
CLINICAL GUIDELINE FOR PROCEDURE FOR SUBCUTANEOUS INJECTION OF INSULIN OR GLP ANALOGUE USING A PEN DEVICE

1. Aim/Purpose of this Guideline

The injection is to be performed by patient under supervision of nursing staff in all clinical areas. If patient is unable to administer their own injection using a pen device staff can administer the injection using the pen device and correct sharps disposal (see procedure number 16) Insulin must not be drawn up from a 3 ml insulin penfill cartridge using a syringe.

Purpose: This procedure applies to all registered nursing staff regardless of grade that are undertaking patient supervision of self administration or administering a prescribed insulin/GLP analogue subcutaneous injection within the Royal Cornwall Hospitals Trust. The purpose of the document is to ensure that all practitioners perform the procedure in accordance with best practice guidelines.

Registered staff have a duty of care to supervise the patient in this procedure. The individual practitioner must ensure they are competent to supervise or administer the injection, undertaking the procedure to the standards within this document. If patients are self administering their own Insulin then the registered nurse self assessment form for patient self administration of subcutaneous insulin (CHA2976) must be completed by nursing staff and filed in the section seven of the nursing documentation

2. The Guidance

Equipment

- EPMA Chart
- Cartridge of prescribed insulin and appropriate reusable pen device, i.e., NovoPen 3/4 if using NovoNordisk insulin, HumaPen if using Lilly insulin, Autopen 24/Clikstar is using Aventis insulin, Autopen if using C P Pharmaceutical Insulin **Or** appropriate disposable pre filled Insulin or GLP1 Analogue pen device.
- Pen needle 6mm or less
- Pen user guide supplied with each box of pens
- Sharps Box

Procedure - (please refer to individual pen guides for specific instructions).

1. Explain procedure to patient and ask patient to wash hands. Assemble required equipment as above and take to patient.

2. Reusable pen -Twist and pull off cap from main body of pen and put to one side. Unscrew the insulin cartridge holder which will provide 2 sections.

Prefilled pen - Twist and pull off cap from main body of pen and put to one side

3. Reusable pen - Identify correct insulin cartridge has been obtained and check expiry date of cartridge.

Prefilled pen - Identify the disposable prefilled pen contains the correct injectable solution and check expiry date.

NB Insulin and GLP1 analogue that has been kept out of the fridge expires in four weeks.

4. Check cartridge/ pre filled pen is intact and that it has no crystals.

5. Reusable pen - Using instruction manual which accompanies pen device ensure piston rod in mechanical section is inside pen.

Prefilled pen – proceed to action number 8

6. Reusable pen – put insulin cartridge into the insulin cartridge holder section. The screw cap end goes first.

7. Reusable pen - Screw the mechanical section and the insulin cartridge holder tightly together.

8. Take protective tab off the pen needle, push and screw onto the screw cap end of the pen device. Pull off outer and inner needle caps.

9. For cloudy or pre-mixed insulin e.g. Humulin M3, Insulatard, Novomix 30, gently roll the pen between your palms 10 times and then turn pen up and down ten times from one end to the other. Repeat until liquid is uniform and cloudy.

10. Perform air shot for all pen devices except Exenatide (Byetta) and Lyxumia (Lixisenatide) where you should refer to the specific pen guide. Check the dose selector has returned to zero. Dial 2 – 4 clicks. (for Novopen 4, disposable Lilly pens and Lyxumia GLP1 analogue pen pull the end injection button out before dialling). With needle pointed upward press the plunger all the way in. A drop of solution should appear, if not, repeat procedure until drop of solution appears. This procedure needs to be repeated prior to every injection.

11. Check that dosage selector is set at zero. Dial required dose as prescribed.

12. Select injection site, e.g. lower abdomen, upper outer arm or upper outer thigh. Support injection site for injection. These sites should be rotated daily.

13. Administer as subcutaneous injection 90° angle to skin surface. Depress plunger all the way down. Wait for a count of 6 seconds before removing needle.

14. Complete EPMA chart, complete nursing documentation.

15. Patient to remove pen needle from the pen device and dispose of sharp as per infection control policy. Needle to be changed at each injection.

16. If patient unable to remove pen needle or staff are administering the injection the pen needle needs to be removed using the appropriate needle removing section on the 1 litre sharps bin Eros Code FSL315. Each patient will need an individual named sharps bin for this method of disposal that is to be stored in the treatment room.

17. Insulin/GLP analogue that is in use is to be kept out of fridge, at room temperature for up to four weeks. Please ensure insulin cartridge/ prefilled pen is dated once commenced.

18. Patients' pen devices and diabetes equipment should ideally be kept with the patient securely.

3. Monitoring compliance and effectiveness

Element to be monitored	Compliance with the relevant process above for patients seen at a Diabetes Team Review. Registered nurse self assessment form for patient self administration of subcutaneous insulin (CHA2976) has been completed
Lead	Ward Pharmacists and DISN team on review of Individual Patients
Tool	Patient Documentation. Registered nurse self assessment form for patient self administration of subcutaneous insulin (CHA2976)
Frequency	Adult in-patients with diabetes who are reviewed by the specialist diabetes team. Registered nurse self assessment form for patient self administration of subcutaneous insulin (CHA2976)
Reporting arrangements	Non compliance will be reported to the responsible ward /area manager. Non compliance resulting in an adverse patient event will be reported via Datix Every patient who is self administering their own Insulin needs a Registered nurse self assessment form for patient self administration of subcutaneous insulin (CHA2976) to be completed
Acting on recommendations and Lead(s)	Ward / area managers will undertake subsequent recommendations and action planning for any or all deficiencies and recommendations within reasonable timeframes for their areas The Specialist Adult In-Patient Diabetes Team and ward pharmacists will undertake any trust wide recommendations and action planning for any or all deficiencies and recommendations within reasonable timeframes
Change in practice and lessons to be shared	Lesson learned or changes to practice will be shared with all the relevant stakeholders

4. Equality and Diversity

4.1. This document complies with the Royal Cornwall Hospitals NHS Trust service Equality and Diversity statement.

4.2. Equality Impact Assessment

The Initial Equality Impact Assessment Screening Form is at Appendix 2.

Appendix 1. Governance Information

Document Title	Clinical Guideline for Procedure for Subcutaneous Injection of Insulin or GLP Analogue Using a Pen Device			
Date Issued/Approved:	06/12/13			
Date Valid From:	06/12/13			
Date for Review:	06/12/16			
Directorate / Department responsible (author/owner):	Medical Directorate Kim Bull Clinical Nurse Specialist Diabetes			
Contact details:	01872 253104			
Brief summary of contents	PROCEDURE FOR SUBCUTANEOUS INJECTION OF INSULIN OR GLP ANALOGUE USING A PEN DEVICE			
Suggested Keywords:	Diabetes. Pen Device			
Target Audience	RCHT	PCH	CFT	KCCG
	✓			
Executive Director responsible for Policy:	Medical Director			
Date revised:	06/12/13			
This document replaces (exact title of previous version):	Clinical Guideline for Procedure for Subcutaneous Injection of Insulin or GLP Analogue Using a Pen Device			
Approval route (names of committees)/consultation:	Diabetes In-Patient Specialist Nurses, Diabetes Pharmacist Senior Staff Nurse Endocrine Ward			
Divisional Manager confirming approval processes	Stella Ellis			
Name and Post Title of additional signatories	Not required			
Signature of Executive Director giving approval	{Original Copy Signed}			
Publication Location (refer to Policy on Policies – Approvals and Ratification):	Internet & Intranet	✓	Intranet Only	
Document Library Folder/Sub Folder	Clinical / Endocrine and Diabetes			
Links to key external standards	National Patient Safety Alert – Safe use of Insulin 2011			
Related Documents:	<ul style="list-style-type: none"> • Novo Pen 4 user manual (2008) - NovoNordisk 			

	<ul style="list-style-type: none"> • Flex Pen user guide (2006) - NovoNordisk • Lantus SoloStar Information For Patients – how to deliver Lantus. Sanofi – Aventis (July 2007) • Diabetes UK (2009) www.diabetes.org.uk • Lyxumia pre filled pen guide (2013) - Aventis
Training Need Identified?	No

Version Control Table

Date	Version No	Summary of Changes	Changes Made by (Name and Job Title)
2004	V1.0	Initial Issue	Kim Bull CNS Diabetes
2007	V2.1	Updated	Kim Bull CNS Diabetes
27/10/10	V2.2	National Patient Safety Alert – Safe use of Insulin 2010 - recommendations specifically the safe removal of Insulin pen needles. Addition of GLP1 Analogue medications and devices.	Kim Bull CNS Diabetes
06/12/13	V2.3	National Patient Safety Alert – The adult patients passport to safe use of insulin 2011 - recommendations specifically the registered nurse self assessment form for patient self administration of subcutaneous insulin (CHA2976) Addition of a further GLP1 Analogue medication/ device - Lyxumia	Kim Bull CNS Diabetes

All or part of this document can be released under the Freedom of Information Act 2000

This document is to be retained for 10 years from the date of expiry.

This document is only valid on the day of printing

Controlled Document

This document has been created following the Royal Cornwall Hospitals NHS Trust Policy on Document Production. It should not be altered in any way without the express permission of the author or their Line Manager.

Appendix 2. Initial Equality Impact Assessment Screening Form

Name of service, strategy, policy or project (hereafter referred to as <i>policy</i>) to be assessed: Clinical Guideline for Procedure for Subcutaneous Injection of Insulin or GLP Analogue Using a Pen Device	
Directorate and service area: Medical	Is this a new or existing Procedure? Existing
Name of individual completing assessment: Kim Bull	Telephone: 01872253104
1. Policy Aim*	To provide detailed guidance on the procedure of Subcutaneous Injection of Insulin or GLP Analogue Using a Pen Device
2. Policy Objectives*	To provide a consistent approach to the management of patients requiring Subcutaneous Injection of Insulin or GLP Analogue Using a Pen Device To maintain patient safety and improve outcomes for adult patients with Diabetes
3. Policy – intended Outcomes*	Consistent management of Diabetes at RCHT sites regarding the Subcutaneous Injection of Insulin or GLP Analogue Using a Pen Device
5. How will you measure the outcome?	Audit Datix Reporting Review of nursing documentation as required
5. Who is intended to benefit from the Policy?	All adult patients with diabetes who require Subcutaneous Injection of Insulin or GLP Analogue Using a Pen Device
6a. Is consultation required with the workforce, equality groups, local interest groups etc. around this policy?	Yes
b. If yes, have these groups been consulted?	Yes
c. Please list any groups who have been consulted about this procedure.	Diabetes In-Patient Specialist Nurses, Diabetes Pharmacist Senior Staff Nurse Endocrine Ward

7. The Impact			
Please complete the following table.			
Are there concerns that the policy could have differential impact on:			
Equality Strands:	Yes	No	Rationale for Assessment / Existing Evidence
Age		x	
Sex (male, female, trans-gender / gender reassignment)		x	

Race / Ethnic communities /groups		x	
Disability - Learning disability, physical disability, sensory impairment and mental health problems	x		For capacity to consent refer to consent form 4
Religion / other beliefs		x	
Marriage and civil partnership		x	
Pregnancy and maternity		x	
Sexual Orientation, Bisexual, Gay, heterosexual, Lesbian		x	
<p>You will need to continue to a full Equality Impact Assessment if the following have been highlighted:</p> <ul style="list-style-type: none"> • You have ticked “Yes” in any column above and • No consultation or evidence of there being consultation- this <u>excludes</u> any <i>policies</i> which have been identified as not requiring consultation. or • Major service redesign or development 			
8. Please indicate if a full equality analysis is recommended.			No x
9. If you are not recommending a Full Impact assessment please explain why.			
It is not required for this as it is clinical guidance for all the care of all Adults with Diabetes requiring SUBCUTANEOUS INJECTION OF INSULIN OR GLP ANALOGUE USING A PEN DEVICE			
Signature of policy developer / lead manager / director Kim Bull		Date of completion and submission 06/12/13	
Names and signatures of members carrying out the Screening Assessment	1. Kim Bull 2.		

Keep one copy and send a copy to the Human Rights, Equality and Inclusion Lead,
c/o Royal Cornwall Hospitals NHS Trust, Human Resources Department, Knowledge Spa,
Truro, Cornwall, TR1 3HD

Please sign and date this form.

Keep one copy and send a copy to Matron, Equality, Diversity and Human Rights,
c/o Royal Cornwall Hospitals NHS Trust, Human Resources Department, Chyvean
House, Penventinnie Lane, Truro, Cornwall, TR1 3LJ

A summary of the results will be published on the Trust's web site.

Signed _____ Kim Bull _____

Date _____ 06/12/13 _____