PHARMACIST MEDICATION RECONCILIATION

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Introduction

- Medication reconciliation at transition points of patient care has been found to consistently reduce discrepancies arising from omissions, duplications, dosing errors, or drug interactions.
- In CGH, the doctor does the first round of medication reconciliation during patient admission, followed by the pharmacist who then highlights to the primary team if any discrepancies are uncovered.

Objectives

To improve patient safety by

- Achieving a higher percentage of pharmacist medication reconciliation so that any unintentional discrepancies can be resolved before medication errors occur.
- Enhancing inter-professional communication on patient preadmission medication list (PAML)

Methodology

PAST

- Pharmacist medication reconciliation occurs only when patients are transferred to the inpatient wards.
- With inpatient bed crunch issues, pharmacist medication reconciliation process was delayed as many inpatients continued to reside in A&E holding area.

CURRENT INITIATIVE

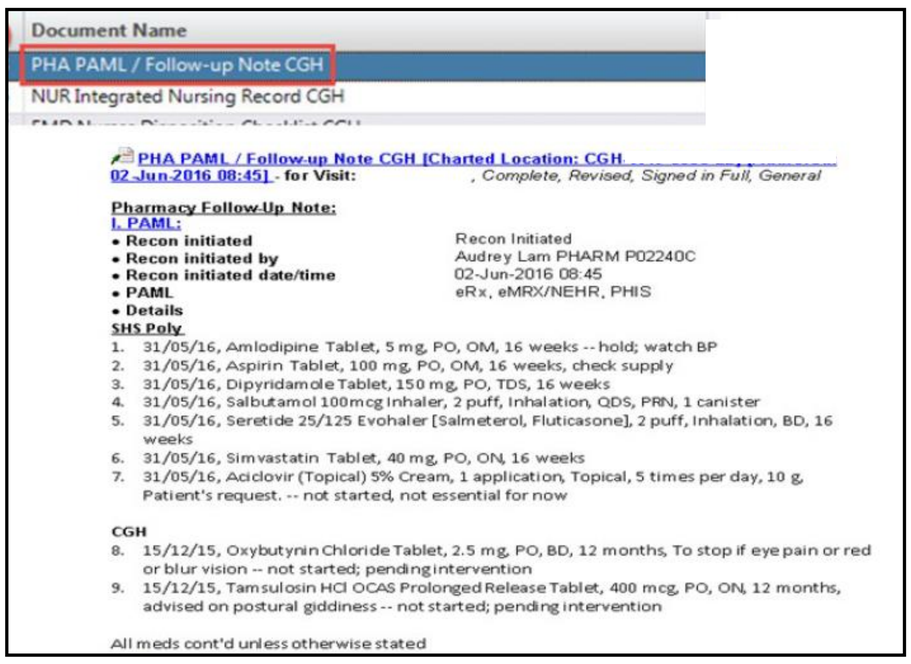
- One pharmacist head count was placed in A&E holding area so that unintentional discrepancies may be surfaced earlier to avert medication errors.
- Making use of information technology (IT), patient's active medications were extracted from Sunrise Clinical Manager to reduce transcribing error
- This helps create the one source of truth for PAML which was later renamed **"PHA PAML/Follow-up Note CGH"** (Figure 2) accessible to all healthcare professionals .

Results

- The average monthly medication reconciliation done **within 24 hours** increased from 2768 (5/2015 to 2/2016) → 3284 (3/2016 to 12/2016).
- The average monthly percentage of pharmacist medication reconciliation rate improved from 90.8% (5/2015 to 2/2016) → 98.4% (3/2016 to 12/2016).
- The average percentage of medication interventions arising from medication reconciliation was 41.1%

	No. of MR done within 24 hours	Total No. of MR	Total No. of Inpatient Admission	Total MR Rate (%)
May-15	2293	3215	3562	90
Jun-15	2475	3247	3530	92
Jul-15	2607	3430	3711	92
Aug-15	2633	3322	3682	90
Sep-15	2874	3335	3536	94
Oct-15	3135	3449	3821	90
Nov-15	2937	3429	3666	94
Dec-15	3031	3425	3795	90
Jan-16	2921	3440	3938	87
Feb-16	2778	3344	3747	89
Mar-16	3156	3914	3974	98
Apr-16	3331	3905	3929	99
May-16	3185	3907	4064	96
Jun-16	3333	3911	3925	100
Jul-16	3195	3993	4174	96
Aug-16	3447	4186	4197	100
Sep-16	3322	3884	3900	100
Oct-16	3288	3993	4073	98
Nov-16	3277	4021	4082	99
Dec-16	3302	4000	4085	98

Figure 1. Medication Reconciliation (MR) Data


Document Name
PHA PAML / Follow-up Note CGH
NUR Integrated Nursing Record CGH

PHA PAML / Follow-up Note CGH [Charted Location: CGH
02-Jun-2016 08:45] - for Visit: , Complete, Revised, Signed in Full, General

Pharmacy Follow-Up Note:
I. PAML:
- Recon initiated: Recon Initiated
- Recon initiated by: Audrey Lam PHARM P02240C
- Recon initiated date/time: 02-Jun-2016 08:45
- PAML: eRx, eMRX/NEHR, PHIS
- Details

SHS Poly
1. 31/05/16, Amlodipine Tablet, 5 mg, PO, OM, 16 weeks -- hold; watch BP
2. 31/05/16, Aspirin Tablet, 100 mg, PO, OM, 16 weeks, check supply
3. 31/05/16, Dipyridamole Tablet, 150 mg, PO, TDS, 16 weeks
4. 31/05/16, Salbutamol 100mcg Inhaler, 2 puff, Inhalation, QDS, PRN, 1 canister
5. 31/05/16, Seretide 25/125 Evohaler [Salmeterol, Fluticasone], 2 puff, Inhalation, BD, 16 weeks
6. 31/05/16, Simvastatin Tablet, 40 mg, PO, ON, 16 weeks
7. 31/05/16, Aciclovir (Topical) 5% Cream, 1 application, Topical, 5 times per day, 10 g, Patient's request. -- not started, not essential for now

CGH
8. 15/12/15, Oxybutynin Chloride Tablet, 2.5 mg, PO, BD, 12 months, To stop if eye pain or red or blur vision -- not started; pending intervention
9. 15/12/15, Tamsulosin HCl OCAS Prolonged Release Tablet, 400 mcg, PO, ON, 12 months, advised on postural giddiness -- not started; pending intervention

All meds cont'd unless otherwise stated

***Figure 2. Example of* "PHA PAML/Follow-up Note CGH"**

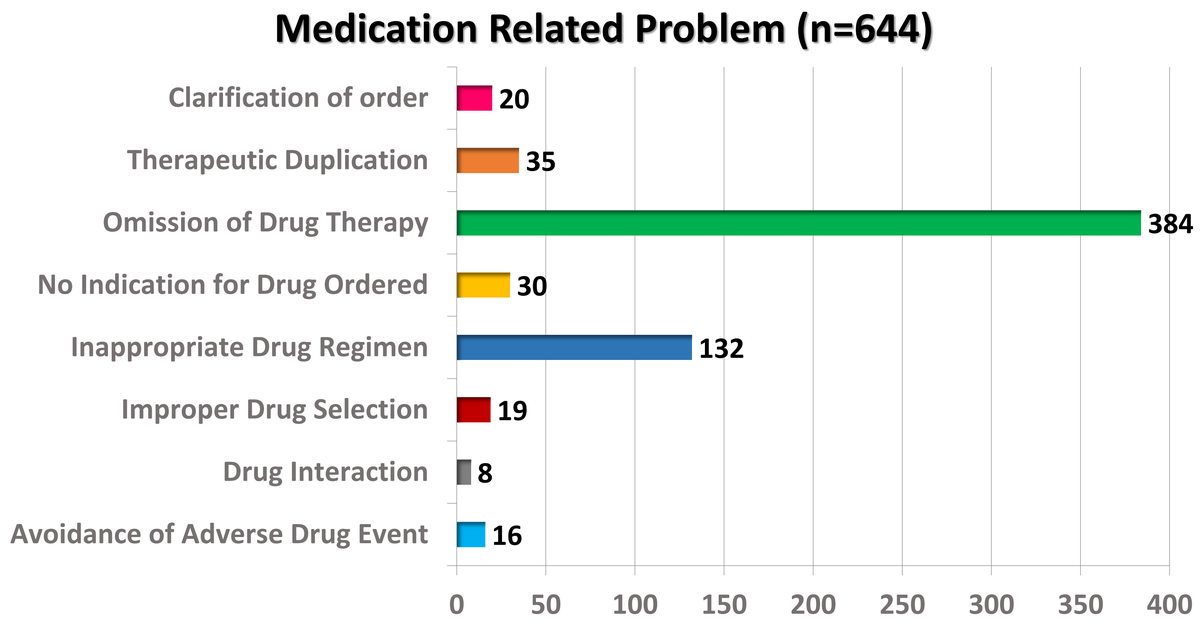


Figure 3. Types of medication interventions (Mar – Dec 2016)

- Of the interventions (n=644) done at A&E holding area from March to December 2016, majority were due to omission of drug therapy (59.6%, n = 384), followed by inappropriate drug regimen (i.e. dose, frequency) (20.5%, n=132).

Medication Related Problem	Examples
Omission of Drug Therapy	Chronic medications e.g. glaucoma eye drops, diabetes, hypertension medications and inhalers not started on admission. This is especially common in patients who are on follow up with external providers.
Inappropriate Drug Regimen	Levothyroxine 50mcg four times a week and 75mcg three times a week ordered as 250mcg three times a week.
Clarification of Order	Aspirin and atorvastatin was stopped during last admission but ordered during this admission.
No indication for Drug order	Patient is no longer on clopidogrel (as completed 1 year of dual antiplatelet therapy) but ordered on admission

Conclusion

- Medication reconciliation is an essential patient safety consideration.
- Placing a pharmacist at A&E holding area increases the number of pharmacist medication reconciliation within 24 hours and the total medication reconciliation rate.
- The 2 most common medication related problems identified during medication reconciliation were omission of drug therapy and inappropriate drug regimen.
- Developing PAML as an electronic document allows easy access by other healthcare professionals involved in the care of patient.
- There is a need to review the medication reconciliation process and its communication to keep up with changes in the hospital. e.g. increased workload and patient residing in A&E holding area.