NHS
South West Yorkshire
Area Prescribing Committee

# High-strength insulins and risks of withdrawing insulin from pens or cartridges

Until fairly recently, insulin was available in only one strength: 100 units/ml, so it was relatively straightforward to prescribe, dispense and administer.

However, we must all be extra vigilant as insulin is now routinely available in 200 units/ml and 300 units/ml strengths (a 500 unit/ml strength can be imported from the USA).

There have been safety incidents where insulin has been withdrawn from pens or cartridges.

The National Reporting and Learning System (NRLS) has identified 56 medication incidents associated with withdrawing insulin from insulin pens or refill cartridges (between 1.01.2013 and 30.06.2016) [1].

•12 described drawing up insulin directly from pens and cartridges

•9 described a failure of safety needle

•9 described incorrect technique with safety needles (healthcare professional)

•6 described incorrect technique with safety needles (patients)

•10 described other themes.

These incidents highlight concerns with the availability of appropriate safety needles, and a lack of training for both staff and patients on the use of insulin pens and safety needles [1].

## Good practice

- read the label and patient information leaflet carefully
- never use a syringe to draw the product from the barrel of the pre-filled pen or a cartridge
- store high-strength insulins in such a way to differentiate them from low-strength ones
- use safety pen needles when administering insulin to a patient from a pen device
- always write units in full.

## Insulin combination products

Insulin is now being formulated with other medicines for diabetes. The first on the market is Xultophy, insulin plus liraglutide. We have heard from other areas that some patients have been given the combination product in error, so please check before administering this product. Store this product in such a way to differentiate it from other insulin products.

## References

1. NHS Improvement. Risk of severe harm and death due to withdrawing insulin from pen devices. 16.11.2016. Accessed from https://improvement.nhs.uk/news-alerts/risk-severe-harm-and-death-withdrawing-insulin-pen-devices/ on 27.3.2017

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