

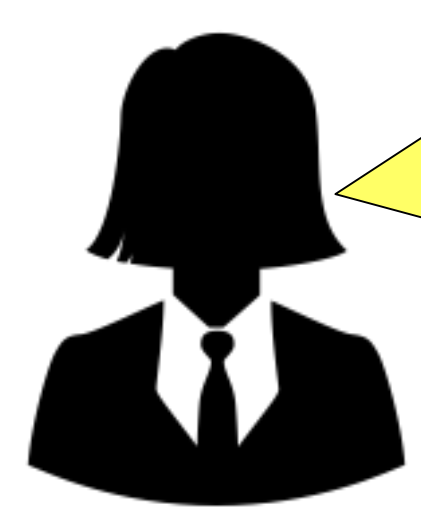
Partnered-Pharmacist Medication Charting in an Outpatient Infusion Centre - a new paradigm

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Background

- Mid-2020, some medical **services were moved** from main hospital to a new campus.
- Included the **Outpatient Infusion Centre (OIC)**; patients receiving infusions such as infliximab, natalizumab and rituximab.
- Our hospital still does not have an Electronic Medical Record.
- All infusions are prescribed on **paper charts** by many different medical units.
- Challenges:
 - Existing medical staff were unable to come to the new campus.
 - **No funding** for additional doctors to write the charts.



PPMC works very well in the Emergency Department. Could a pharmacist write these charts too?

- **SVHM Chief Nursing Officer**

Aim

To implement and evaluate a PPMC service in an Outpatient Infusion Centre.

Implementation Model

- Workflow requirements determined.
- Victorian **Legislation reviewed**:
 - ✓ Pharmacists able to do so.
- Medications in/out of scope determined.
- **Best-practice charting** determined.
 - Include: unit-specific practices such as types and doses of pre-medications.

Figure 1: Recommended charting – Infliximab, first dose, gastroenterology

Year 2020	Date/Time ordered	Fluid Type and Additive (amount per bag or syringe)	Line/Route	Volume	Rate	Dr Signature/Print Name
11/8	1400	Pre-medication hydrocortisone 100 mg	IV	2 mL	Over 30 seconds	SRE
11/8	1400	Infliximab 300 mg in sodium chloride 0.9%	IV	250 mL	Over 2 hours	S. Cockram (Pharmacist)
11/8	1400	Post-infusion sodium chloride 0.9% flush	IV	100 mL	Over 2 hours	SRE
11/8	1400	Hydrocortisone 100 mg PRN	IV	2 mL	Over 30 seconds	S. Cockram

Figure 2: Recommended charting – Natalizumab, 1 hour rate

Year 2020	Date/Time ordered	Fluid Type and Additive (amount per bag or syringe)	Line/Route	Volume	Rate	Dr Signature/Print Name
11/8	1400	Natalizumab 300mg in sodium chloride 0.9%	IV	115 mL	Over 1 hour	SRE

Figure 3: Recommended charting – Ocrelizumab, first dose

Year 2020	Date/Time ordered	Fluid Type and Additive (amount per bag or syringe)	Line/Route	Volume	Rate	Dr Signature/Print Name
11/8	1400	Pre-medication methylprednisolone 100 mg	IV	1 mL	Over 5 minutes	SRE
11/8	1400	Pre-medication paracetamol 1000 mg	PO	-	STAT	S. Cockram (Pharmacist)
11/8	1400	Pre-medication cetirizine 10 mg	PO	-	STAT	S. Cockram
11/8	1400	Ocrelizumab 300 mg in sodium chloride 0.9%	IV	275 mL	as per guideline	SRE

Implementation Model

- **Procedures and credentialing processes** developed by senior pharmacists.
- Pharmacist to document a **clinical note** prior to charting.
 - **Templates** developed to standardise documentation.

Figure 2: section of the infliximab clinical note template

Infusion	
Medication:	Infliximab
Brand:	
Diluent:	Sodium Chloride 0.9%
Dose:	
Volume:	
Rate:	Over XXXXX minutes OR Patient eligible for rate increase (nurses to manage). "As per guideline" to be documented.
Frequency:	Every XXXXX weeks
Supportive Therapies:	
Pre-infusion	
Post-infusion	Sodium chloride 0.9% flush 100 mL over XXXXX minutes
PRN	Hydrocortisone 100 mg IV (2 mL) over 30 seconds
Funding Information:	
PBS approved OR PBS plus compassionate	
OR SVHM MTAC approved until <date> OR clinical trial	

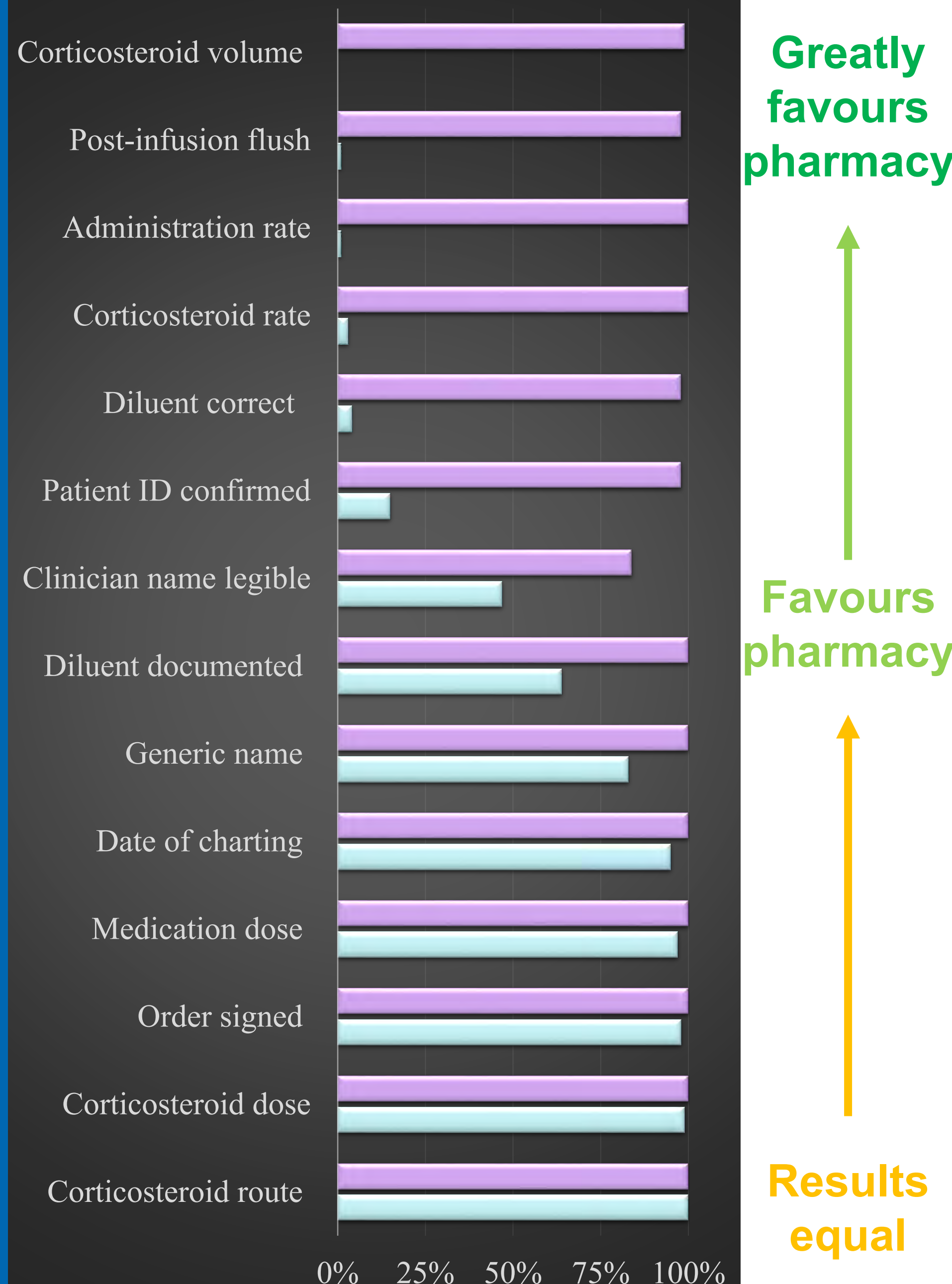
- Pharmacists need existing credentialing in general PPMC.
- Proposal endorsed by Heads of Units and Medication Safety Committee.

Retrospective Audit

Hypothesis: quality of medication charts by pharmacists non-inferior to those written by medical model.

Retrospective analysis:

- **Medical model – 289 charts**
- **Pharmacist model – 199 charts**
- Compliance compared for a range of medication-safety best practices.



Workflow Impact

- PPMC **integrated efficiently** to OIC.
- **Pharmacy model: single pharmacist** can coordinate all charts.
 - **Medical model:** requires at **least five** different part-time **medical staff**.



Sometimes it is necessary for OIC bookings to be made with little notice.

- **Pharmacy model:** on-site pharmacist can prepare medication charts **quickly**.
- **Medical model:** **delays** often result.

Incidental Safety Share

- Patient prescribed **rituximab**.
- Mandatory serology was not performed.
- **Pharmacist identified and facilitated**.
- Positive **core** antibodies for **hepatitis B**.
- Prophylactic **anti-virals** commenced.
 - *Without PPMC thoroughness, rituximab could have caused serious patient harm.*

Discussion

Compared to medical model, our program is:

- ✓ **At least non-inferior** in terms of medication safety parameters,
- ✓ **Very well accepted** by all staff and,
- ✓ **Works efficiently** within OIC workflow.

- Pharmacist **clinical notes** considered **valuable sources** of information.
- Templates have proven useful tools for ensuring all safety requirements are met.

Future Directions

- OIC has **moved back** to the main campus.
- However PPMC was deemed so successful that it is **now the standard of practice** and continues as a permanent role.
- Services now **expanded** to cover **blood products** (e.g. Intravenous Immunoglobulin)

We have demonstrated that PPMC does not need to be confined to acute wards.

- *Could PPMC be applied to other services such as pre-admission, dialysis, and hospital in the home?*

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