# **MEDICATION ERROR**

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Strives to promulgate preventable medication errors amongst healthcare professionals

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#TowardsZeroMed-Error

Addressing a common medication error...

### TRICKY INSULIN CALCULATION: NOTE THE DECIMALS (how many zeros) & UNITS (IU/mL)!

A common mistake with insulin, namely Actrapid has been reported quite frequently and is mainly due to errors in:



**Dose Administration** 



Same dose: Actrapid 5 IU 2 different error types



#### **CALCULATION**

(note the DECIMALS)

Actrapid vial strength: 100 IU/mL



If 5 IU is prescribed, how many mL should be administered?

Answer:

$$x \text{ mL} \rightarrow 5 \text{ IU}$$

$$mI \rightarrow 100 \text{ IU}$$
 $x mL = \frac{5 IU \times 1mL}{100 IU}$ 

x = 0.05mL

Hence, 0.05mL = 5 IU.

#### **Example of Prescribing Error:**

Intended dose: 5 IU

Wrongly prescribed: 0.5 mL

Result: 10X overdose! (50 IU!)

**Consequence: Refractory hypoglycaemia** 

## 2. ADMINISTRATION

(note the UNITS)

If 5 IU is prescribed, 0.05mL should be administered. HOW?



If an insulin syringe is used (left picture), for a dose of 5 IU, make sure to take only 5 IU. which should not exceed the 10 IU mark -30

> Insulin syringes can be ordered from the central store

If using 1ml Syringe [Scale in 0.01ml]

Check the

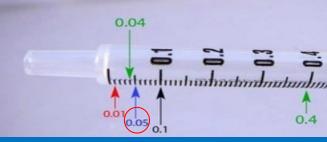
**VOLUME** 

and

UNITS

of the

syringe!



For 1mLsyringe (pic above), make sure to syringe out at the o.o5mL (blue mark) for 5 IU dose. Anything > 0.1mL is overdose!

PPUKM Formulary App is now available on:





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50 -60 -70

-80

90

-100

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