PrescQIPP Community Interest Company

Cost-effective lancets for blood sampling

Across England and Wales £12.4 million is spent on single use lancets for blood sampling per year (NHSBSA May - July 20). There are significant cost differences between the lancets currently available. Switching to lancets costings ≤£3 per 100 lancets, in appropriate patients, could release savings of up to £1.5 million across England and Wales.

QIPP projects in this area are aimed at switching to the most cost-effective and suitable option. This bulletin reviews the place in therapy of different lancets and offers guidance and support material for organisations considering reviewing lancet prescribing as a QIPP project. This bulletin should be read in conjunction with Bulletin 212: Diabetes Testing Strips in relation to appropriate frequency of blood glucose monitoring.

Recommendations

- Ensure that prescribing of lancets is cost-effective and in line with current guidance, including ensuring that quantities on prescription are appropriate for single use only and in line with the frequency of recommended testing.
- Start new patients requiring lancets on the most cost-effective lancets; costing ≤£3 per 100 lancets.
- Review all patients prescribed lancets for suitability for switching to a product costing ≤£3 per 100 lancets, where appropriate. As with all switches, these should be tailored to the individual patient.
- Once organisations have made their lancet formulary choices, they may wish to contact lancet manufacturers for a supply of lancing devices to give to their patients if the lancing device supplied with the patient's blood glucose meter is not compatible with the lancets.
- Any change to a patient's lancing device should include discussion with a healthcare professional to ensure they receive advice on the correct technique and are supplied with a new lancing device if needed.
- Safety lancets (to prevent injury to health and social care professionals from the recapping of needles) should not be prescribed as it is the responsibility of the health or social care worker's employer to provide these.
- Patients self-testing and using safety lancets, should be switched to cost-effective alternative lancets.
- Ensure that suitable containers are available to the patient for collecting used needles and other sharps, including lancets. The following containers can be prescribed on an NHS FP10 prescription: MySharps® pocket container and sharps bins in a range of sizes – Sharpsafe®, SharpSafety® and Sharpsguard®.
- Ascertain local arrangements for the collection of full sharps containers by local councils and inform patients of these arrangements.

Supporting information

Lancets for blood sampling are small needles or blades used to obtain a blood sample. They are commonly used to perform finger prick testing for blood glucose in patients with diabetes.[1] Lancets are usually used in combination with a lancing or finger pricking device which uses a spring to drive a single use lancet into the skin and retract it very quickly. The aim is to obtain enough blood for the test sample without causing unnecessary pain and bleeding.[2]

Lancets are available in different lengths and gauges and as needles or blades.[3] The higher the gauge, the smaller the needle diameter.[4] Higher gauge needles usually cause less pain but lower gauge needles are required for patients who don't produce enough blood for an adequate sample with a higher gauge product, e.g. patients with extremely thick skin or calloused hands.[2,4] In a finger-prick, the skin penetration depth should not go beyond 2.4 mm, so a 2.2 mm lancet is the longest length typically used.[5]

Lancets are eligible for prescribing on the NHS. The lancing or finger pricking devices the lancets are used in, are not prescribable on an NHS FP10 prescription as they are not listed as appliances under Part IXA of the Drug Tariff.[6] A lancing device is usually supplied with the patient's blood glucose meter or one can normally be obtained, often free of charge, by contacting the relevant manufacturer.[3,7] Although lancets are marketed to fit into specific proprietary lancing devices, some single use lancets can fit several lancing devices, so a new device is not always required when switching to a more cost-effective lancet choice.[3,8] Information on lancing device / lancet compatibility is available from product manufacturers and also in comparison tables.[9] Once organisations have made their lancet formulary choices, they may need to contact lancet manufacturers for a supply of lancing devices to give their patients if the lancing device supplied with the patient's blood glucose meter is not compatible with the lancets.

Safety

Lancets are single use **only** and patients should be discouraged from reusing them due to the risk of infection and pain due to blunting.[1]

Safety lancets are those that do not require a lancing or finger pricking device and are designed to retract after use to prevent needle stick injuries to health care professionals using them.[2,10] These are significantly more costly than non-safety lancets as shown in table 1. They are not recommended for prescribing for patients who use lancets themselves. In addition, in accordance with the Health and Safety Sharp Instruments in Healthcare Regulations and associated EU directive 2010/32/EU (the Sharps directive), it is the responsibility of the employer of the health or social care worker to provide safer sharps, such as safety lancets, for their staff.[10] Consequently safer sharps, such as safety lancets, should not be prescribed on an FP10 unless for exceptional circumstances only, e.g. for use by people who are not employees in the health and social care sectors, but are using a lancet on a patient where there is a risk of disease transmission, such as HIV or hepatitis.

Lancets should be disposed of safely once used.[11] Sharps bins can be prescribed on an NHS FP10 prescription. These include MySharps® pocket container, and sharps bins in a range of sizes – Sharpsafe®, SharpSafety® and Sharpsguard®.[6] Arrangements for the collection of sharps bins varies by local council. Some councils charge to collect sharps bins, but most do not.[11] Patients should be aware of local arrangements for collection of full sharps bins.

Patient factors

There are 2 types of device activation:[2]

- Pressure type where good contact is maintained and the device triggers automatically
- Top Button or Side Trigger type where the operator has control over the moment of activation

Children or patients with dexterity issues who are self-testing may need to try different lancing devices to determine which type of device is easier for them to use.

Multi-device lancets (e.g. Fastclix®) contain a preloaded lancet drum which can be useful for those with a specific clinical need, such as patients with dexterity problems, significant needle phobia or visual impairment.[12]

A lancet length slightly shorter than the estimated depth needed should be used because the pressure compresses the skin; thus, the puncture depth will be slightly deeper than the lancet length.[2]

Patients should be advised to use the second and third finger (i.e. middle and ring finger); avoiding the thumb and index finger because of calluses and avoiding the little finger because the tissue is thin.[5]

Patients experiencing pain or an insufficient blood sample should have the size of their lancet reviewed.

Costs

There is a significant difference in cost between lancets. Table 1 below illustrates the cost differences and highlights those that are ≤£3 per 100 lancets.

Table 1: Lancets product and price comparison – Drug Tariff October 2020.[6]

Product	Cost per 100 lancets*	Product	Cost per 100 lancets*
Cost ≤£3 per 100 lancets			
Droplet® 0.2mm/33 gauge	£2.19	4SURE® 0.195mm/33 gauge	£2.90
Droplet® 0.31mm/30 gauge	£2.19	TRUEplus® Lancets 0.32mm/30 gauge	£2.90
Droplet® 0.36mm/28 gauge	£2.19	TRUEplus® Lancets 0.195mm/33 gauge	£2.90
Microdot® Plus 0.2mm/33 gauge	£2.19	TRUEplus® Lancets 0.36mm/28 gauge	£2.90
Microdot® Plus 0.3mm/30 gauge	£2.19	OneTouch Delica Plus® 0.32mm/30 gauge	£2.93
Apollo Twist® 0.36mm/28 gauge	£2.25	Advocate® 0.31mm/30 gauge	£2.95
GlucoRx® Lancets 0.31mm/30 gauge	£2.25	CareSens® 0.31mm/30 gauge	£2.95
GlucoZen® 0.36mm/28 gauge	£2.50	CareSens® 0.36mm/28 gauge	£2.95
AgaMatrix® Ultra-Thin Lancets 0.35mm/28 gauge	£2.72	VivaChek® Lancets 0.37mm/28 gauge	£2.99
AgaMatrix® Ultra-Thin Lancets 0.2mm/33 gauge	£2.72	Greenlan® Lancets 0.35mm/28 gauge	£3.00
Omnican Lance Soft® 0.3mm/30 gauge	£2.73	Kinetik Wellbeing® 0.28mm/30 gauge	£2.63 - £3.00
Mylife® Lancets 0.3mm/30 gauge	£2.75	IME-DC® 0.3mm/30 gauge	£3.00
Mylife Multicolour® 0.3mm/30 gauge	£2.75	Microdot® 0.31mm/30 gauge	£3.00
Palmdoc® Lancets 0.38mm/30 gauge	£2.85	Milward Steri-Let® 0.66mm/23 gauge	£2.85 - £3.00
Palmdoc iCare® Advanced 0.38mm/30 gauge	£2.23 - £2.85	Milward Steri-Let® 0.36mm/28 gauge	£2.85 - £3.00
FastClix® 0.3mm/30 gauge	£2.89	Vitrex Soft® 0.65mm/23 gauge	£2.85 - £3.00
4SURE® 0.32mm/30 gauge	£2.90	***Cost may vary depending on whether a pack size of 50,100 or 200 is supplied.**	

Product	Cost per 100 lancets*	Product	Cost per 100 lancets*
Cost >£3 per 100 lancets			
Glucoject® Lancets PLUS 0.2mm/33 gauge	£2.75 - £3.77	BGStar® Ultra-Thin Lancets 0.2mm/33 gauge	£3.65
Unilet Eco® 0.375mm/28 gauge	£3.07	SylkFeel® Ultra-Thin Lancets 0.2mm/33 gauge	£3.65
Vitrex Gentle® 0.36mm/28 gauge	£3.07 - £3.19	Microlet® 0.5mm/28 gauge	£3.72 - £3.90
Dario® 0.31mm/30 gauge	£3.45	OneTouch UltraSoft® 0.4mm/28 gauge	£3.81
GlucoDock® Lancets 0.35mm/28 gauge	£3.60	Freestyle® 0.5mm/28 gauge	£3.82
MediTouch® 0.34mm/28 gauge	£3.60	OneTouch Comfort® 0.2mm/33 gauge (Discontinued)	£3.82
Glucoject No-dol® Lancets 0.315mm/30 gauge (Discontinued; now Glucoject PLUS)	£3.60 - £3.71	Thin Lancets 0.36mm/28 gauge (Discontinued)	£3.94
Mendor Discreet® 0.32mm/28 gauge	£3.61	CoaguChek Softclix® 0.8mm/21 gauge (INR testing)	£3.96
Unilet ComforTouch® 0.375mm/28 gauge	£3.63 - £3.82	Softclix® 0.4mm/28 gauge	£4.03
Safety lancets (not recommended for prescribing)			
Neon Verifine Safety lancets 1.8mm/23gauge	£4.50	Medlance Plus® Lite 1.5mm/25 gauge	£4.79 - £4.81
Neon Verifine Safety lancets 1.8mm/28gauge	£4.50	Medlance Plus® Super-Lite 1.2mm/30 gauge	£4.79 - £4.81
Neon Verifine Safety lancets 1.8mm/30gauge	£4.50	Unistik Touch® 1.5mm/30 gauge	£4.80
Neon Verifine Safety lancets 2.4mm/21gauge	£4.50	Unistik Touch® 1.8mm/28 gauge	£4.80
Safe-T-Lance Plus® 1.8mm/18 gauge	£4.50	Unistik Touch® 2mm/23 gauge	£4.80
Microdot HiFlow® 2.2mm/21 gauge	£4.75	Unistik Touch® 2mm/21 gauge	£4.80
Microdot Lite® 1.8mm/28 gauge	£4.75	Safe-T-Lance Plus® 1.4mm/25 gauge	£4.91
Microdot Professional® 2.2mm/23 gauge	£4.75	Safe-T-Lance Plus® 1.6mm/28 gauge	£4.91
Microdot SuperLite® 1.8mm/30 gauge	£4.75	Safe-T-Lance Plus® 1.8mm/21 gauge	£4.91
Medlance Plus Universal® 1.8mm/21 gauge	£4.79 - £4.81	Acti-Lance Lite® 1.5mm/28 gauge	£4.94 - £5.49
Medlance Plus® Extra 2.4mm/21 gauge	£4.79 - £4.81	Acti-Lance Universal® 1.8mm/23 gauge	£4.94 - £5.49

***Cost may vary depending on whether a pack size of 50,100 or 200 is supplied.**

Product	Cost per 100 lancets*	Product	Cost per 100 lancets*
Medlance Plus® Special 2mm/0.8mm (blade)	£5.13 - £5.39	Sterilance Lite II Safety® Lancets 1.8mm/28 gauge	£5.70
Acti-Lance Special® 2mm/17 gauge (blade)	£5.21 - £5.49	Sterilance Lite II Safety® Lancets 2.4mm/21 gauge	£5.70
Sarstedt Safety® Lancets 1.6mm/28 gauge	£5.46	Sterilance Lite II Safety® Lancets 2.4mm/26 gauge	£5.70
Sarstedt Safety® Lancets 1.8mm/21 gauge	£5.46	Apollo® Pressure-Activated Safety Lancets 1.8mm/26 gauge	£5.99
Sarstedt Safety® Lancets 1.8mm/18 gauge	£5.46	Apollo® Pressure-Activated Safety Lancets 1.8mm/28 gauge	£5.99
GlucoRx Safety® lancets 1.6mm/30 gauge	£5.50	Apollo® Pressure-Activated Safety Lancets 2.4mm/21 gauge	£5.99
GlucoRx Safety® lancets 1.8mm/28 gauge	£5.50	Mylife Safety Comfort® lancets 0.32mm/30 gauge	£6.00
GlucoRx Safety® lancets 1.8mm/26 gauge	£5.50	Mylife Safety® lancets 0.36mm/28 gauge	£6.00
GlucoRx Safety® lancets 2.2mm/23 gauge	£5.50	Unistik 3 Gentle® 1.5mm/30 gauge	£6.00 - £6.48
Sterilance Lite II Safety® Lancets 1.8mm/18 gauge	£5.70	Unistik 3 Extra® 2mm/21 gauge	£6.17 - £6.31
Sterilance Lite II Safety® Lancets 1.8mm/21 gauge	£5.70	Unistik 3 Comfort® 1.8mm/28 gauge	£6.17 - £6.48
Sterilance Lite II Safety® Lancets 1.8mm/26 gauge	£5.70	Unistik 3 Normal® 1.8mm/23 gauge	£6.17 - £6.48

***Cost may vary depending on whether a pack size of 50,100 or 200 is supplied.**

The most cost-effective lancets are currently:

Droplet® (0.2mm/33 gauge, 0.31mm/30 gauge or 0.36mm/28 gauge)-100 pack size

OR

Microdot® Plus (0.2mm/33 gauge or 0.3mm/30 gauge)- 100 pack size

Droplet® lancets are compatible with most lancing devices.[12]. Microdot® Plus lancets are compatible with most lancing devices, however GPs wishing to prescribe the Microdot® Plus lancets can be supplied with compatible lancing devices from Cambridge Sensors Limited (Microdot) to distribute to patients to ensure full compatibility. This would leave the lancing device supplied with any non-Microdot® kits, surplus to requirements. Please contact their Customer Helpline (0800 088 3920) for further information.[7]

Savings

There is a significant difference in cost between the different lancets available. In England and Wales, approximately £12.4 million is spent on lancets per year (NHSBSA May - July 20). **Switching to lancets costings ≤£3 per 100 lancets could release savings of up to £1.5 million across England and Wales. This equates to savings of £2,406 per 100,000 patients across England and Wales.**

The potential saving options are outlined below (although clinicians may choose other options according to the clinical need of the patient). These include:

1. Switch prescribed non-preferred lancets to a more cost-effective alternative costing ≤£3 per 100 lancets of an appropriate length and gauge for the patient.
2. The most cost-effective options for lancets are Droplet® or Microdot® Plus. They are considered compatible with most lancing devices.
3. Safety lancets should only be prescribed on an NHS FP10 prescription for exceptional circumstances, e.g. for use by people who are not employees in the health and social care sectors but are testing patients where there is a risk of disease transmission, such as HIV or hepatitis. Discontinue safety lancets for use by people employed in the health and social care sector as it is their employer's responsibility to provide these for their employees.
4. Prescribe Fastclix® lancets (a drum of 6 preloaded lancets) for patients with dexterity problems, significant needle phobia or visual impairment unable to manage regular lancets.
5. Ensure the quantity prescribed is appropriate for the frequency of testing recommended to minimise waste or unnecessary over-testing. For patients with diabetes, this should be in line with an appropriate supply of blood glucose testing strips.

Summary

It is important that the prescribing of lancets is cost-effective and in line with current guidance, ensuring that quantities on prescription are appropriate and in line with single use only and the frequency of recommended testing.

Of the lancets available for blood sampling via a finger prick lancing device, the most cost-effective options are Droplet® or Microdot® Plus. Patients prescribed lancets costing more than £3 per 100 lancets should be reviewed and switched to a more cost-effective option suitable for the individual.

References

1. Diabetes.co.uk. Lancets and lancing. Last updated 15th January 2019. https://www.diabetes.co.uk/insulin/Diabetes-lancets-and-lancing.html#:~:text=Lancets%20are%20the%20small%2C%20sharp,and%20blood%20glucose%20test%20strips
2. NHS Clinical Evaluation Team. Clinical review. Safety Blood Lancets (Needle and Blade). September 2018. https://wwwmedia.supplychain.nhs.uk/media/Clinical-Review-for-Blood-Lancets-September-2018.pdf
3. Monthly Index of Medical Specialities (MIMS). August 2020. https://www.mims.co.uk/
4. The Diabetes Council. Nicole Justus, RN, BSN. Lancets & Lancing Devices for Diabetes: Read This Before You Buy. Last updated 4th June 2020. https://www.thediabetescouncil.com/lancets-lancing-devices-for-diabetes-read-this-before-you-buy/
5. World Health Organisation. WHO Guidelines on Drawing Blood: Best Practices in Phlebotomy. Chapter 7 - Capillary sampling. 2010. Geneva: WHO Press. https://www.who.int/infection-prevention/publications/drawing_blood_best/en/
6. NHS Business Services Authority. Drug Tariff October 2020. https://www.nhsbsa.nhs.uk/pharmacies-gp-practices-and-appliance-contractors/drug-tariff
7. Personal communication. Cambridge Sensors Ltd. 13/10/20.
8. National Pharmacy Association (NPA). Blood glucose monitoring and compatibility equipment checker. Updated 10 January 2018. https://www.npa.co.uk/wp-content/uploads/2017/12/Blood-glucose-equipment-January-2018-FINAL.pdf

9. HTL-Strefa high tech lab. Personal lancets. https://htl-strefa.com/products/personal-lancets/ Accessed 14/10/20.
10. Health and Safety Executive (HSE). Health and Safety (Sharp Instruments in Healthcare) Regulations 2013. Guidance for employers and employees. Health Services Information Sheet 7. March 2013. https://www.hse.gov.uk/pubns/hsis7.pdf
11. NHS. How should I dispose of used needles or sharps? https://www.nhs.uk/common-health-questions/accidents-first-aid-and-treatments/how-should-i-dispose-of-used-needles-or-sharps/
12. Accu-Chek FastClix Finger Pricker Product Support Website. 2020. Last accessed 28/07/20. https://www.accu-chek.co.uk/help/finger-prickers/fastclix

Additional PrescQIPP resources

Briefing	https://www.prescqipp.info/our-resources/bulletins/bulletin-276-lancets/
Implementation tools	
Data pack	https://data.prescqipp.info/#/views/B276_Lancets/FrontPage?:iid=1

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