staff should be aware to perform additional CBG testing in case of any concerns or unexpected symptoms.

## Alarms for CGM

Target glucose levels in hospital are usually 6.0 – 10.0 mmol/L (in people more at risk this is higher 6.0 – 12.0 mmol/L). If CGM is being used it may be useful to change the alarm settings to avoid the burden of high alarm frequency and help prevent low glucose levels. If the CGM is being used to alert the medical team, the settings can be programmed as:

- HIGH ALERT: set at 15 – 18 mmol/L – consider extra insulin
- LOW ALERT: set at 4 – 5 mmol/L – consider treating to prevent hypoglycaemia (especially if downward arrow on CGM)

## Insulin pumps currently work in one of two ways:

**Open loop:** Pump delivers preset basal rates, and the patient manually manages pump to deliver bolus doses

**Hybrid closed loop (HCL):** The pump uses an algorithm to automatically adjust basal rates in response to the glucose sensor every 5 minutes. The patient manually delivers bolus insulin doses through the pump for food and corrections. HCL should be turned off unless agreed with the diabetes team. The pump and CGM can then be used as an open loop system

## Use of pumps in hospital

Refer to local guidelines. In absence of local guideline refer to

[JBDS 20 Using Technology to Support Diabetes Care in Hospital 1.pdf \(abcd.care\)](#).

Insulin pumps should be discontinued if there is any impairment to consciousness, or the person with diabetes is acutely unwell and/or confused. If there is disruption of insulin delivery via the pump (for example, removal of pump or a blocked cannula), ensure an alternative source of insulin is started immediately (intravenous or subcutaneous injections). Any removed devices, should be labelled, stored in a safe place and documented.