

Type 1 diabetic patients
Category 1 meters - For adult and paediatric patients with type 1 diabetes who need standard monitoring of blood glucose and ketone levels.

Category 1 information Ketone monitoring (blood) is required as part of 'sick day rules' for adults and children with T1DM, in some adults urine testing of ketones may be preferred (not suitable for children).

Category 1 meter name	Compatible blood glucose test strips	Compatible ketone test strips	Lancets	Restrictions
PREFERRED FIRST LINE: GlucoMen Areo 2K	GlucoMen Areo Sensor blood glucose strips (£9.95/50)	GlucoMen Areo Ketone Sensor ketone strips (£9.95/10)	GlucoJect Lancets Plus Prescribe box of 200 as most cost effective option. (£5.50/200)	Initiation restricted to secondary care or community DSN. First line for newly diagnosed and regular type 1 patients, both adult and paediatric.
PREFERRED FIRST LINE: Caresens Dual	Caresens PRO blood glucose strips (£9.95/50)	Ketosens blood ketone strips (£9.95/10)	Caresens Lancets (£2.95/100)	
FreeStyle Optium Neo	FreeStyle Optium blood glucose strips (£16.30/50)	FreeStyle Optium blood ketone strips (£21.94/10)	FreeStyle Lancets (£7.64/200)	RESTRICTED: Initiation restricted to secondary care or community DSN. For use ONLY when patients have a history of DKA, or very labile blood sugars. TEST STRIPS FOR THIS METER ARE SIGNIFICANTLY MORE EXPENSIVE THAN FOR THE GLUCOMEN AREO 2K.

Type 2 diabetic patients
Category 2 meters - for patients with type 2 diabetes who need standard monitoring of blood glucose levels.

Category 2 information	Patients who are diet controlled +/- metformin, glitazone, DPP-4, SGLT2 inhibitors (or any combination once stable).	Home blood glucose monitoring NOT recommended as part of routine care. Meters should not be offered unless a clear action plan based on test results is available.
	Patients on sulphonylurea alone or in combination with other oral hypoglycaemics/GLP-1 analogues if at significant risk/evidence of hypoglycaemia during illness/medicine changes/driving.	Patients choosing to purchase a meter and self-test where there is no clinical indication for monitoring should not have test strips supplied on FP10. They should purchase test strips and lancets.
	Patients on insulin alone or in combination with oral therapies	Choose appropriate meter from category 2 meter list below.
	Consider short-term self-monitoring of blood glucose levels in adults with T2DM and review treatment as necessary when starting treatment with oral or intravenous corticosteroids or to confirm suspected hypoglycaemia.	Choose appropriate meter from category 2 meter list below.

Category 2 meter name	Compatible blood glucose test strips	Compatible ketone test strips	Lancets	Restrictions
PREFERRED FIRST LINE: Tee2+	Tee2 blood glucose test strips (£7.75/50)	NA	CareSens Lancets (£2.95/100)	NA
Wavesense Jazz or Wavesense Jazz Wireless meter	Wavesense Jazz glucose test strips (£8.74/50) Wavesense Jazz Duo (2x25 packs for less frequent users £8.74)	NA	AgaMatrix Ultra-Thin Lancets (£5.43/200)	NA
Accu-Chek Performa Nano	Performa blood glucose test strips (£7.50/50)	NA	Fastclix Lancets (£5.90/204)	NA

Special patient groups and restricted meters - Category 3 meters

Category 3 information If a patient requires a specialist meter included in the category 3 meter list below, and requires ketone monitoring, please provide the Glucomen Areo 2K meter and ketone strips as well.

Category 3 meters	Meter name	Compatible blood glucose test strips	Compatible ketone test strips	Lancets	Restrictions
Pregnancy and Gestational Diabetic Patients (T1 and T2 patients)	Contour Next meter	Contour Next strips (£15.16/50)	NA	Microlet lancets (£7.44/200)	Use ONLY during the gestational period. Meter has 0-70% haematocrit range. Short term use following secondary care advice.
	CareSens N meter	CareSens N strips (£12.75/50)	NA	CareSens lancets (£2.95/100)	Use ONLY during the gestational period, following secondary care advice.
Carbohydrate Counting Patients (adult and paediatric patients)	Accu-Chek Aviva Expert	Accu -Chek Aviva strips (£16.21/50)	NA	FastClix lancets (£5.90/204)	RESTRICTED: use for patients who require carbohydrate counting function. NB. If ketone monitoring is also required then Glucomen Areo 2K meter and ketone strips should be provided.
	FreeStyle InsulinX	Freestyle Lite strips (£16.41/50)	NA	FreeStyle Lancets (£7.64/200)	RESTRICTED: use for patients who require carbohydrate counting function. NB. If ketone monitoring is also required then Glucomen Areo 2K meter and ketone strips should be provided.
Failure to use Preferred Meter (adult and paediatric patients)	Accu-Chek Mobile	Accu-Chek mobile test cassette (£9.99/50)	NA	FastClix (£5.90/204)	RESTRICTED: use for T1DM or T2DM patients after failure to use the preferred meter due to needle phobia, paediatrics, visual impairments, physical impairments requiring single handed use, dexterity issues with test strip insertion or sharps disposal issues e.g. young children
Visually impaired patients (adult and paediatric patients)	CareSens N Voice	CareSens N strips (£12.75/50)	NA	CareSens lancets (£2.95/100)	RESTRICTED: Use for T1DM and T2DM patients after failure to use the preferred meter due to visual impairment. Consider Accu-Chek Mobile first for these patients.
Ketone Testing Meter Only (adults and paediatric patients)	Glucomen Areo 2K	NA in these patients	GlucoJect Lancets Plus (£5.50/200)	GlucoJect Lancets Plus (£5.50/200)	For T1DM patients who require ketone testing function only. For example carbohydrate counting T1DM patients who use a glucose meter that doesn't have ketone testing facility (AccuChek Aviva Expert).
	Caresen Dual	NA in these patients	Caresens Lancets (£2.95/100)	Caresens Lancets (£2.95/100)	

Patients (adult and paediatric) using insulin pumps - Category 4 meters

Category 4 information | If a patient requires a specialist meter/handset included in the category 4 meter list below, and requires ketone monitoring, please provide the Glucomen Areo 2K meter and ketone strips as well.

INSULIN PUMP	Category 4 meter/handset	Compatible blood glucose test strips	Compatible ketone test strips	Lancets	Restrictions
Accu-Chek Combo (Roche)	Accu-Chek Combo handset	Accu-Chek Aviva blood glucose test strips (£16.21/50)	NA	FastClix (£5.90/204)	Initiation restricted to secondary care.
Accu-Chek Insight (Roche)	Insight handset	Accu-Chek Aviva blood glucose test strips (£16.21/50)	NA	FastClix (£5.90/204)	
Omnipod	Omnipod PDM	Freestyle Lite (£16.41/50)	NA	FreeStyle Lancets (£7.56/200)	
Medtronic 640 G	Ascensia Contour Next 2.4 USB	Contour Next blood glucose test strips (£15.16/50)	NA	Microlet lancets (£7.44/200)	
Medtronic Paradigm Veo	Ascensia Contour Next USB link	Contour Next blood glucose test strips (£15.04/50)	NA	Microlet lancets (£7.44/200)	
Animas pumps	No requirement for a particular meter, normally GlucoMen Areo 2K to be used.	GlucoMen Areo Sensor blood glucose strips (£15.16/50)	GlucoMen Areo Ketone Sensor ketone strips (£9.95/10)	GlucoJect Lancets Plus Prescribe box of 200 as most cost effective option. (£5.50/200)	Meter to be selected after discussion between patient and secondary care. Meter should be one included in the local guidelines.

Background to preferred meter selection

The blood glucose market is growing, by limiting the number of machines in the health economy this allows all healthcare professionals to become familiar with the machines and ancillaries needed. The CCG does not support the prescribing of non-formulary strips or lancets for patients where there is no justifiable reason.

Lancet choice

Lancets are prescribed to use with a finger pricking device (usually supplied with the blood glucose meter) to draw a sample of blood to test. Finger pricking devices cannot be prescribed on FP10 and are supplied with the blood glucose meters. Patients should be advised that lancets are single use and require safe disposal.

The formulary approved lancets are:

- GlucoJect Lancets Plus (£5.50/200)
- AgaMatrix Ultra Thin lancets (£5.43/200)
- Any other lancet brand with an acquisition cost less than £6/200.

These are type A lancets and are compatible with other devices.

If the patient is using a meter included in this guidance then it is appropriate to prescribe the lancets that are supplied with the blood glucose meter, however where the acquisition cost is greater than £6/200 it may be an option to identify those patients who would be happy to use the preferred formulary choice lancets, included above.

Safety lancet choice

These are lancets that do not require a finger pricking device and are designed to retract after use. They are disposable after use and are more costly than the lancets that go in finger pricking devices.

They should only be prescribed for patients where a healthcare professional is helping a patient measure their blood glucose. They should not be prescribed for patients who test their own blood glucose.

The formulary approved safety lancets are:

- GlucoRx® safety lancets (£5.50/100)
- Mylife® safety lancets (£12/200)

Needle choice for pre-filled pens and reusable pen injectors

BD Viva (BD), PROFine (Prosum Medical) and TriCare (Owen and Mumford) are the locally preferred needle brands, as well as any brand with an acquisition cost of less than £4.00/100.

These needles fit all leading insulin pen delivery devices. All needles are for single use.

The recommended needle sizes locally are 4, 5, and 6mm. For all patients, including children and adolescents there is no clinical reason for using needles longer than 6mm. Using needles of 6mm or less helps to prevent IM injection, which can cause unpredictable blood glucose levels and severe hypoglycaemia. Patients currently on 8mm needles should be encouraged to switch to 6mm if willing, and new patients should not be initiated on 8mm needles.

BD AutoShield® Duo (£25.00/100) is the safety needle of choice and can be prescribed on FP10. They should not be routinely used but must be used for patients who have their insulin administered by healthcare professionals.

Safe disposal

Patients must be educated on safe disposal of needles via a sharps disposal unit. Sharps disposal units and needle clipping devices can be prescribed on FP10.

In Herefordshire all sizes of sharps bins can be prescribed, according to patient need. Patients should be advised to return bins to their GP practice.

In Worcestershire Sharpsguard® and Sharpsafe® yellow 1 litre disposal units are suitable for insulin needles and lancets. Patients should be advised to return full 1L sharps disposal units to local community pharmacies. Larger disposal units can be prescribed if required, but the patient must have an arrangement in place for returning the unit once it is full. This would need to be either the GP practice accepting the unit for disposal or an arrangement between the patient and their community pharmacist.