University Hospitals of Leicester
NHS Trust

Managing your diabetes for planned surgery (diabetes passport)

Diabetes Service

Information for Patients

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Name: _____

Proposed date of operation: _____

Contact details:
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Diabetes Department
Leicester General Hospital
Diabetes Nurse Helpline Tel: 0116 258 4919
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Introduction

You have been given this leaflet because you have diabetes and are having a planned operation. We call this your 'perioperative diabetes passport'. Perioperative describes the journey you will take before, during and after your operation.

It has been shown that patients whose diabetes is well controlled before their operation are less likely to have complications and more likely to be discharged home earlier.

The aim of this perioperative diabetes passport is to help you, and the healthcare professionals looking after you, ensure that you are in the best possible condition for surgery and to make sure you get the most appropriate care during your inpatient stay.

- The yellow tables in this passport are for you to fill in with information about you; this will be helpful to your care.
- The green tables in this passport are for your healthcare professionals to fill in.
- All other information is for you to read.

Please bring this diabetes passport to all appointments you have with a healthcare professional, at both the hospital and at your GP surgery.

Key points:

- Good control before surgery reduces complications.
- Keep this leaflet with you during your inpatient stay.

My details	
Name: I like to be called:	
Date of birth:	
NHS number:	
Address:	
Home telephone number: Mobile number:	
Your next of kin (name): Relation to you:	
Your next of kin's address:	
Your next of kin's contact numbers Home telephone: Mobile number:	

About my GP surgery	
Your usual / registered GP:	
Your GP address:	
Your GP telephone number:	

Details about my diabetes		
The type of diabetes I have is ……..	Type 1	☐
	Type 2	☐
	Other	☐ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _
	Don't know	☐ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _
Place of usual care for my diabetes (for example GP / hospital team):		
Filled in by:		
Date:		

My diabetes medication

(We will have information on the medicines you normally take, but please confirm the medication you take for your diabetes below)

Medication chart	Diabetes medication name	Dose / Units
Breakfast:		
Lunch:		
Evening meal:		
Bedtime:		
Weekly:		

Are you normally on insulin?	No ☐	
	Yes ☐ Please confirm the name and concentration (e.g., U100, U200 or U300) of your insulin, and also the device you use to inject it: _	
Who normally manages your diabetes medication (tick all that apply).	Myself ☐	
	Relative ☐	
	Carer ☐	
	Dosette box ☐	
	District nurse ☐	

Eating and drinking

I normally eat at the following times:	_ _

Choosing from the hospital menu if you have diabetes:

Remember to think about what you are eating to ensure that you have a healthy diet for your diabetes while you are in hospital.

This is some guidance to help you choose appropriate foods from the menu. Most people who have diabetes are encouraged to choose a healthy diet, similar to the one also recommended for the general population, which is low in fat, salt and added sugar.

The healthy options will be highlighted on the hospital menu with a heart symbol. The symbols are found next to the meal, dessert or snack.

Try to have 3 meals a day (breakfast, lunch and an evening meal) while in hospital. Try to make sure that you have some starchy food at each meal e.g. cereal, bread, rice, pasta, potatoes.

Do you have hypos?	Yes ☐ No ☐
My choice of snacks include:	_ _

If you feel like your blood sugar is low (hypo) whilst on the ward please alert ward staff immediately. If you treat a hypo with your own supplies please inform ward staff who can check that your blood sugar has returned back to normal, and arrange for you to have some longer acting carbohydrates (e.g., toast or sandwich) if there is a delay until your next meal.

Please bring in any treatments you may prefer to use for hypo treatment, such as jelly babies, sugary drinks or cartons of fruit juice. You should be able to keep a supply of snacks at your bedside. Ask friends/ relatives to bring in sugar free drinks or squash, so that you can have these on your bedside cabinet.

You should be offered a snack before bed if you are on insulin, or certain other diabetic medication. You may prefer to bring your own supply of snacks into hospital.

All wards should provide regular snacks and snacks at bedtime. Please ask the ward housekeeper or nursing staff if you need to.

Blood glucose control before your surgery

High blood glucose can increase the risk of infections and lead to less favourable outcomes after surgery. Good blood glucose control has been shown to improve healing after surgery.

HbA1c is a blood test that gives an overall picture of your blood glucose levels over the past 3 months.

We recommend that your HbA1c should be 8.5% (69 mmol/mol) or less before your operation – the lower the better.

For certain operations, a lower target HbA1c may be needed. We will do a HbA1c test at your pre-operative assessment and the nurse will advise you on the result.

If your operation needs to proceed quickly (for example surgery for cancer) and your HbA1c is higher than 8.5%, then the surgical team may advise to proceed with surgery whilst closely monitoring your blood sugar during the perioperative time.

	HbA1c (mmol/mol)	HbA1c (%)
	42	*6
	53	7
	64	8
Target	69	8.5
	75	9
	86	10
	97	11
	108	12

* Note: target HbA1c may need to be determined depending on the patient.

For some patients (for example older or frail patients), HbA1c in this range should be avoided if on insulin or sulphonylureas, due to risk of hypo (hypoglycaemia).

Referrals

Following on from your pre-operative assessment, you have been referred:	
	back to your GP ☐
	to the Hospital Diabetes Team ☐

The reasons for this referral are: ______________________________________

____

____

____

What to do with your medication before surgery

For patients taking tablets or GLP-1 injections for their diabetes:

The table below will tell you what to do with your diabetes tablets/ injections. If you are taking more than 1, please follow the instructions for each of them.

Name of tablet	Days before	Day of surgery **(morning operation)**	Day of surgery **(afternoon operation)**
Acarbose	Take as usual.	Skip morning dose.	Take usual morning dose with breakfast and omit lunchtime dose.
Repaglinide Nateglinide	Take as usual.	Skip morning dose.	Take usual morning dose with breakfast and omit lunchtime dose.
Metformin (Sukkarto)	Take as usual.	Take as usual unless specifically advised not to.	Take as usual unless specifically advised not to.
Gliclazide, Glibenclamide, Glipizide, Glimepiride, Gliquidone	Take as usual.	Skip morning dose.	Skip morning dose.
Pioglitazone	Take as usual.	Take as usual.	Take as usual.
Sitagliptin, Saxagliptin, Vildagliptin, Alogliptin, Linagliptin	Take as usual.	Take as usual.	Take as usual.
Dapagliflozin, Canagliflozin, Empagliflozin	**Stop 3 days before surgery.**	Skip morning dose and omit until after surgery. Normally until eating and drinking or when your surgeon advises.	Skip morning dose and omit until after surgery. Normally until eating and drinking or when your surgeon advises.
Ertugliflozin	**Stop 4 days before surgery.**	Skip morning dose and omit until after surgery. Normally until eating and drinking or when your surgeon advises.	Skip morning dose and omit until after surgery. Normally until eating and drinking or when your surgeon advises.
GLP-1 injections or tablets			
Exenatide, Liraglutide, Exenatide SR, Lixisenatide Semaglutide Mounjaro	Take as usual.	Take as usual.	Take as usual.

For patients taking insulin for their diabetes:

On the day of your surgery, from 6am onwards, monitor your blood glucose every 2 hours before your arrival at hospital. Bring your recordings with you.

If you are driving, you should also check your blood glucose just before starting your car. Only drive if your blood glucose is more than 5 mmol/L.

The table below will tell you what to do with your insulin. If you are taking more than 1 type of insulin, please follow the instructions for each.

If you are having bowel surgery, liver or gallbladder surgery, Ear, Nose and Throat surgery, cardiac (heart) or vascular (blood vessels) surgery - the instructions may differ. Please contact your usual diabetes care provider for further support and a specific plan for you.

Name of insulin	Day **before** surgery	Day of surgery **(morning operation)**	Day of surgery **(afternoon operation)**
Biphasic mixed insulins / twice daily			
Novomix 30, Humulin M3, Humalog Mix 25, Humalog Mix 50, Insuman Comb 25, Insuman Comb 50, Hypurin Porcine 30/70 mix	Take your usual dose.	a) Take half your usual morning dose. b) Take your usual evening dose. c) If taking before breakfast, lunch and evening meal – halve morning dose; omit lunch dose. Resume normal dose before evening meal (if small meal halve dose).	a) Take half your usual morning dose. b) Take your usual evening dose. c) If taking before breakfast, lunch and evening meal – halve morning dose; omit lunch dose. Resume normal dose before evening meal (if small meal halve dose).
Basal bolus			
Rapid insulins: Actrapid, Humulin S, Insuman Rapid, Novorapid, Fiasp, Humalog, Apidra Porcine Neutral Lyumjev Trurapi	Take your usual doses.	a) Skip morning dose. *If also on long-acting, reduce your dose by 20%. b) Take usual lunch dose if eating and drinking. c) Take usual evening dose if eating and drinking. *If also on long-acting, take your usual dose in the evening.	a) Take your usual morning dose. *If also on long-acting, reduce your dose by 20%. b) Omit lunchtime dose. c) Take usual evening dose if eating and drinking. *If also on long-acting, take your usual dose in the evening.
Basal insulins: Lantus, Levemir, Insulatard, Humulin I, Hypurin Porcine Isophane Insuman Basal, Abasaglar, Toujeo, Tresiba	**If taken in the morning:**		
	Reduce your dose by 20%.	Reduce your dose by 20%.	Reduce your dose by 20%.
	If taken in the evening:		
	Reduce your dose by 20%.	Take your usual dose.	Take your usual dose.
	If taken twice daily:		
	Reduce evening dose by 20%.	Reduce your morning dose by 20%.	Reduce your morning dose by 20%.

Fasting instructions

Please follow the fasting instructions below before your surgery, unless informed differently by medical staff:

For morning surgery:

- **Do not** eat any food after 2am.
- From 2am to 6am you may only drink clear fluids (water, diluted squash, non-fizzy see-through drinks).
- Please drink a glass of still water at 6am.
- After 6am avoid chewing gum.
- After 6am normal medication can be taken with a sip of water, unless you have been advised otherwise.
- After admission when the order of patients on the operating list is finalised, it may be possible to have further drinks of water. Please ask your nurse. Many patients will be offered a drink at 7am, and then allowed sips of water until the time of your surgery (this may not apply to you if you have certain medical conditions such as acid reflux or problems with swallowing).

For afternoon surgery:

- **Do not** have any food or drinks (except water) after 7am. You may have a **light** breakfast before 7am.
- From 7am to 11am we encourage that you drink clear fluids (water, diluted squash, non-fizzy see-through drinks) as usual to keep yourself hydrated. Please drink regularly until 11am.
- After 11am no drink and avoid chewing gum.
- After 11am normal medication can be taken with a sip of water, unless you have been advised otherwise.
- Many patients will be offered a drink of water on admission to hospital, and then allowed sips of water until the time of your surgery (this may not apply to you if you have certain medical conditions such as acid reflux or problems with swallowing for example).

What to bring with you into hospital

- Your diabetes medication.
- A supply of insulin needles (if you take insulin). The needles used in hospital are for use of healthcare professionals and may not be the same as you have at home.
- Any other normal medication you take.
- Your normal hypo treatments, such as glucose drink, jelly babies/ fruit juice.
- A few snacks.

Diabetes self-care during your hospital stay

Blood glucose testing:

It is important that you are able to manage your own diabetes in hospital if you are well enough to do so. You are allowed to do your own blood glucose tests whenever you like. However, to ensure safe care, we will also undertake blood tests using our very accurate precision meters.

Insulin administration and dose adjustment:

You may also be able to self-inject and decide on your own insulin dose, but please agree this with the ward nurse so that it can be documented on your treatment record. If you are having difficulties please ask to see a member of the hospital's Diabetes Team. The nursing staff will need to check, confirm and record the dose given. You should then be able to keep your insulin on you, but at times it maybe necessary for your insulin to be locked away.

In general you should aim for blood glucose values of between 5 mmol/L and 12 mmol/L while in hospital, except at bedtime when the target range is a little higher (between 7 mmol/L and 12 mmol/L).

Don't worry if an occasional reading is outside these ranges, but if you would like advice please ask your ward nurse to contact the Inpatient Diabetes Specialist Support Team.

Inpatient Diabetes Specialist Support Team

During your hospital stay you may be seen by a member of the Inpatient Diabetes Specialist Support Team. Nurses in this team can provide support and management for inpatients who have diabetes.

If you would like to speak to a member of the team during your hospital admission, please let your ward nurse or doctor know so they can arrange this for you. Alternatively, you can contact the Diabetes Team directly on 0116 258 4919 (Monday to Friday, 9am to 4.30pm) or on 0116 258 5517 (weekdays and weekends).

Inpatient Diabetes Specialist Support Team - assessment notes

Today you were seen by: _____

from the Inpatient Diabetes Specialist Support Team, who has given you the following advice:

Changes to your medications:	_____ _____ _____ _____
Current situation:	_____ _____ _____ _____
Background:	_____ _____ _____ _____
Assessment:	_____ _____ _____ _____
Recommendations:	_____ _____ _____ _____
Name:	
Date:	
Signature:	

Blood glucose control in hospital

When in hospital it is not uncommon to experience changes in blood glucose control, including high glucose levels. There are a variety of reasons for this including:

- changed medication and meal times.
- altered portion sizes.
- being less active.
- new medications such as steroids.
- periods of fasting such as before and after surgery.
- the stress of being unwell.
- an infection.

Maintaining good control can be difficult. In hospital your targets may change for safety reasons. However, provided that your blood glucose is kept within reasonable limits, your recovery will be quicker. For this reason, if your blood glucose goes above 18 mmol/L you may need extra treatment, including insulin, even if you normally control your diabetes by tablet or diet alone.

Please ask a member of staff on the ward if you have any queries or concerns about your blood glucose levels.

Occasionally when in hospital blood glucose levels need to be managed using insulin given in a drip (intravenously or IV). This will be discontinued once you are eating and drinking well and able to take your usual diabetes medication.

If you use an insulin pump (continuous subcutaneous insulin infusion (CSII)) to manage your diabetes, and either you or staff have any questions or concerns about insulin pump treatment, please request that ward staff arrange a review by the hospital's Diabetes Team. There is more detailed information on both IV insulin infusion and CSII on pages 14 to 16.

Avoiding hypoglycaemia ('hypo') while in hospital

Unless you are treated with insulin or gliclazide (or a similar tablet from the same class), or given either of these treatments for the first time in hospital, this section should not be relevant to you.

Hypoglycaemia, also known as a 'hypo' is when your blood sugar (glucose) level falls too low. Any blood glucose below 4.0 mmol/L should be treated.

Sadly it is not unusual for people with diabetes treated with insulin or gliclazide to become hypoglycaemic in hospital. There are many reasons for this including changes in your daily routine (in particular eating times in hospital), and interactions between insulin and necessary medications. We will do our best to prevent you becoming hypoglycaemic during your hospital stay and advice in this leaflet will help you too.

A hypo can happen very quickly and, if severe, it can give rise to confusion or impaired consciousness. However, in most people treatment of early symptoms will prevent severe hypoglycaemia.

Lookout for the following early symptoms. They may differ from person to person but include:

- blurred vision.
- excessive sweating.
- anxiety or agitation.
- tingling in the mouth or fingers.
- a fast or heavy heartbeat.
- odd behaviour (normally recognised by others).
- sudden difficulty with concentration.
- slurred speech.

If you have any of the above symptoms, notify a member of staff as soon as possible so that your blood sugar can be tested. If it is low, preventative treatment can be given.

Preventing night time hypos in hospital:

- **Bedtime snack** - to reduce the frequency of overnight hypoglycaemia, those treated with insulin or gliclazide will be prescribed and offered a snack before bed. Although a bedtime snack may not be your usual practice we would recommend this during your stay.
- **Medication adjustment** - for some people we may reduce their basal or evening insulin dose and, again, for some people on gliclazide the evening dose may be reduced.

  If you are adjusting your own insulin doses in hospital please bear in mind the different circumstances of being in hospital and adjust your insulin accordingly. The first priority is to avoid hypoglycaemia, but it is also important to avoid excessively high blood glucose levels.

Treating a hypo in hospital:

If you experience a hypo in hospital you will be treated with a sugary drink. However, many patients prefer to bring in their own hypo treatments. These could be:

- 150 to 200ml of concentrated orange juice.
- 4 to 5 GlucoTabs® or 5 to 6 Dextrose® tablets.
- 4 jelly babies.

If you have a hypo treat it with some rapid-acting carbohydrate as above. Let the ward sister know and test your blood glucose 10 to 15 minutes later. If it is still below 4.0 mmol/L you should repeat the rapid-acting carbohydrate.

Don’t forget, you should also follow this treatment with a more long-acting source of carbohydrate such as a banana, cereal bar or sandwich to prevent hypoglycaemia recurring several hours later.

If you are experiencing regular hypos whilst in hospital please ask your staff nurse to refer you to the hospital’s Diabetes Team.

Eating for safe glucose control in hospital:

3 key messages for patients, relatives, medical, nursing and catering staff:

- **When you are able to eat and drink normally, food choice and meal size must not be restricted.**

  Hypoglycaemia in hospital is very common and must be prevented. For this reason food choices should **not** be restricted.

- **People with diabetes should eat what they eat at home.**

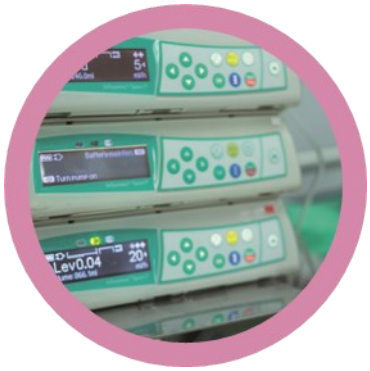
  The size of the meal should be as close to that eaten at home, even if this is not what healthcare professionals would consider the ideal diet for diabetics. This is how the patient normally manages, so restricting their food without adjusting their treatment will result in hypoglycaemia. The Diabetes Team are there to help with adjusting medications during admission if needed.

- **Bedtime snacks are to be encouraged.**

  Because of the longer gaps between meals than occurs at home, snacks are available between meals for those on insulin or treated with gliclazide. This is especially so at bedtime as the evening meal is early in hospital, so there can be up to 15 hours before breakfast.




Intravenous (IV) insulin infusion



An intravenous (IV) insulin infusion is a way of giving insulin directly into the bloodstream in order to establish and maintain good control of your blood glucose. This is usually done using a pump which drives a syringe of insulin connected to a small cannula (slim plastic tube) inserted into a vein in the arm.

Insulin acts very rapidly when given directly into the bloodstream. By varying the rate of the insulin infusion very good diabetes control can be achieved when linked to hourly or 2 hourly finger-stick blood glucose measurements. We realise this will result in a disturbed night but it is important to have these regular blood glucose checks for the infusion to be used safely.

The insulin infusion will be accompanied by a drip containing a glucose solution to keep you fed. If you are on a background (also called basal) insulin, this will usually be continued while you are on the insulin infusion but other insulins will be stopped.

Will I need an insulin IV infusion?

If you will not be eating or drinking for a prolonged period, for example if you are having a major operation or if you become too ill to eat or drink sufficiently, then an intravenous insulin infusion is the best way to maintain good diabetes control.

How long will I be on the insulin IV infusion for?

As soon as you are able to eat and drink normally the infusion should be discontinued – if not, please ask ward staff for the reason it is being continued. The sooner you are back on your usual treatment the better.

What should I do if the insulin IV infusion or glucose drip stops?

If the insulin infusion is stopped the blood glucose can rise very rapidly; this is one reason why frequent blood glucose tests are needed. The infusion may stop because it becomes accidently disconnected, is switched off and not switched back on again (for example when you are having a scan), or if the cannula becomes blocked or displaced. If you notice any of these occurring, let your nurse know straight away so that it can be immediately restarted.

If the glucose drip stops then your blood glucose could drop too low causing hypoglycaemia. Therefore if you notice a problem with the glucose drip, again, let your nurse know straight away so that it can be immediately restarted.

Is there anything I should know about restarting my usual treatment?

If you are on tablets these will be restarted.

If you are already on insulin it is important that the infusion is continued for the first 30 to 60 minutes after your first insulin injection. This is because after the infusion is stopped, there will rapidly be no insulin in your system; 30 to 60 minutes gives enough time for the subcutaneously injected insulin to get into the bloodstream from the injection site.

If your background insulin has not been continued while you are on the insulin infusion, this must be given before the infusion is stopped.

Switching back to the subcutaneous insulin should ideally be at a meal time, after short-acting insulin or mixed insulin has been given. This switch should not occur at bedtime when there is less observation by staff.

Self-management of your insulin pump (continuous subcutaneous insulin infusion (CSII)) during your hospital stay

Insulin pumps may be used by people with type 1 diabetes to optimise blood glucose control. Pump users undergo detailed education and training in the use of the pump by the hospital Diabetes Team and are very familiar with self-management even during illness.

Insulin pumps use rapid or short-acting insulin which is infused continuously subcutaneously at a pre-programmed rate set by the patient, often with the advice of the Diabetes Team. Bolus doses are then taken for each meal.

If the pump is discontinued for any reason without an alternative provision of insulin, diabetic ketoacidosis is likely to develop within a short space of time because there is no reservoir of long-acting insulin. For this reason an insulin pump should never be discontinued without immediate substitution of rapid-acting insulin via an alternative administration route.

General principles for managing your pump for procedures needing a short period of fasting:

- Continuous infusion of subcutaneous insulin via a pump is designed to maintain a stable blood glucose level during the fasting state.
- You should be allowed to self-manage if you are well enough to do so. If the procedure requires you to be nil-by-mouth for a limited period (no more than 1 missed meal) you should still be able to manage your diabetes with a pump.
- However, if you are unable to self-manage because of your illness the pump will be discontinued and a variable rate intravenous insulin infusion (see page 14/15) will be started immediately.
- The Inpatient Diabetes Specialist Support Team should be notified of all patients in hospital receiving subcutaneous insulin pump treatment, with the exception of day surgery patients. If you are on a pump, please ask to speak to a member of the Diabetes Team.
- If your insulin pump is discontinued it should be stored safely until you are ready to go back on the pump. Please inform the nursing team where it is stored as this should be documented.
- When you restart your insulin pump, the intravenous insulin infusion should not be discontinued until a mealtime bolus dose of insulin has been given via the pump.

Preventing sores and pressure ulcers on your feet

Some people with diabetes, when in hospital, are at high risk of developing sores and pressure ulcers on their feet and particularly on their heels. This can be prevented by identifying those at risk and providing preventative foot care.

You should expect to have your feet examined when you are admitted, so we can check whether you are at increased risk of developing foot problems in hospital. Your nurse or healthcare assistant will undertake a simple examination. If you have not had your feet examined, please remind the nursing staff.

You will also have your heels inspected daily to check for any early skin changes which, if addressed, can prevent the development of a heel ulcer. If you are found to be at increased risk, your feet will be raised (elevated) off the mattress to reduce pressure on your heels.

If you are unsure what the nurse has found during your foot inspection, please ask.

Discharge checklist (for your information)

The table below contains an example of what should be reviewed before you leave hospital. Have a look to see if anything has been overlooked.

Please ask the nurse who is in charge of your discharge to complete it with you, to ensure you are discharged with all the equipment and information you will need for a safe discharge.

Patients on insulin and/or gliclazide	
Avoiding hypos (hypoglycaemia) - patient / family member / carer knows how to recognise and treat a hypo.	☐
Patients on insulin	
Insulin administration - patient competent at injecting; if not, arrangements are in place for community (district) nurse / carer to administer.	☐
Insulin dose and timing - patient / family member / carer has **written** instructions on insulin doses and correct timings.	☐
Treatment supplies - confirm supplies listed below have been provided:	☐

All patients on insulin therapy (tick as appropriate):		Patients new to insulin therapy must also be provided with:	
Vials	☐	Blood glucose meter	☐
Syringe	☐	Blood glucose strips	☐
Pre-loaded pen	☐	'Sick day rules' leaflet	☐
Needles	☐	Lancets	☐
Pen device	☐	Sharps box	☐
Cartridges	☐	Monitoring diary	☐

(Note: patients who are not usually treated with Novorapid insulin are sometimes prescribed PRN Novorapid for management of high blood glucose whilst in hospital. Unless this insulin is part of the patients usual regime, PRN Novorapid should not routinely be included in the discharge medications. If unsure check with patient, carer, family or doctor.)	
Nurse or DSN name:	
Date:	
Signature:	

Patients with active diabetic foot disease	
Patient has been informed if antibiotics needed at discharge, how long needed for, and that antibiotics have been prescribed.	☐
A referral to practice nurse / community team for dressings has been made.	☐
3 days supply of dressings have been given.	☐
Foot clinic follow-up appointment has been arranged. Diabetes Nurse Helpline Tel: 0116 258 4929 (Monday to Friday, 9am to 4pm) Email: DiabetesNurseHelpline@uhl-tr.nhs.uk	☐

All patients with diabetes - if follow-up plan made please document below:	
GP diabetes care provider: _	☐
Community diabetes nurse team: _	☐
Hospital diabetes clinic / diabetes care provider: _	☐
Hospital MDT foot clinic: _	☐
Other: _	☐

Assessed by: Name (PRINT) and signature:	
Designation:	
Date and Time:	Date: _ _ _ _ /_ _ _ _ /_ _ _ _ Time: _ _ _ :_ _ _

Advice for managing blood glucose levels after your discharge

Sometimes blood glucose levels can be unstable after discharge from hospital. The advice below will help you to manage your diabetes after discharge.

Sick day rules for type 2 diabetes

What should I do if I am unwell after surgery?

- **Never** stop taking your insulin – illness usually increases your body's need for insulin.
- If you are vomiting, have diarrhoea or become dehydrated, **stop** taking metformin and SGLT2 inhibitors (dapagliflozin, canagliflozin, empagliflozin and ertugliflozin).
- **Test** your blood sugars at least 4 times a day, if you have the equipment to do so.
- **If you are unable to test your blood sugar you should inform your GP that you are unwell and ask that your blood sugar be checked.**
- **Drink** at least 100ml of water/ sugar-free fluid every hour – at least 2.5 litres a day.
- **Eat** as normally as you can. If you cannot eat or if you have a smaller appetite than normal, replace solid food during illness with 1 of the following:
  - 2 cups of milk
  - 200ml carton of fruit juice
  - 150 to 200ml of a non-diet fizzy drink
  - 1 scoop of ice-cream.
- Even if you are eating less than usual, being unwell usually makes your blood glucose rise. Symptoms of high blood glucose include:
  - thirst
  - passing more urine than usual
  - tiredness.

  Not all illnesses have this effect and in some patients rather than rising, the blood glucose level may fall, when they are not eating. In this circumstance patients on gliclazide/ glimepiride tablets or insulin may need to reduce their dose of diabetes medication.

When should I call my diabetes care provider or GP?

- If you have **continuous** diarrhoea and vomiting and/ or a high fever.
- If you are **unable** to keep food down for 4 hours or more.
- If you become **drowsy** and **breathless**.
- **High** blood glucose levels with symptoms of illness (if above 15 mmol/L you may need more insulin).

Outside normal working hours consult your local out-of-hours service or go to your local hospital's Emergency Department.

Sick day rules for type 1 diabetes

What should I do if I am unwell after surgery?

- **Never** stop taking your insulin – illness usually increases your body's need for insulin.
- Rarely people with type 1 diabetes take diabetes tablets as well as insulin. If you do, then **stop** your metformin or SGLT2 inhibitors (dapagliflozin, canagliflozin, empagliflozin and ertugliflozin).
- **Test** your blood glucose level every 2 hours, day and night.
- **Test** your urine for ketones every time you go to the toilet, or your blood ketones every 2 hours, if you have the equipment to do this.
- **Drink** at least 100ml of water/ sugar-free fluid every hour – you must drink at least 2.5 litres per day during illness (about 5 pints).
- **Rest** and avoid strenuous exercise as this may increase your blood glucose level during illness.
- **Eat** as normally as you can. If you cannot eat or if you have a smaller appetite than normal, replace solid food during illness with 1 of the following:
  - 400ml of milk
  - 200ml carton of fruit juice
  - 150 to 200ml of a non-diet fizzy drink
  - 1 scoop of ice-cream

When should I call my diabetes care provider or GP?

- If you have **continuous** diarrhoea and vomiting and/ or a high fever.
- If you are **unable** to keep food down for 4 hours or more.
- **High** blood glucose levels with symptoms of illness (if above 15 mmol/L you may need more insulin).
- **Ketones** at ++2 or +++3 in your urine, or 1.5 mmol/L blood ketones or more (you may need more insulin). In this case, contact the person who normally looks after your diabetes immediately.

Outside normal working hours consult your local out-of-hours service or go to your local hospital's Emergency Department.

Discharge letter: Advice for patients with diabetes who are discharged after a surgical procedure

- Take your insulin or other medication as advised in the information leaflet.
- Monitor your blood glucose if you have the equipment to do so – 4 times per day if possible. You should test more frequently if you are unwell, feel sick (nausea) or vomiting.
- Your blood glucose may be higher than usual. This is not a concern if you are feeling well.
- If you are feeling unwell (particularly if vomiting and unable to take food or medication) contact your usual diabetes team/ GP surgery.

  Tel: ....

  If outside normal working hours contact the out-of-hours service.

  Tel: ....

If you have any questions, write them down here to remind you what to ask when you speak to your nurse/ doctor/ consultant:

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Adapted with kind permission from original document produced by Prof. Gerry Rayman, Ipswich Hospital Diabetes Team.