Managing smart pump governance compliance visibility

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Background:

- Smart pump drug libraries require sound governance processes.
- Our governance requires a minimum number of references and multidisciplinary review and sign off by; a senior medical officer, a registered nurse or midwife, a specialist pharmacist, and a smart pump pharmacist.
- For high-risk medicines where disparate practices are possible, sign off by each clinical area is required before including in unit specific profiles.
- The overarching committee requires evidence of following the governance process for approval and prior to sending protocols to "live" devices.
- We implemented smart pumps with a staged library with some protocols fully programmed with limits, and others acting only as a label with no limits and mL/hour only, termed "NOT smart".

Objectives:

- Clearly identify protocols with completed approval process in smart pump editor tool to prevent inadvertent inclusion in live datasets.
- Develop process for recording large amounts of data, allowing retrieval for reporting purposes, recording changes, and responding to questions of "who signed off that dose?"

Method:

1. Every protocol built in master drug library to allow use of categories

- The smart pump software used allows for categories to be attached to protocols in the master drug library.
- All protocols were built to allow allocation of three governance categories;

Test
NOT smart
APPROVED

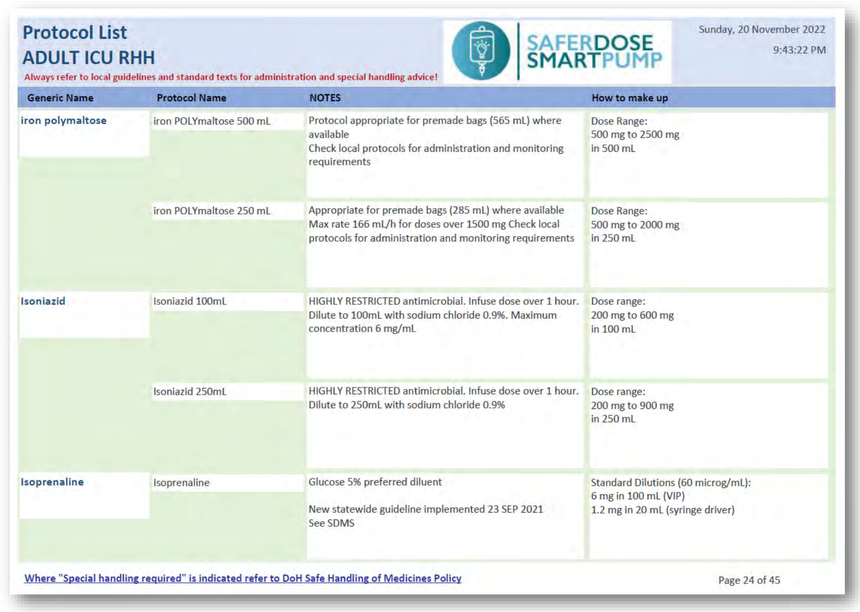
Drug Name	Drug Libraries	Therapies	Category
Metaraminol *P	1	1	Paediatric Test Critical Care BOLUS enabled CHILD >40kg

- The "approved" category is allocated to protocols only once all steps of the approval process are completed.

2. Microsoft Access™ was utilised to record every aspect of the approval process

- Access "Task management" template was expanded to include generic name, protocol name, justification of limits, updates, multiple pick drop down lists for references, clinician review and sign off, status (e.g. not started, approved, waiting for clinician sign off), links to scanned sign offs.
- Reports were developed for the governance process, and for profiles. Profile reports include a full list of smart protocols, how to make up infusions and brief clinical notes.

Profile reports hosted on the "SaferDose SmartPump " intranet page


Protocol List
ADULT ICU RHH
Always refer to local guidelines and standard texts for administration and special handling advice!
SAFERDOSE SMARTPUMP
Sunday, 20 November 2022 9:43:22 PM

Generic Name	Protocol Name	NOTES	How to make up
iron polymaltose	iron POLYmaltose 500 mL	Protocol appropriate for premade bags (565 mL) where available Check local protocols for administration and monitoring requirements	Dose Range: 500 mg to 2500 mg in 500 mL
	iron POLYmaltose 250 mL	Appropriate for premade bags (285 mL) where available Max rate 166 mL/h for doses over 1500 mg Check local protocols for administration and monitoring requirements	Dose Range: 500 mg to 2000 mg in 250 mL
Isoniazid	Isoniazid 100mL	HIGHLY RESTRICTED antimicrobial. Infuse dose over 1 hour. Dilute to 100mL with sodium chloride 0.9%. Maximum concentration 6 mg/mL	Dose range: 200 mg to 600 mg in 100 mL
	Isoniazid 250mL	HIGHLY RESTRICTED antimicrobial. Infuse dose over 1 hour. Dilute to 250mL with sodium chloride 0.9%	Dose range: 200 mg to 900 mg in 250 mL
Isoprenaline	Isoprenaline	Glucose 5% preferred diluent New statewide guideline implemented 23 SEP 2021 See SDMS	Standard Dilutions (60 microg/mL): 6 mg in 100 mL (VIP) 1.2 mg in 20 mL (syringe driver)

Where "Special handling required" is indicated refer to DoH Safe Handling of Medicines Policy
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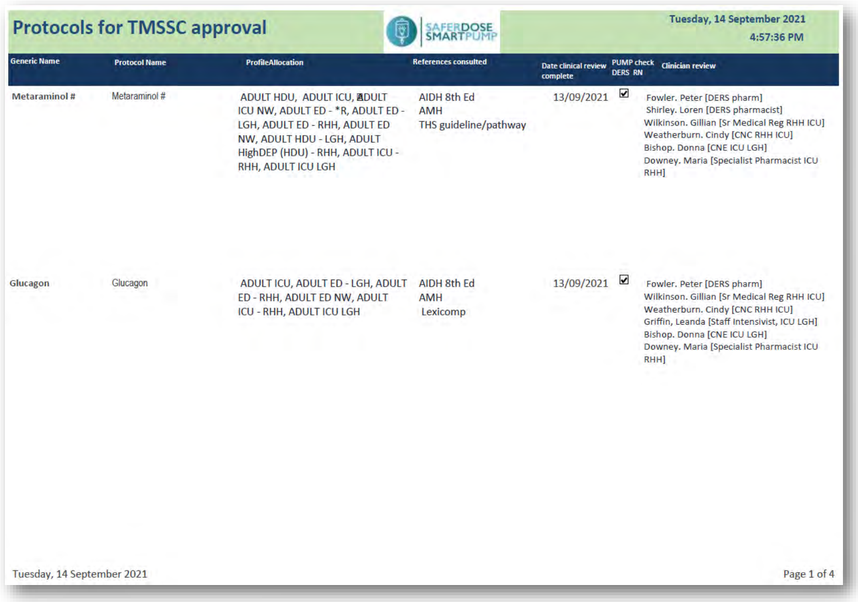
Report for governing committee


Protocols for TMSSC approval
SAFERDOSE SMARTPUMP
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Generic Name	Protocol Name	ProfileAllocation	References consulted	Date clinical review complete	PUMP check DERS	PUMP check RN	Clinician review
Metaraminol #	Metaraminol #	ADULT HDU, ADULT ICU, ADULT ICU NW, ADULT ED - *R, ADULT ED - LGH, ADULT ED - RHH, ADULT ED NW, ADULT HDU - LGH, ADULT HighDEP (HDU) - RHH, ADULT ICU - RHH, ADULT ICU LGH	AIDH 8th Ed AMH THS guideline/pathway	13/09/2021	☑		Fowler. Peter [DERS pharm] Shirley. Loren [DERS pharmacist] Wilkinson. Gillian [Sr Medical Reg RHH ICU] Weatherburn. Cindy [CNC RHH ICU] Bishop. Donna [CNE ICU LGH] Downey. Maria [Specialist Pharmacist ICU RHH]
Glucagon	Glucagon	ADULT ICU, ADULT ED - LGH, ADULT ED - RHH, ADULT ED NW, ADULT ICU - RHH, ADULT ICU LGH	AIDH 8th Ed AMH Lexicomp	13/09/2021	☑		Fowler. Peter [DERS pharm] Wilkinson. Gillian [Sr Medical Reg RHH ICU] Weatherburn. Cindy [CNC RHH ICU] Griffin, Leanda [Staff Intensivist, ICU LGH] Bishop. Donna [CNE ICU LGH] Downey. Maria [Specialist Pharmacist ICU RHH]

Tuesday, 14 September 2021
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Evaluation:

- There have been occasions where clinicians have questioned who signed off the protocol, or why certain parameters were selected. All aspects of the development, review, and approval process are easily extracted from the developed database.
- The use of categories allocated to each protocol allows visibility of smart protocols that have completed the full approval process. Over a period of two years there have been no cases of unapproved protocols being included in a live dataset.

Discussion

Microsoft Access™ is an effective tool to manage large amounts of data with complex relationships. Interrogating the data to trace all aspects of the development, review and approval process is simple and visible.

Using categories in the smart pump editor software is a useful tool to improve the visibility of approved protocols and prevent test protocols being inadvertently added to live profiles