

**Hertfordshire and West Essex (HWE) ICB Area Prescribing Committee (APC) recommendations for blood glucose and ketone meters, testing strips and lancets in adults**

Guidance based on national recommendations has been developed for use across HWE ICB, for adults with type 1, type 2, and gestational diabetes self-monitoring device selection. This guideline is not aimed at paediatric patients with diabetes.

Table 1 showing the different categories and patient cohorts with the recommendations for the type of meter.

Category	Patient cohort	Meter
1a	Type 1 diabetes or ketosis prone type 2 diabetes	Meters and strips which are suitable for the majority of people that also require a ketone testing meter.
1b	Type 1 diabetes or ketosis prone type 2 diabetes. (With additional functionality*)	As above with additional functionality.
2	Type 2 diabetes	Meters and strips which are suitable for the majority of people with type 2 diabetes
3	Type 2 diabetes (with additional functionality*)	Meters and strips which are suitable for people with Type 2 diabetes that require additional functionality. This includes gestational people with diabetes.
4	Type 1 and type 2 diabetes.	Lancets which are suitable for the majority of people, and which are suitable for people that require additional functionality.

\*Additional functionality includes features such as; on-board carbohydrate counting calculator, large display for visual impairment, and extra memory for group 2 drivers.

This guidance will include **HWE APC recommended preferred options** for the various patient cohorts. To see the full recommended list and further information on meters refer to [NHSE commissioning recommendations](#). Prices quoted in this document are based on Drug Tariff prices as of 1<sup>st</sup> September 2023.

Please refer to the '[Guideline for the prescribing of ketone test strips](#)' for information on the groups of patients that require ketone monitoring, prescribing ketone test strips, interpreting ketone test results and sick day rules.

**Category 1: Blood glucose and ketone monitoring for patients with type 1 diabetes or ketosis prone type 2 diabetes.**

The NHSE commissioning recommendations have included specifications for dual meters for patients with type 1 diabetes or ketosis prone type 2 diabetes, (i.e. for patients in category 1a and 1b). Of the five products suggested by NHSE, two of the meters are more suitable for meeting the additional functionality of patients. This includes the GlucoFix Tech GK, which is

proposed to be the first line glucose and ketone testing meter as it is the best value product in this category. The NHSE commissioning recommendations have included GlucoRx KEYA SMART which tests a patient's blood glucose and ketones at each test. There is no place for testing both ketones and glucose at each occasion and therefore in HWE GlucoRx KEYA SMART is non-formulary.

**Review and switching of meters for patients within this group is to be undertaken at the next review by community diabetes specialist service, specialists within hospital or primary care clinicians with special interest and relevant training on diabetes.**

Table 2. Specifications for dual meters for use in type 1 diabetes and type 2 ketosis prone diabetes (with information for meters with additional functionality)

Patient cohort and category	Meter	Glucose test strips and cost	Ketone test strip and cost	Carb counting	Cognitive or learning impairment	Dexterity issues	Group2 drivers	No fixed abode	Unable to read English	Visual issues
<b>First Line</b>										
1b. Type 1 diabetes or ketosis prone type 2 diabetes with additional functionality.	A.Menarini- GlucoFix Tech GK	Glucifix tech strips £5.95 for 1x50	Glucifix tech strips £9.95 for 10	✓	✓	✓	✓	✓	✓	✓
<b>Second Line</b>										
1b. Type 1 diabetes or ketosis prone type 2 diabetes with additional functionality.	Nipro diagnostics- 4SURE Smart duo	4SURE strips £8.99 for 1x50	4SURE β-ketone £9.92 for 10	✓	✓	✓	✓	✓	✓	✓
	GlucoRx- GlucoRx HCT	GlucoRx HCT strips £8.95 for 1 x50	GlucoRx HCT strips £9.95 for 1 x10							
	Spirit Health- CareSens Dual	CareSens PRO test strips £9.95 for 1x50	CareSens PRO strips £9.95 for 1x10							

### Insulin pump patients

Where patients are on an insulin pump, they can upon recommendation of the specialists use the following strips:

- Freestyle Lite test strips (£16.41 for 50) with the Omnipod pump
- Contour Next test strips (£15.82 for 50) with the Medtronic pump
- Accucheck guide test strips (£16.21 for 50) with the Medtronic pump

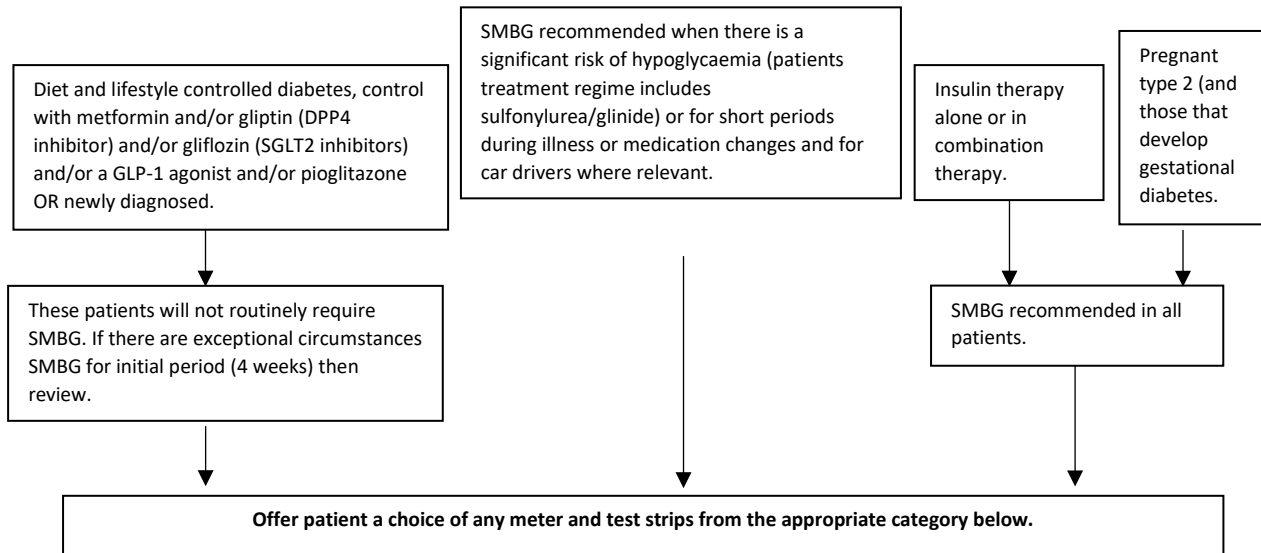
These test strips are only reserved for patients who require them to be used with the insulin pump.

### Patients on continuous glucose monitoring devices

When a patient is commenced on continuous glucose monitoring (CGM), the specialists should review the blood glucose meter and strip choice and change to the products listed in the guidance. Specialists should advise primary care clinicians of the change in quantity of blood glucose strips and primary care should amend the repeat prescriptions (reduction in number of strips).

**Category 2: Meters and strips which are suitable for the majority of people with Type 2 diabetes (no ketone monitoring and without additional functionality).**

The following algorithm should be used to support clinicians when considering the need for Self-Monitoring of Blood Glucose (SMBG) in Type 2 diabetes.



The following products are recommended as suitable for the majority of patients with type2 diabetes, that do not require to measure their ketone levels and do not require additional functionality. **Review and switching of meters for patients within this category is to be undertaken by primary care.**

Table 3. Meter and strips which are suitable for the majority of people with Type 2 diabetes (no ketone monitoring and without additional functionality)

Patient cohort and category	Meter	Glucose test strips and cost
2. Type 2 diabetes no ketone monitoring and without additional functionality.	Connect 2 pharma-On Call Extra Mobile	On Call extra test £5.20 for 1x50
	GlucoRx- GlucoRx Q	GlucoRx Q test strips £5.45 for 1x50
	Spirit health- CareSens S Fit	CareSens S Fit test strips £5.45 for 1x50
	Ascensia- Contour plus blue	Contour plus test strips £5.95 for 1x50
	Neon diagnostics- Finetest lite	Finetest lite test strips £5.95 for 1x50
	Trivida- TRUE Metrix Air	TRUE Metrix test strips £5.95 for 1x50
	Roche- Accu-Chek Instant meter	Accu-Chek Instant test strips £5.95 for 1x50 (additional option- meets local criteria <£6 for 1x50)
	AgaMatrix- agile (available December 2023)	Agamatrix agile test strips £5.99 for 1x50

Clinicians may use other meters for this category of patients with blood glucose test strips costing <£6 for 50.

**Category 3: Meters and strips which are suitable for the majority of people with Type 2 diabetes (no ketone monitoring required and with additional functionality).**

**Review and switching of meters for patients within this group is to be undertaken at the next review by community diabetes specialist service, specialists within hospital or primary care clinicians with special interest and relevant training on diabetes.**

Table 4. Showing meter choice for patients with type 2 diabetes and glucose monitoring only and with additional functionality.

Patient cohort and category	Meter	Glucose test strips and cost	Carb counting	Cognitive or learning impairment	Dexterity issues	Group2 drivers	No fixed abode	Unable to read English	Visual issues
<b>First Line</b>									
3. Type 2 diabetes with additional functionality.	Agamatrix-agile (available December 2023)	Agamatrix agile test strips £5.99 for 1x50	✓	✓	✓	✓	✓	✓	✓
	A.Menarini-GlucoFix Tech GK	Glucofix tech glucose strips £5.95 for 1x50	✓	✓	✓	✓	✓	✓	✓
<b>Second Line</b>									
3. Type 2 diabetes with additional functionality.	Agamatrix-WaveSense JAZZ	Wavesense Jazz test strips £8.74 for 1x50*	✓	✓	✓	✓		✓	✓
	Agamatrix-WaveSense JAZZ Wireless	Wavesense Jazz test strips £8.74 for 1x50*	✓	✓	✓	✓	✓	✓	✓

**Category 3: Meters and strips which are suitable for gestational people with Type 2 diabetes.**

**Review and switching of meters for patients within this group is to be undertaken by the antenatal clinic.**

Table 5. Meter choice for gestational patients with type 2 diabetes and additional functionality

Patient cohort and category	Meter	Glucose test strips and cost	Carb counting	Cognitive or learning impairment	Dexterity issues	Group2 drivers	No fixed abode	Unable to read English	Visual issues	Gestational
<b>Recommended option</b>										
3 Type 2 gestational diabetes with additional functionality.	Agamatrix-WaveSense JAZZ Wireless	Wavesense Jazz test strips £8.74 for 1x50*	✓	✓	✓	✓	✓	✓	✓	✓ (with GDm-Health™ app)

**Sharps guidance**

Ensure patients are educated on the safe disposing of needles via a sharps bin. Sharp bins and needle clipping devices can be prescribed on FP10 prescriptions.

Arrangements for disposing of full sharps bins vary from area to area. The information can be obtained from the council's website or by phoning them using the local council telephone number found in the table below. Some councils may exempt patients with diabetes, but some can charge for this service.

Council	Telephone number	Council	Telephone number
Broxbourne	01992 785555	St Albans	01727 866100
Dacorum	01442 228000	Stevenage	01438 242242
East Herts	01279 655261	Three Rivers	01923 776611
Epping Forest	01992 564000	Uttlesford	01799 510510
Harlow	01279 446655	Watford	01923 226400
Hertsmere	020 8207 2277	Welwyn Hatfield	01707 357000
North Hertfordshire	01462 474 000		

## Lancets

Patients needing to self monitor blood glucose (where appropriate) will also need to be prescribed lancets to use with a finger pricking device to enable them to draw blood samples to test. Ensure that quantities on prescription are appropriate and in line with frequency of testing (i.e. should match quantities and frequency of ordering of blood glucose test strips).

Finger pricking devices are not prescribable as they are not listed as appliances under Part IXA of the Drug Tariff but are supplied with the blood glucose monitoring meter. Compatible lancets according to the finger pricking device should be prescribed.

The recommendations includes a range of lancets for patients with type 1 and type 2 diabetes, including people who require additional functionality. HWE ICB have reviewed the recommended products to include all lancets for formulary inclusion which cost less than £3 per 100 lancets.

Table 6. HWE formulary recommendations for lancets for type 1 and type 2 diabetes.

Supplier	Lancet name	Size	Lancet (£)/pack size	Cost of lancet per 100 (£)
GlucoRx	GlucoRx	0.31mm/30G	£4.50/200	£2.25
AgaMatrix	WaveSense Ultra-Thin <sup>2</sup>	0.2mm/33G & 0.35mm/28G	£5.43/200	£2.71
AgaMatrix	Comfort Twist	30G	£2.69/100	£2.69
A.Menarini diagnostics	Glucoject Plus	0.22mm/33G	£5.50/200 <sup>1</sup>	£2.75
Connect 2 Pharma	On Call	0.3mm/30G & 0.46mm/26G	£2.75/100	£2.75
Roche	Fastclix lancets	0.3mm/30G	£5.90/204	£2.89
Nipro Diagnostics	4Sure	0.32mm/30G & 0.195mm/33G	£2.90/100	£2.90
Trividia	TRUEplus	0.36mm/28G, 0.32mm/30G, 0.195mm/33G	£2.90/100	£2.90
Spirit Health	CareSens	0.36mm/28G & 0.31mm/30G	£2.95/100	£2.95
Ascensia	Microlet	0.5mm/28G	£2.99/100	£2.99
Neon Diagnostics	Greenlan	0.35mm/28G	£3.00/100	£3.00

1-Prescribe Glucojet plus in a pack of 200. As the pack of 100 falls outside of the recommended price range within HWE ICB.

2-These lancets can be capped by patients for safety until they have access to a sharps bin.

## Safety Lancets

Safety lancets are designed so that the sharp retracts after use. These are primarily for the benefit of healthcare workers to avoid needle stick injury, not to be used by patients self-monitoring blood glucose, therefore they should not routinely be prescribed by GPs on FP10s.

- Safety lancets should NOT be prescribed on FP10 for use by healthcare professionals and employees; it is the healthcare employer's responsibility to provide them.
- Safety lancets may be prescribed for use by a patient's carer or family member who is not an employee of a health or social care organisation and support the patient to undertake blood glucose testing.

Table 7: HWE formulary recommendations (in line with NHSE) for safety lancets for type 1 and type 2 diabetes.

Supplier	Lancet name	Size	Lancet (£)	Pack size
<b>First Line</b>				
Neon diagnostics	Neon Verifine safety	1.8mm/23G & 1.8mm/28G & 1.8mm/30G & 2.4mm/21G	£2.99	100
<b>Second Line</b>				
Glucorx	Glucorx Safety	1.6mm/30G & 1.8mm/28G & 1.8mm/26G & 2.2mm/23G	£5.50	100

### **Standards**

As a minimum, all recommended devices are compliant with the ISO Standard ISO 15197:2015, measure in mmol/l and provide plasma-calibrated meter readings only. No calibration or coding of meters is required, and they have a shelf-life ≥3years.

### **Existing people with diabetes**

Where people with diabetes are already using blood glucose or ketone meters that are not on the recommended list of products. These people should be offered an alternative meter at the earliest opportunity following a discussion with their healthcare professional.

### **Supply of meters**

Any patient newly diagnosed with diabetes should be assessed by a healthcare professional and supplied a suitable meter if self-monitoring of blood glucose is required. Training on the correct use, storage and interpretation of readings should be provided.

Note: All suppliers will provide, free of charge, the recommended meters, lancing devices, and ongoing free control solutions to all healthcare settings across England in primary care, secondary care and to service users. See table below for full list of manufacturers and contact details.

### **Training and technical Support**

All recommended suppliers will provide free technical support by a freephone telephone number, support material and meter training for both service users and healthcare professionals.

### **Supplier Contact details**

Supplier	Contact details
A. Menarini Diagnostics	Sam Maylott National ICS & HB Manager email: <a href="mailto:smaylott@menarinidiag.com">smaylott@menarinidiag.com</a> Mobile: 07775585618 Customer service: 0800 243667 <a href="https://www.glucomen.co.uk/training-presentations/">https://www.glucomen.co.uk/training-presentations/</a>
AgaMatrix	Samantha Chamberlain Mobile - 07825178974 <a href="mailto:schamberlain@agamatrix.com">schamberlain@agamatrix.com</a> Freephone: 0800 093 1812
Ascensia	Kirsty Oliver - UK Head of Sales Mobile: 07950 128752 E-mail: <a href="mailto:kirsty.oliver@ascensia.com">kirsty.oliver@ascensia.com</a>
Connect 2 Pharma	Nick Robinson

	Switchboard: 020 3307 4646 Mobile: 07968446969 Email: <a href="mailto:nick.robinson@connect2pharma.co.uk">nick.robinson@connect2pharma.co.uk</a>
GlucoRx	Chris Chapman Chief Operating Officer E-mail: <a href="mailto:chris@glucorx.co.uk">chris@glucorx.co.uk</a> Tel: 01483 755133
Neon Diagnostics	Mr Alan Wheeler Email: <a href="mailto:alan@neondiagnosics.co.uk">alan@neondiagnosics.co.uk</a> Mobile: 07860 265642 Office: 0800 009 3378
Nipro Diagnostics	Diagnostics-uk@nipro-group.com Freephone 0800 0858808 <a href="https://www.nipro-diagnostics.co.uk/demonstration-videos">https://www.nipro-diagnostics.co.uk/demonstration-videos</a>
Roche	Josephine smith Key Account Manager Mobile: 07885 473013 Email: <a href="mailto:Josephine.smith.js2@roche.com">Josephine.smith.js2@roche.com</a> <a href="https://diabetes.roche.com/hcp-gb/">https://diabetes.roche.com/hcp-gb/</a>
Spirit	Alison-Jayne Myers Customer Services Manager Tel: 0800 8815423 Email: <a href="mailto:cs@spirit-healthcare.co.uk">cs@spirit-healthcare.co.uk</a>
Trividia	Steve Llewelyn International Diabetes Care Manager Mobile: 07810 084661 Email: <a href="mailto:slllewelyn@trividiahealth.co.uk">slllewelyn@trividiahealth.co.uk</a>

## References

1. [NHSE on commissioning recommendations following the national assessment of blood glucose and ketone meters, testing strips and lancets, October 2023.](#)
2. [NICE NG17 Type 1 diabetes in adults: diagnosis and management](#)
3. [NICE NG28 Type 2 diabetes in adults: management](#)
4. Health and Safety (Sharp Instruments in Healthcare) Regulations 2013. Guidance for employers and employees. <http://www.hse.gov.uk/pubns/hsis7.pdf>

<b>Version</b>	1.0 Agreement of guidance at HWE APC (November 2023). 1.1 Update includes implementation plan as agreed with specialists and GP prescribing leads.
<b>Approved by</b>	Hertfordshire & West Essex Area Prescribing Committee Medicines Optimisation Delivery and Implementation Group
<b>Date approved / updated</b>	December 2023
<b>Developed by</b>	Pharmacy and Medicines Optimisation Team Hertfordshire and West Essex (HWE) ICB with relevant HWE ICS stakeholders.
<b>Review Date</b>	This HWE APC recommendation is based upon the evidence available at the time of publication. This recommendation will be reviewed upon request in the light of new evidence becoming available
<b>Superseded version</b>	1) Herts Valley and East North Hertfordshire clinical commissioning groups- Blood glucose monitoring systems joint statement between primary, community and secondary care 2) West Essex clinical commissioning groups West Essex Blood Glucose & Ketone Meter Guidance (Including lancets, insulin pen needles and disposal of sharps)