



## Background information on the Medusa website

- **Why does the website exist?**
- **Who produces it and how is it funded?**
- **What is the content of the website?**
- **Who uses it?**
- **What problems does it try to solve?**
- **Why standardise infusion concentrations?**
- **Do NHS agreed standard infusion concentration lists exist?**



## HSIB report

### **[HSIB report: Procurement, usability and adoption of smart infusion pumps, published Dec 3 2020](#)**

**One of the recommendations was as follows: It is recommended that the MEDUSA (UK Injectable Medicines Guide) advisory board, in conjunction with other relevant multi-professional organisations, develops validated national drug libraries for smart infusion pumps.**



## **IMG response to HSIB report**

- **Expansion of already agreed paediatric and adult infusion concentration lists**
- **Collaboration with ALL infusion pump manufacturers**
- **Continuing funding for specialist paediatric and adult critical care pharmacists**



## Current problem

- **Individual organisations and pump manufacturers are doing their own thing and are reluctant to share their work**



## **IMG Drug library project**

### **Scoping studies**

#### **Why**

**National drug library**

**Building from what we have or build from scratch**

#### **Questions**

**What drug libraries do we already have**

**What do they look like**

**Can they be brought together for analysis**

**Libraries from different pumps and manufacturers**

**Various formats and data sets**

**How many drugs are involved**

**Why a number of entries for each drug**



## **IMG Drug library project**

### **Process**

#### **Requested drug libraries to be sent in**

**108 drug libraries so far from 29 Trusts**

**Various formats – mainly Excel and pdf**

#### **Data extraction**

**Built a library of extraction techniques to get the data out of the file into a database**

**Matched each data item to a master dataset**

**Extending the dataset as we found new data items**

**Pdf are the most challenging to extract data from**



## IMG Drug library project

### Standardisation

#### Drugs

Different names for the same thing

Generic and brand names

Products and concentrations

#### Units

mcg vs micrograms, hour or hr

1000 mcg vs 1 mg – followed BNF prescribing guideline rules

#### Other things

Patient groups

Particularly Paeds and Neonates <1kg, 2-4kg

Conditions and Specialties – CCU, General wards

How administered – central vs peripheral

Dosing – loading vs maintenance

Routes - Central and peripheral

#### Why

Not just so we could analyse

But also a national drug library would be built on national terminology



## **IMG Drug library project**

### **Analysis and outcomes - report 1**

#### **First report**

**Looked at concentrations and products in drug libraries**

**Split into adult, paediatric and neonatal**

**Included the ICs and NPPG standard concentrations**

**Looked for other common concentrations used**



Drug	Standard or common	Occasional	Rare
Alteplase (24)	<b>1 mg /mL (20)</b> 50 mg in 50 mL Syringe (10)		20 micrograms /mL (1) 10 mg in 500 mL Volumetric  100 micrograms /mL (1) 5 mg in 50 mL Syringe  200 micrograms /mL (1) 10 mg in 50 mL Syringe  2 mg /mL (1) Syringe
Aminophylline (31)	<b>ICS standard</b> <b>1 mg /mL (16)</b> 250 mg in 250 mL Volumetric (1) 500 mg in 500 mL Volumetric (4) 1 g in 1 L Volumetric (2)	<b>10 mg /mL (7)</b> 500 mg in 50 mL Syringe (3) 1 g in 100 mL Volumetric (1)	500 micrograms /mL (1) 500 mg in 1 L Volumetric  2 mg /mL (2) 500 mg in 250 mL Volumetric  2.5 mg /mL (1) Volumetric  5 mg /mL (2) 250 mg in 50 mL Both  25 mg /mL (2) Syringe (1)



## **IMG Drug library project**

**Analysis and outcomes – report 2**

**Looked at dose rates for continuous infusions**

**Split into adult, paediatric and neonatal**

**Observations:**

**Specification of pumps**

**Standardising of terminology**

**Consideration of what could be national and what would be local**

**How we could develop a national drug library template**

**But a national pump library is, at present, unlikely to be achievable**



## **IMG Drug library project**

**These are observations and cannot be recommendations**

**Recommendations could only come after an expert group had considered these observations**

**Access to the reports**



## **IMG Drug library project**

**Next steps**

**IMG cannot do this alone**

**Funding**

**Engagement**

**NAMDET**

**Drug library authors expert group to work on this - Sub-group of MSO network?**

**Involvement of nurses who use the pumps**

**Critical care, Cardiology, General ward – also Maternity and Renal**

**Involvement of staff who manage pumps in Trusts and who provide training**