

NHS Greater Glasgow and Clyde Adult Blood Glucose Meter and Test Strip Formulary 2016-17

Primary Care and Acute Joint Formulary

Blood Glucose Meter formulary developed by the Diabetes MCN Blood Glucose Meter Formulary Review Group.

Review date: March 2017

Foreword

The NHS Greater Glasgow & Clyde Blood Glucose Meter and Test Strip Formulary has been developed to provide practitioners with a selection of preferred blood glucose meters and test strips for adult patient self monitoring of blood glucose.

Self monitoring of blood glucose (SMBG) is necessary for patients treated with insulin or other medication with a high risk of hypoglycaemia. The NHS GGC Guideline for Self Monitoring of Blood Glucose, updated November 2015 is available on staffnet (via www.ggcprescribing.org.uk).

Self monitoring of blood glucose involves the use of blood glucose meters and test strips. Blood glucose meters are not available on the NHS while the testing strips or discs are. Historically, meters were supplied either by the diabetes team, practice nurse or purchased online or through community pharmacies by the patient or family members.

The Diabetes MCN established a review group to recommend one or two preferred meters and strips to be included in the NHS GGC Formulary for use by the majority of patients. The review group included patient representatives, specialists from primary and secondary care, community pharmacy, biochemistry and the prescribing team.

Implementing the Formulary provides assurance that the products being used in practice have been assessed as suitable for use, effective both clinically and in terms of cost, and acceptable to patients and clinicians.

All blood glucose meters and test strips meet the international manufacturing quality standard for blood glucose meters and test strips ISO 15197 (2013).

Taking a formulary approach to blood glucose monitoring systems will provide benefits in terms of aiding continuity and increase familiarity with a select range of meters amongst healthcare professionals. Rationalising the range of products in use assures that only clinically proven and cost effective products are used. However it is recognised that variation in product choice may occur in specialist areas.

Practitioners should aim to prescribe a product included in the Formulary and only use a non-formulary product when there is a good clinical reason for doing so. Test strips out with the formulary may only be prescribed on GP10 if there is a clear clinical need for a non-formulary choice to be made.

Supplies of the preferred meters and starter packs can be obtained by contacting the local representatives as listed in the reference table. Patients should be dissuaded from purchasing a meter themselves without prior discussion with their healthcare professional as strips and lancets will not automatically be supplied.

The Blood Glucose Meter Formulary follows the same structure as the NHSGGC Formulary with choices being subdivided into two categories: Preferred List (P) – these represent the first line choices for use by the majority of patients with type 1 and type 2 diabetes requiring a blood glucose meter, Total Formulary List (TF) – contains a specialist meters for use with insulin pumps and in ketone testing plus a second line option for general use.

NHS GG&C Blood Glucose Meters & Strip Formulary

Specific meter & test strip information can be found in the attached Reference Table

Preferred List Blood Glucose Meters & Strips

Preferred blood glucose meters for adult patients with type 1 and type 2 diabetes not on an insulin pump

- **GlucRx Nexus system meters including Nexus, Mini & Voice.**

This includes three device options: the Voice provides an audible option for the visually impaired, the Mini a small discrete meter and the standard Nexus easy to read device.

- **Glucomen Areo**

The Areo is a single easy to read & use device. It uses blue tooth technology that allows easy electronic transfer of results.

Total Formulary Blood Glucose Meters & Strips

Second line blood glucose meter for adult patients with type 1 and type 2 diabetes who are not on an insulin pump:

- **One Touch Select Plus**

Currently the One Touch Select Plus offers a different visual display but requires a larger blood volume size and uses small strips that patients with dexterity problems may find hard to use.

For use with Insulin Pump

- Contour Next Link is used in conjunction with Medtronic insulin pump and will be supplied from the diabetes clinic.

Ketone monitoring in patients with type 1 diabetes

- Glucomen LX Plus & Freestyle Optium Neo are identified for ketone monitoring requirements







The Formulary recommendations apply across primary and secondary care.

Supplies of the preferred meters and starter packs can be obtained by contacting the local representatives as listed in the reference table.

Glucomen Areo : Martha MacKenzie 07833682116

GlucRx Nexus system meters including Nexus, Mini & Voice: Linda Brown 07741262097

Patients should be dissuaded from purchasing a meter themselves without prior discussion with their healthcare professional as strips and lancets will not automatically be supplied.

| | Preferred List Formulary Meter | Preferred List Formulary Meter | Preferred List Formulary Meter | Preferred List Formulary Meter | Second Line Formulary Meter | For use with Medtronic Insulin Pump |
|------------------------------------|--|--|--|---|---|--|
| Meter | GlucoRx Nexus System | GlucoRx Nexus Mini | GlucoRx Nexus Voice | Glucomen Areo | One Touch Select Plus | Contour Next Link |
| |  |  |  |  |  |  |
| Features | Large LCD screen with backlight. Strip ejection avoids blood contact. | Small & compact | Audio feedback for visually impaired patients. Strip ejection avoids blood contact. | Large glow in the dark display. Strip ejection avoids blood contact. | 3 colour range indicator | Supports second-chance testing if 1 st blood sample not enough |
| Memory capacity | 1000 | 1000 | 450 | 730 | 500 | 1000 |
| Strips | GlucoRx Nexus | GlucoRx Nexus | GlucoRx Nexus | Glucomen Areo | One Touch Select Plus | Contour Next |
| Drug Tariff price (pence) | 995 | 995 | 995 | 995 | 999 | 1504 |
| Test Strips | 2 vials of 25 strips or 1 vial of 50 strips | 2 vials of 25 strips or 1 vial of 50 strips | 2 vials of 25 strips or 1 vial of 50 strips | One vial of 50 strips | One vial of 50 strips | One vial of 50 strips |
| Strip expiry date | 6 months from opening vial | 6 months from opening vial | 6 months from opening vial | 9 months from opening | 18 months from opening vial or date on vial whichever is shorter | 24 month shelf life. Once open date as on vial |
| Sample size | 0.5 µL | 0.5 µL | 0.5 µL | 0.5 µL | 1 µL | 0.6 µL |
| Time for results | 5 sec | 5 sec | 5 sec | 5 sec | 5 sec | 5 sec |
| Range | 1.1-33.3 mmol/L | 1.1-33.3 mmol/L | 1.1-33.3 mmol/L | 1.1-33.3 mmol/L | 1.1-33.3 mmol/L | 1.1-33.3 mmol/L |
| Test Strip Coding Required | Not required | Not required | Not required | Not required | Not required | Not required |
| Alternative Site Testing Supported | Yes – fingertip, forearm, upper arm, hand, thigh and calf | Yes –fingertip, forearm, upper arm, hand, thigh and calf | Yes – fingertip, forearm, upper arm, hand, thigh and calf | Yes – fingertip, palm and forearm | No – fingertip testing only | Yes – fingertip and palm |
| Haematocrit | 30- 60% | 30- 60% | 30- 60% | 10-70% | 30-55% | 0-70% |
| Enzyme | GDH – FAD | GDH – FAD | GDH – FAD | Glucose Oxidase | Glucose Oxidase | GDH – FAD |
| Replacement batteries | Two 1.5V AAA size alkaline batteries Contact Customer Service – supplied by courier | One 3V CR2032 Lithium Battery Contact Customer Service – supplied by courier | Two 1.5V AAA size alkaline batteries Contact Customer Service – supplied by courier | Two 3V CR2032 Lithium Battery Contact Customer Service – supplied by courier | Two 3VCR2032 lithium batteries | Meter is rechargeable by plugging into a USB port. USB wall charger plugs available free of charge |
| Website | www.glucorx.co.uk include videos - FAQ & | www.glucorx.co.uk include videos - FAQ & | www.glucorx.co.uk includedVideos - FAQ & | www.glucomen.co.uk includesvideos | www.lifescan.co.uk Yes. - with videos. | www.diabetes.bayer.co.uk |

| | Preferred List Formulary Meter | Preferred List Formulary Meter | Preferred List Formulary Meter | Preferred List Formulary Meter | Second Line Formulary Meter | For use with Medtronic Insulin Pump |
|--|---|---|--|--|--|---|
| Meter | GlucoRx Nexus System | GlucoRx Nexus Mini | GlucoRx Nexus Voice | Glucomen Areo | One Touch Select Plus | Contour Next Link |
| | ordering | ordering | ordering | | | |
| Other languages | Downloads available plus operatives also trained in Hindi, Gujarati, Nepali, Punjabi & Romanian languages | Downloads available plus operatives also trained in Hindi, Gujarati, Nepali, Punjabi & Romanian languages | Operatives also trained in Hindi, Gujarati, Nepali, Punjabi & Romanian languages | Yes - available in most European languages. ALL Languages are available within 3- to 4 weeks at specific request from our customers. | Yes | No |
| Connectivity to Diasend | yes | yes | yes | yes | yes | yes |
| Company Downloads | Access to GlucoRX Software for download Free cable from customer service | Access to GlucoRX Software for download | Access to GlucoRX Software for download | Download with cable or blue tooth to PC, near Field Test, smartphone or blue tooth device. App | Download to LifeScan DMS USB - cable | Download to Bayer's Glucofacts software & Medtronic's CareLink software |
| Warranty | Lifetime | Lifetime | Lifetime | Lifetime | Lifetime | Lifetime |
| Meal Flagging | Yes | Yes | Yes | Yes | Yes | Yes |
| | Hi/Lo display | Hi/Lo display | Hi /Lo display | Hi/Lo display | Hi/Lo display | Hi/Lo display |
| Control Solution | Requires marking | Requires marking | Requires marking | Requires marking | Requires marking | Auto detection |
| Company details | Gluco Rx | Gluco Rx | Gluco Rx | Menarini | Lifescan | Bayer |
| Customer Service | 01483 755133 | 01483 755133 | 01483 755133 | 0800 243 667 | 0800 121 200 | 0345 600 6030 |
| Working hours | 9-5 Monday to Friday | 9-5 Monday to Friday | 9-5 Monday to Friday | Mon- Fri - 8.30-5.30 | 08:30-18:00 Mon to Fri 9am- 1pm Saturdays | 9-5 Monday to Friday |
| Local representative | Linda Brown 07741262097 | Linda Brown 07741262097 | Linda Brown 07741262097 | Martha MacKenzie 07833682116 | Sharon Scott: 07989562141 | Claire Hopkinson 07717888542 |
| Lancing device compatible with formulary lancets | Yes | Yes | Yes | Yes | No | Yes |

Additional Information

Training

Most meters have the same basic functions and the process to obtain a blood glucose reading is similar. However it is important that all patients are trained on how to use their meter and know:

- the purpose of testing
- how to interpret the blood glucose results and what action to take
- how often and when to test
- how to use the meter and the lancing device to achieve an accurate result
- when to seek advice from their healthcare professional

NICE recommend that patients with type 1 & type 2 diabetes who are self-monitoring their blood glucose levels, have a structured assessment at least annually to include self monitoring skills. In addition to this the assessment should take account on the impact on the person's quality of life & the continued benefit of monitoring.

Good Practice in Self Testing & Safe Storage of Blood Glucose Testing Strips - Information for Patients

Specific information is included in product leaflets for meters & strips.

SELF TESTING

- Ensure hands are washed with soap and thoroughly dried (with a clean towel) prior to testing. Contaminants on the skin or excess moisture can affect the accuracy of the reading.
- Ensure sufficient blood sample size is applied to the test strip. Do not add more blood after the first drop has been applied.
- Apply fresh blood drop to test strip immediately after blood drop obtained. Not testing promptly can lead to evaporation of blood drop which can affect accuracy of the reading.
- Do not test with a smeared or spread blood drop as this can introduce contaminants. Also, do not wipe or smear the blood drop onto the test strip, simply touch the test strip and blood drop together without excess pressure.

STORAGE

- Store strips in accordance with manufacturer's instructions. Heat, cold, humidity and moisture can all affect how the strips work which in turn affects the accuracy of the reading.
- Keep strips in their original sealed container only. Ensure container lid is closed properly after each use.
- Check expiry dates of test strips and control solutions. Do not use if out of date. Most strip packaging allows the opening or expiry date once opened to be written on the label
- Store the meter and test strips at room temperature. Keep away from direct sunlight & heat. Do not freeze.
- Do not leave test strips in vehicles for extended periods of time as may be subject to temperature extremes.
- Do not bend, cut or alter test strip in any way.

A Control Solution, available free from meter companies, contains a known amount of glucose and is used to ensure the meter and strips are working correctly. It is advised to routinely use the control solution to test the meter and if there are situations where the blood glucose test results are not as expected.