Name of patient

CHI

Date of Birth

(Please attach printed label here)

Adult Insulin Prescription & Administration Record

NHS
Lothian

This document is for adult patients on regular insulin treatment
*For patients **not on insulin**, use the Blood Glucose Monitoring Record*
For Variable Rate Insulin Intravenous Infusion (VRIII), use the VRIII chart

1

Record patient's usual insulin

Identify the insulin prescription on the Emergency Care Summary
Confirm the preparation and dose with the patient or another source

Patient's usual insulin preparation	Dose and time of administration			
	BB	BL	BE	BBed
	units	units	units	units
	units	units	units	units
	units	units	units	units

BB = before breakfast BL= before lunch BE = before evening meal BBed = before bed

2

Convert the insulin to the ward stock alternative if the patient's own insulin is not available, or the patient is not able to administer their insulin

Action	Patient's usual insulin	Ward stock
Rapid	NovoRapid, Apidra, Fiasp, Humalog, Lyumjev	**NOVORAPID**
Short	Actrapid, Humulin S, Insuman Rapid	**ACTRAPID**
Intermediate	Insulatard, Humulin I, Insuman Basal, Levemir	**INSULATARD**
Long	Lantus, Abasaglar, Toujeo, Tresiba	**LANTUS**
Fixed Mixture	Humulin M3, Humalog Mix (25, 50), Insuman Comb (15, 25, 50), NovoMix 30	**HUMULIN M3**

3

Prescribe the insulin using the brand name on:

1) the Prescription and Medicines Administration Record (electronic or paper). The dose should be prescribed 'as charted'
2) this Insulin Prescription and Administration Record. Turn overleaf, prescribe the insulin preparation and specify the dose in the appropriate section

4

On discharge

Discharge patients on their usual regular insulin if they have been given an alternative ward stock during admission
Inform GP and district nursing team of any changes in preparation or dose of insulin

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Insulin Prescription

Review the blood glucose daily and adjust the prescription as appropriate
If no adjustments are necessary, the prescription will remain valid for 6 days

Regular Prescription — Intermediate, Long Acting or Fixed Mixture Insulin

Start date	Insulin preparation *(in CAPITALS)*	Dose and time of administration				Prescribed by *(sign & print)*	Discontinued by *(sign, print and strike through prescription)*
		BB	BL	BE	BBed		
		units	units	units	units		
		units	units	units	units		
		units	units	units	units		
		units	units	units	units		
		units	units	units	units		
		units	units	units	units		

Regular Prescription — Rapid or Short Acting Insulin

Start date	Insulin preparation *(in CAPITALS)*	Dose and time of administration				Prescribed by *(sign & print)*	Discontinued by *(sign, print and strike through prescription)*
		BB	BL	BE	BBed		
		units	units	units	units		
		units	units	units	units		
		units	units	units	units		
		units	units	units	units		
		units	units	units	units		
		units	units	units	units		
		Self managed by continuous subcutaneous insulin pump infusion					

BB = before breakfast BL= before lunch BE = before evening meal BBed = before bed

Once only *'stat'* insulin prescription

Caution: stat doses of rapid acting insulin can precipitate hypoglycaemia

Date	Time	Insulin preparation *(in CAPITALS)*	Dose	Prescribed by *(sign & print)*	Time given	Administered by
			units			
			units			
			units			
			units			
			units			
			units			
			units			

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Insulin Administration & Blood Glucose Monitoring Record

Blood glucose range (excluding pregnancy): 6 to12 mmol/L
Individual range (optional):

If the patient is unwell or has ketones above 0.6 mmol/L seek medical advice
For glucose readings less than 4 or more than 12 mmol/L, refer to the guidance for hypoglycaemia (page 5) and hyperglycaemia (page 6)

Date:

____ /____ /____

	Before Breakfast			**Before Lunch**			**Before Evening Meal**			**Before Bed**		
Time												
Blood glucose												
Ketones												
Insulin preparation & dose			units			units			units			units
Administered by & time given		/	time		/	time		/	time		/	time
Insulin preparation & dose			units			units			units			units
Administered by & time given		/	time		/	time		/	time		/	time

Date:

____ /____ /____

	Before Breakfast			**Before Lunch**			**Before Evening Meal**			**Before Bed**		
Time												
Blood glucose												
Ketones												
Insulin preparation & dose			units			units			units			units
Administered by & time given		/	time		/	time		/	time		/	time
Insulin preparation & dose			units			units			units			units
Administered by & time given		/	time		/	time		/	time		/	time

Date:

____ /____ /____

	Before Breakfast			**Before Lunch**			**Before Evening Meal**			**Before Bed**		
Time												
Blood glucose												
Ketones												
Insulin preparation & dose			units			units			units			units
Administered by & time given		/	time		/	time		/	time		/	time
Insulin preparation & dose			units			units			units			units
Administered by & time given		/	time		/	time		/	time		/	time

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Insulin Administration & Blood Glucose Monitoring Record

Date:

____ /____/____

	Before Breakfast			**Before Lunch**			**Before Evening Meal**			**Before Bed**		
Time												
Blood glucose												
Ketones												
Insulin preparation & dose			units			units			units			units
Administered by & time given		/	time		/	time		/	time		/	time
Insulin preparation & dose			units			units			units			units
Administered by & time given		/	time		/	time		/	time		/	time

Date:

____ /____/____

	Before Breakfast			**Before Lunch**			**Before Evening Meal**			**Before Bed**		
Time												
Blood glucose												
Ketones												
Insulin preparation & dose			units			units			units			units
Administered by & time given		/	time		/	time		/	time		/	time
Insulin preparation & dose			units			units			units			units
Administered by & time given		/	time		/	time		/	time		/	time

Date:

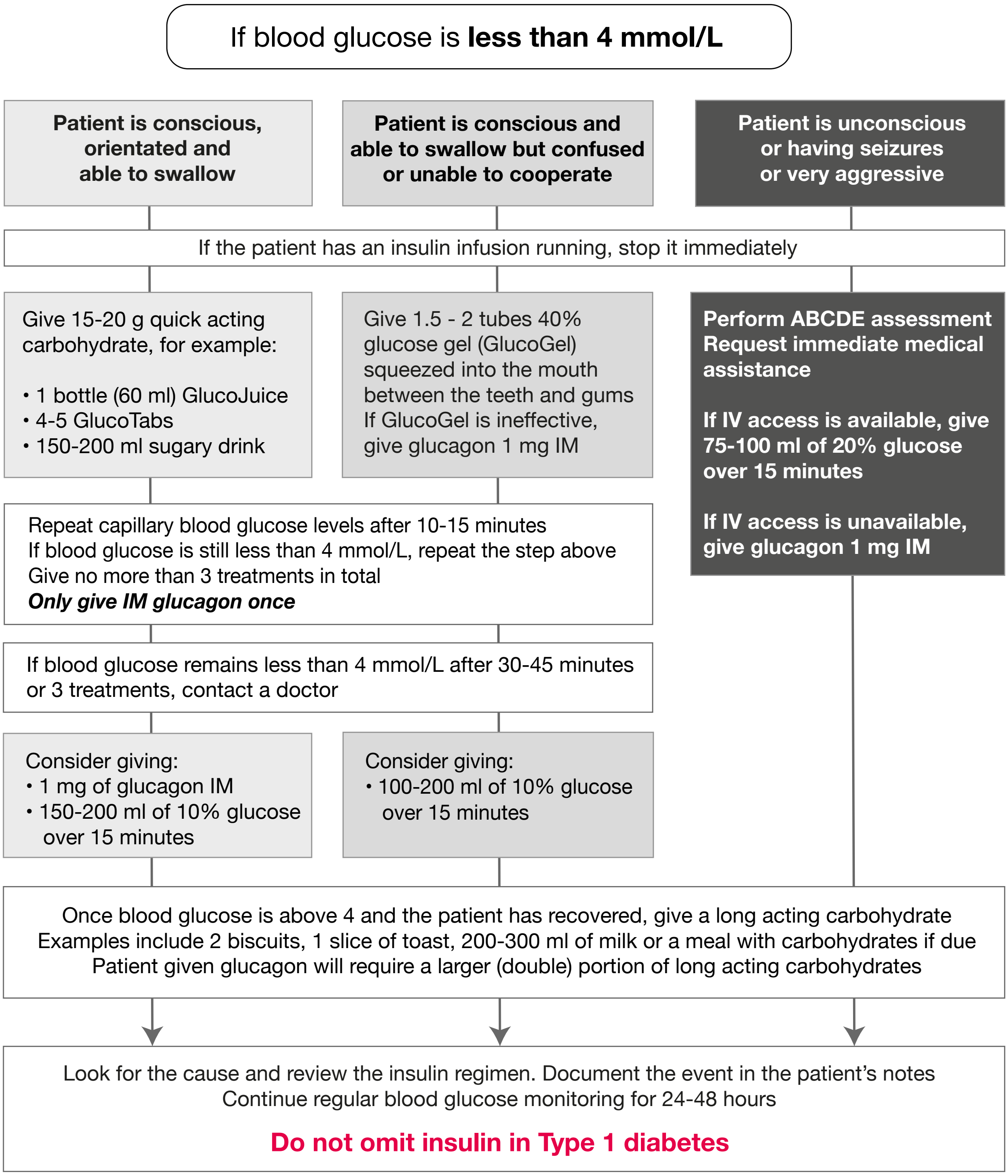
____ /____/____

	Before Breakfast			**Before Lunch**			**Before Evening Meal**			**Before Bed**		
Time												
Blood glucose												
Ketones												
Insulin preparation & dose			units			units			units			units
Administered by & time given		/	time		/	time		/	time		/	time
Insulin preparation & dose			units			units			units			units
Administered by & time given		/	time		/	time		/	time		/	time

STOP

You have reached the end of this document
Discontinue by striking through the prescription page
Review and represcribe the insulin on a new chart

Management of Hypoglycaemia



If blood glucose is **less than 4 mmol/L**

Patient is conscious, orientated and able to swallow

Patient is conscious and able to swallow but confused or unable to cooperate

Patient is unconscious or having seizures or very aggressive

If the patient has an insulin infusion running, stop it immediately

Give 15-20 g quick acting carbohydrate, for example:

- 1 bottle (60 ml) GlucoJuice
- 4-5 GlucoTabs
- 150-200 ml sugary drink

Give 1.5 - 2 tubes 40% glucose gel (GlucoGel) squeezed into the mouth between the teeth and gums
If GlucoGel is ineffective, give glucagon 1 mg IM

Perform ABCDE assessment
Request immediate medical assistance

If IV access is available, give 75-100 ml of 20% glucose over 15 minutes

If IV access is unavailable, give glucagon 1 mg IM

Repeat capillary blood glucose levels after 10-15 minutes
If blood glucose is still less than 4 mmol/L, repeat the step above
Give no more than 3 treatments in total
Only give IM glucagon once

If blood glucose remains less than 4 mmol/L after 30-45 minutes or 3 treatments, contact a doctor

Consider giving:

- 1 mg of glucagon IM
- 150-200 ml of 10% glucose over 15 minutes

Consider giving:

- 100-200 ml of 10% glucose over 15 minutes

Once blood glucose is above 4 and the patient has recovered, give a long acting carbohydrate
Examples include 2 biscuits, 1 slice of toast, 200-300 ml of milk or a meal with carbohydrates if due
Patient given glucagon will require a larger (double) portion of long acting carbohydrates

Look for the cause and review the insulin regimen. Document the event in the patient's notes
Continue regular blood glucose monitoring for 24-48 hours

Do not omit insulin in Type 1 diabetes

This flowchart is intended to guide clinical staff
It is not a substitute for clinical judgement or seeking advice from the inpatient diabetes team

Diabetes Team Contact Details

Diabetes Registrars
On call at RIE (07870 158298), WGH (07976 977402) and SJH (via switchboard) Monday to Friday 09:00-17:00. Contact via switchboard for evenings 07:00-20:00, weekends and public holidays 09:00-17:00

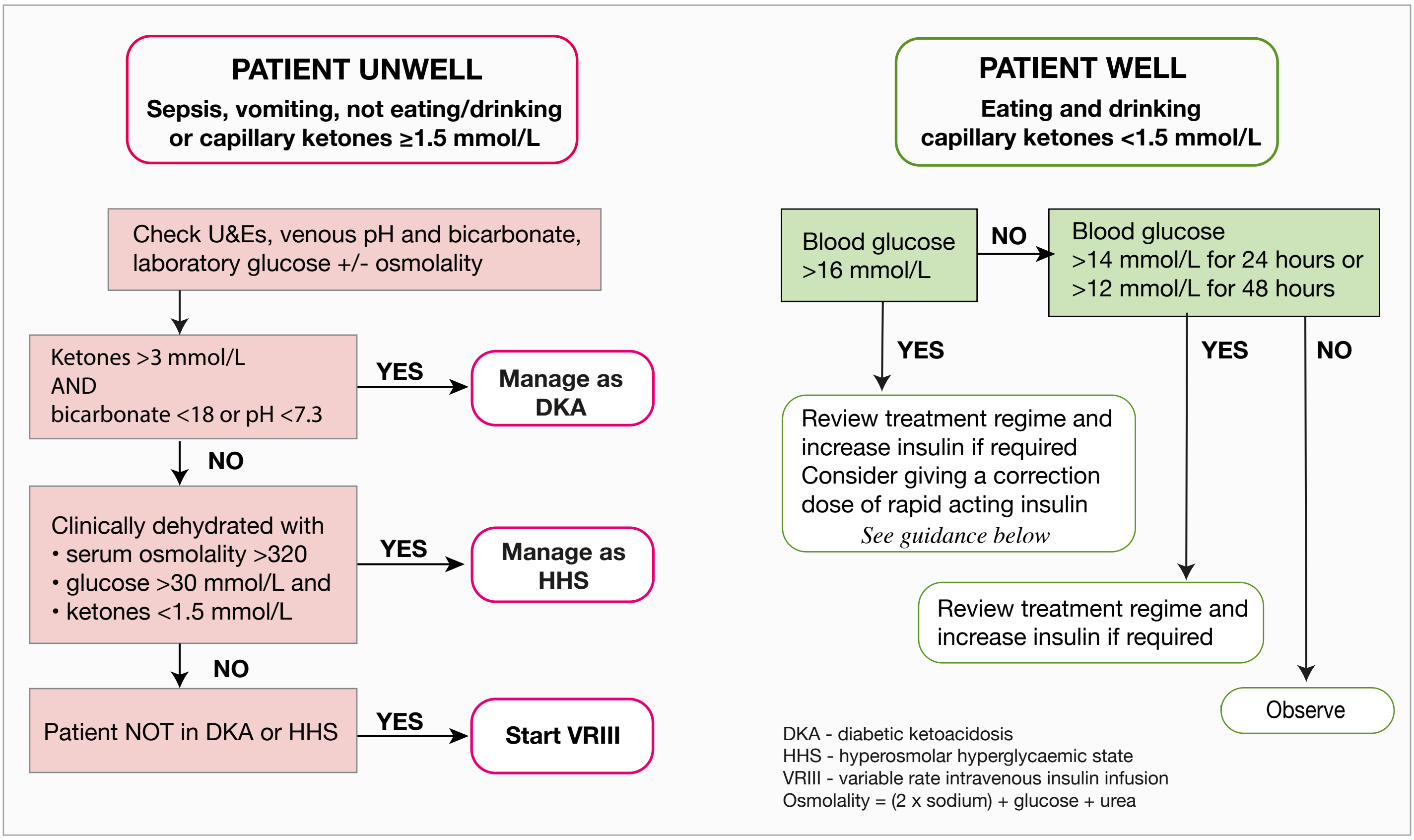
Diabetes Specialist Nurses (Monday to Friday)

RIE	Ext. 21044	Phone 0131 242 1471	Hours 09:00-17:00
WGH	Ext. 33157	Phone 0131 537 1746	Hours 09:00-17:00
SJH	07929742535	Phone 01506 523 856	Hours 08:30-16:00

Contacts and other protocols can be found at
http://www.edinburghdiabetes.com

Management of Hyperglycaemia

- Check capillary ketones in any unwell patient with diabetes or in a well patient with diabetes where capillary blood glucose is >16 mmol/L (>11 mmol/L in pregnancy)
- If blood ketone measurements are unavailable, please contact your diabetes department
- Identify the cause of hyperglycaemia - check for intercurrent illness, missed or incorrect doses of insulin or hypoglycaemic agents, recent meal/snack, prescription of steroids or enteral feeding
- Ensure all patients requiring intravenous insulin or repeated correction doses of subcutaneous insulin are referred to the diabetes team at the earliest opportunity



PATIENT UNWELL

Sepsis, vomiting, not eating/drinking or capillary ketones ≥1.5 mmol/L

Check U&Es, venous pH and bicarbonate, laboratory glucose +/- osmolality

Ketones >3 mmol/L AND bicarbonate <18 or pH <7.3 — YES → **Manage as DKA**

NO

Clinically dehydrated with
- serum osmolality >320
- glucose >30 mmol/L and
- ketones <1.5 mmol/L

YES → **Manage as HHS**

NO

Patient NOT in DKA or HHS — YES → **Start VRIII**

PATIENT WELL

Eating and drinking capillary ketones <1.5 mmol/L

Blood glucose >16 mmol/L — NO → Blood glucose >14 mmol/L for 24 hours or >12 mmol/L for 48 hours

YES → Review treatment regime and increase insulin if required Consider giving a correction dose of rapid acting insulin *See guidance below*

YES → Review treatment regime and increase insulin if required

NO → Observe

DKA - diabetic ketoacidosis
HHS - hyperosmolar hyperglycaemic state
VRIII - variable rate intravenous insulin infusion
Osmolality = (2 x sodium) + glucose + urea

Adapted from the University Hospital of Leicester NHS Trust

Guidance for use of correction doses of rapid acting insulin

- Do not give a correction dose without considering the underlying cause for hyperglycaemia and reviewing the patient's diabetes treatment
- Check capillary blood glucose at 2 and 4 hours after a correction dose
- Do not give correction doses more frequently than 4 hourly unless on the advice of the diabetes team
- Aim to correct the glucose level to 10 mmol/L unless an alternative target is specified
- Correction doses are usually based on a correction factor of 1:3 (i.e. 1 unit of rapid acting insulin reduces the blood glucose by 3 mmol/L)

Capillary blood glucose (mmol/L)	Typical correction dose (units)
18.1 - 25	4
>25	6

- The correction factor can be estimated using the 'rule of 100' and roughly equates to 100/total daily insulin dose:
- individuals on small doses of insulin may require lower correction doses to avoid hypoglycaemia e.g. slim individuals with Type 1 diabetes or those recently diagnosed
- higher correction doses may be required in Type 2 diabetes where the total daily insulin dose is likely to be higher

This guidance is for clinical staff and it is not a substitute for clinical judgement or seeking advice from the inpatient diabetes team