

Insulin/GLP1 Administration via a Pen Device by Patients or Nursing Staff - Full Clinical Guideline

Reference No: CG-T/2023/179

Guideline Aim

The administration of subcutaneous treatments for diabetes will be managed using a pen device appropriately and safely dependent on patient ability and medication type, with the aim to reduce medication errors and needle stick injury to staff.

EU directive 2010 Prevention of sharps injuries in the hospital and healthcare sector requires all healthcare organisations to implement mandatory safety standards to protect healthcare staff.

Disease/condition/target population

All adult patients with diabetes mellitus requiring injectable forms of treatments given by a pen device

If patient is able to self-inject their own insulin/GLP1 via a pen device and wishes to do so this should be supported by hospital staff.

Staff should ensure that the correct medication is prescribed.

- Right medication.
- Right device.
- Right dose.
- Right time.

Patients must be capable of applying, removing and disposing of their usual pen needle safely. A new pen needle should be used each time.

Equipment required

- Patient's insulin/GLP1 pen. **This should be stored with the patient to enable access at the appropriate administration times.**
- Patient's usual pen needle or use ward stock 4mm or 6mm pen needle.
- Sharps bin.

Contact the diabetes team if unable to obtain needles.

Procedure

- Patient to wash hands. .
- Always check the pen device/cartridge for the manufactures expiry date. Spare pens/ cartridges should be stored in the fridge. The pen device in use should be dated when first used and discarded according to manufacturers' instructions routinely after 28 days.
- Patient to attach their usual pen needle to the pen device.
- If the insulin is cloudy the patient should re-suspend the insulin adequately by rolling the pen device between their hands and turning the pen up and down until the insulin is uniform. It should not be used if the insulin appears discoloured or lumpy.
- The patient should perform a 2 - 4 unit air shot before **every** insulin injection to ensure a small amount of fluid flows through the end of the needle. If necessary repeat until this occurs.
- This air shot is only required at the START of a new pen if using GLP1 and NOT before every injection**
- Patient to self-administer treatment subcutaneously using a 90 degree angle and patients usual technique for supporting the skin.

- Recommended sites are abdomen, buttocks, upper, outer thighs. Rotation of sites should be encouraged.
- The patient must maintain a 10 second wait following delivery of treatment before the needle is removed from skin.
- The Patient must remove the pen needle and place directly in the sharps bin.**
- Pen needles must NEVER be re-sheathed or removed by healthcare staff.**
- The registered nurse to make a record of self-administration on patient's electronic insulin prescription. **This record should include last BG reading and type and dose of insulin taken.**

If Patient is unable to self-administer.

If the patient lacks capacity or is unable or unwilling to self-administer their treatment, this should be administered in the patients best interests.

Equipment required

- Patient's insulin/GLP1 pen
- Safety pen needle**
- Patients electronic prescription and blood glucose monitoring chart
- Sharps bin

Procedure

- Ensure correct patient identified using trust policy by verbally confirming their name and DOB, visually check the wrist band and finally ensure all details correspond with the patient's medication prescription and blood glucose monitoring chart. Obtain verbal consent if appropriate. Check medication has not already been given.
- Check manufacturer's expiry date. Spare pens should be stored in the fridge, Pen device in use should be dated when first opened and discarded according to the manufacturer's instructions routinely after 28 days.
- Wash hands or use alcohol gel according to trust Hand hygiene policy.
- Attach the **Safety pen needle** to the pen device.
- If the insulin is cloudy ensure it is re-suspended adequately by the rolling the pen device between your hands and turning up and down until the liquid is uniform. It should not be used if the insulin appears discoloured or lumpy.
- Perform a 2-4 unit air shot before **every** insulin injection to ensure small amount of insulin flows through the end of the needle. If necessary repeat until this occurs.
- This air shot is only required at the START of a new pen if using GLP1 and NOT before every injection.**
- Dial up correct dose as confirmed on prescription.
- Obtain verbal consent. If the patient lacks capacity then treatment should be administered in the patient's best interest.
- Administer treatment subcutaneously using a 90 degree angle with lifted skin fold (not pinch) Recommended sites are abdomen, buttocks, upper, outer thighs. Rotate injection sites on a regular basis.
- Maintain 10 second wait following delivery of treatment before the needle is removed from skin.
- Remove Auto shield pen needle and place directly in sharps bin.
- Registered nurse to make a record of administration on patient's electronic prescription, including previous blood glucose test, type of insulin and dose administered.

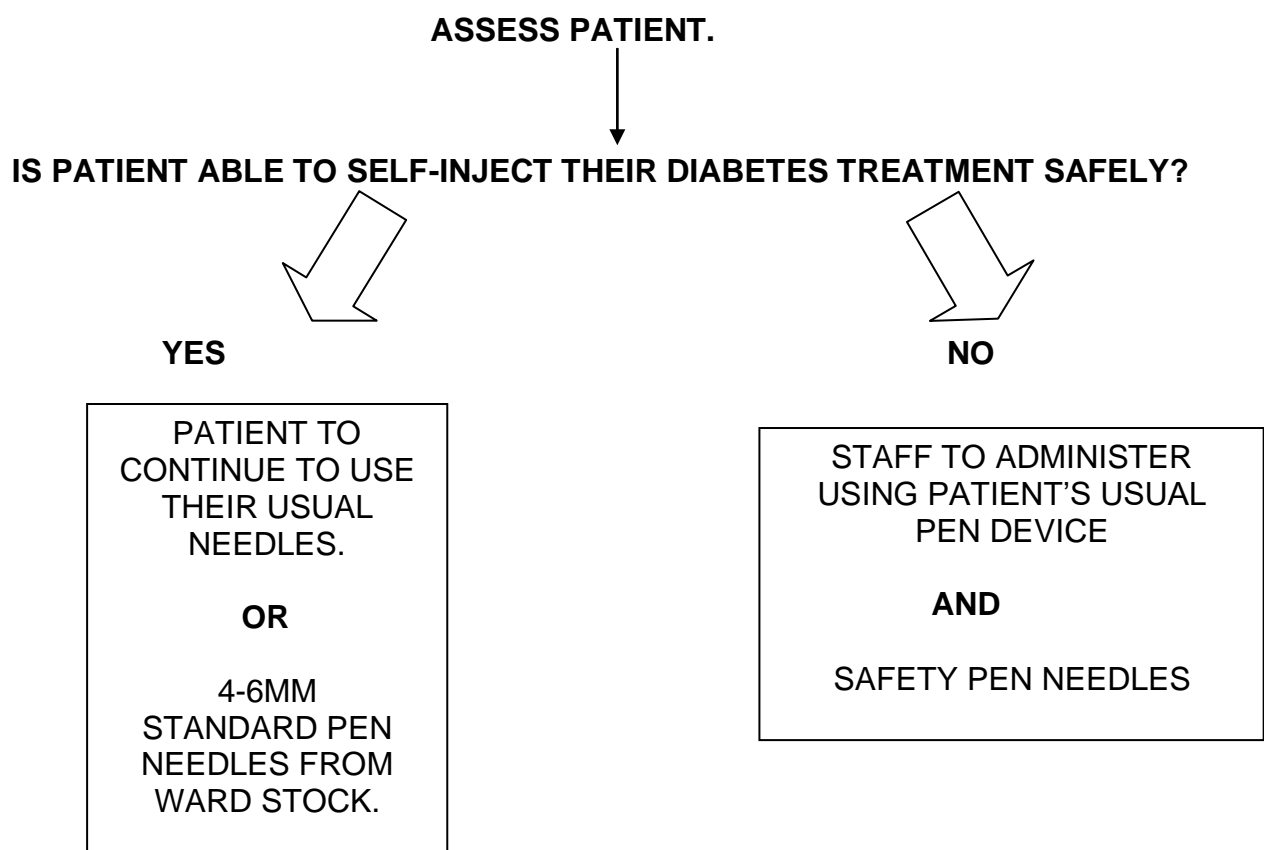
When the patient is able to resume self-injection their usual pen needles should be used and a full assessment of their injection technique made.

If the patient is **unable** to resume self-injection they should be referred to the Inpatient Diabetes Specialist Nurses via **Extra Med/ V6** for further advice.

ADDITIONAL INFORMATION.

- Pen devices should be for individual, named patient use and should **NEVER** be used for other patients.
- All patients requiring subcutaneous therapy to control their diabetes should have their blood glucose levels checked and recorded on a daily basis. Frequency of recording will depend on treatment and patient's condition and should be recorded on Patient Track.
- Nurses should be competent with any pen device before supporting patients in self- administration.
- Insulin **must not** be withdrawn from a 3ml pen cartridge or disposable pen device via a syringe.
- All pen needles are for single use only.
- Reusable pen devices that hold 3ml cartridges should not be stored in the fridge.
- 3ml cartridges and disposable pen devices not in use should generally be stored in the main part of the refrigerator at 2-8c, Not at the back of the fridge or be allowed to freeze.

CHOICE OF PEN NEEDLE



Implementation strategy

- Initial staff training will be required, this will be included in safe use of insulin training (essential to role for all registered nurses)

- Monitoring of needle stick injuries to staff involving pen needles.

Patient resources

- Use of Trust patient information leaflet; 'Looking after your diabetes in hospital' which promotes self-administration.

References

Council Directive 2010 of May 2010 implementing the Framework Agreement on prevention from sharp injuries in the hospital and healthcare sector.

Documentation Control

Development of Guideline:	Diabetes Specialist Nurse/ Diabetes Consultant
Approved By:	Diabetes Safety Group - 19/12/2023 Medical Division – Dec 2023
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Key Contact:	Diabetes Specialist Nurse On Call Mobile: Derby 07384245434 Burton 07385375932

NAME	INSULIN USED IN PENS	EXAMPLE APPEARANCE
Humalog HumaPen Savvio	Humalog, Humalog Mix 25, Humalog Mix 50, Humulin I, Humulin M3, Humulin S	
Humalog KwikPen, Humalog Mix 25 KwikPen, Humalog Mix 50 KwikPen	Humalog, Humalog Mix 25, Humalog Mix 50	
Humulin I KwikPen, Humulin M3 KwikPen	Humulin I, Humulin M3	
HumaPen Luxura HD	Lilly 3ml cartridges from Humalog and Humulin ranges	
FlexPen	NovoRapid, Levemir, NovoMix 30	
Innolet	Insulatard, Levemir	
NovoPen 4	All Novo Nordisk 3ml penfill cartridges	
NovoPen Echo	All Novo Nordisk 3ml penfill cartridges	
Tresiba FlexTouch	Tresiba	
Tresiba FlexTouch	Tresiba	
NovoRapid FlexTouch	NovoRapid	
Autopen Classic	Lilly or Wockhardt UK 3ml insulin cartridges	
Autopen 24	Sanofi 3ml insulin cartridges	
SoloSTAR	Apidra, Lantus, Insuman Basal and Insuman Comb 25	
ClikSTAR	Apidra, Lantus, Insuman (all presentations)	
JuniorSTAR	Apidra, Lantus, Insuman (all presentations)	