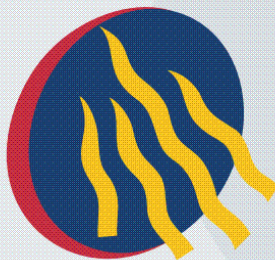


Streamlining Medication Management into the Community

Jennie McKay

Safe Medication Practice Unit



Queensland Government

Queensland **Health**

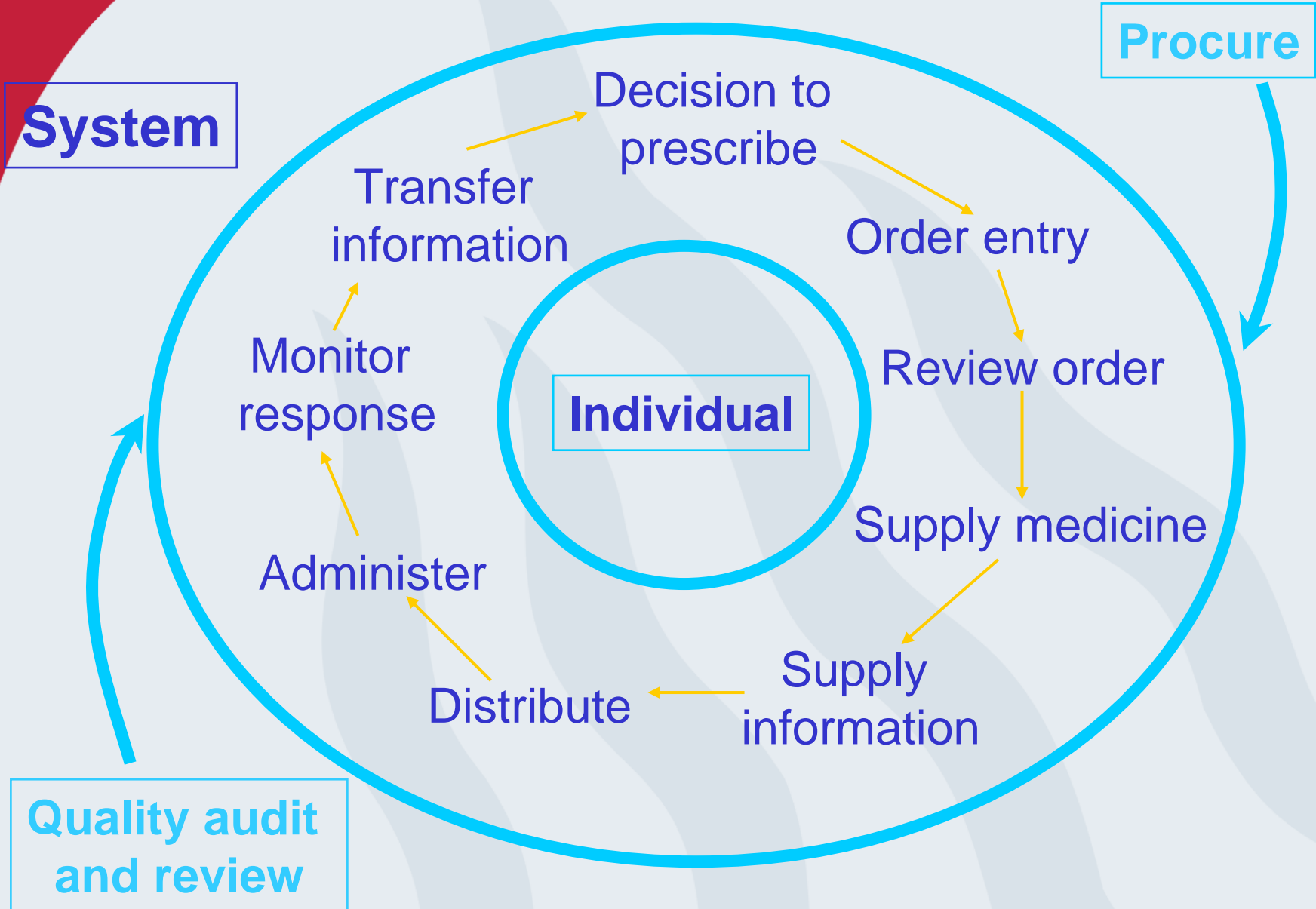
Background – Who are we?

Safe Medication Practice Unit

To prevent and address adverse drug events resulting in patient harm by improving medication related practices in four main areas:

- High risk medications
 - Anticoagulants, electrolytes, opiates, insulin etc
- Medication Continuum
 - Admission, discharge, handover
- Pharmaceutical Review
 - Minimum standards, competency assessment
- Electronic Medication Management
 - Enterprise-wide Liaison Medication System

Medicines Management Pathway



Background

- Admission
 - Gaps in medication history
 - Omitted on admission 0.54 ± 1.0 (0-5)
 - Discrepancies 0.28 ± 0.98 (0-11)
 - Omissions and discrepancies often continue until discharge

Ref: (1) Stowasser DA. [PhD] The University of Queensland; 2000; (2) Lum E, [MClinPharm] The University of Queensland; 2002; (3) Cornish P, Knowles S, Marchesano R, et al. Arch Intern Med 2005;165:424-9;

Background

- Discharge
 - 72% patients have changes to medications
 - Multiple medication changes total 8.1 ± 4.4 (0-22)
 - new 3.1 ± 2.6 (0-13)
 - changes 1.2 ± 0.8 (0-7)
 - ceased 1.8 ± 1.9 (0-13)
 - Omitted from discharge 1.38 ± 2.0 (0-12)
- Omission 1 drug = 2.3 X risk readmission
- Errors on discharge 5.2 – 52%
 - Prescriptions, discharge summaries

Stowasser DA, McGuire TM, Petrie GM, Lachlan RL, Collins DM. *Information Quality. A Major Consideration in the Development of Medication Liaison Services.* Aust J Hosp Pharm, 1997; 27: 322-6.

Background

- Discharge
 - ~20% patients have adverse event post discharge
 - ~70% related to medication
 - 95-98% ADEs occur in first 28 days post discharge
 - Patients provided with PBS quantity
 - No forcing function for review for 30 days
- GPs not receiving discharge summaries

Ref:(9) Mant A et al. MJA 2002;177: 32–34; (10) Stowasser DA et al. JPPR 2002; 32:133–40; (11) Forster A et al. Ann Int Med 2003;138:161-7.

Background

- Other issues
 - Timely communication
 - Aged Care Facilities
 - Community Pharmacies
 - Dose administration aids
 - Intra-hospital communication of medication issues

Background

- Solutions
 - Structured medication history interview on admission
 - Process for reconciliation on discharge
 - Medication chart
 - Discharge prescription
 - Medication history
 - Patients' own medicines
 - Statewide medication chart
 - Information technology

Enterprise-wide Liaison Medication System - eLMS

- Statewide system
- Capture “snapshots” of medication information
 - Admission (or pre-admission)
 - Discharge
- Pharmacy driven
 - RNs in rural sites
- Web-based application
 - accessed on any web-enabled QH computer across the state

eLMS

- Designed to capture ALL medications patient is taking
- Linked to iPharmacy dispensing system
 - Demographic information
 - Adverse drug events and allergies
 - Medicines dispensed
 - Wards, prescribers, clinical units
 - Medicine file
- Medication information can be copied from one episode of care to the next

eLMS

- Complementary medicines or alternative therapies can be recorded
- More than one trade name can be displayed for a generic medicine (i.e. less patient confusion)
- Ability to record information on use of medicines e.g. medication aids such as Webster Packs (i.e. to facilitate patient care)

Strategic Alignment

Aligns with QH work:

- APAC 'Guiding Principles to Achieve Continuity of Medication Management' - important to the Pharmaceutical Reform arrangements between QH and the Commonwealth Government
- Provides a tool to enable Pharmaceutical Review of inpatients as stipulated by the Joint Health Ministers' Communique (April 2004)
- With Divisions of GPs through GP Advisory Council (GPAC) Quality Use of Medicines Workgroup, to ensure development of resources that assist and support continuity of care for patients across the community-hospital interface

UR: 9326954

PRINCESS ALEXANDRA HOSPITAL TRAINING PHARMACY DEPARTMENT

Ward: W5A Medical & Ophthalmology

If you have any questions, please phone (07) 3240 2557 and ask for the pharmacy department.

DISCHARGE MEDICATION RECORD FOR PETER PAGE

Pharmacist: Jennie McKay

Date: Wednesday, 3 May 2006

Medicine Names	Brand Name	Used for	Directions	Daily Time Table				Changes
				Morning	Noon	Evening	Night	
Aspirin 100mg Tablets	Cardiprin 100	Prevent blood clotting	Take 1 tablet in the MORNING	1				Restarted
Insulin Neutral / Isophane 30/70, 3mL Pen	Mixtard 30/70 InnoLet	Treat diabetes	Use 10 units in the MORNING and Use 8 units in the EVENING with dinner	10 units		8 units		Changed - Decreased dose
Frusumide 40mg Tablets	Lasix Uremide	Remove excess fluid	Take 1 tablet in the MORNING	1				Unchanged
Temazepam 20mg Capsules	Temaze	Assist sleep	Take 1 capsule at NIGHT when required	Take 1 capsule at NIGHT when required				Unchanged
Oxycodone 5mg Tablets	Endone	Treat pain	Take 1 tablet FOUR times a day when required	Take 1 tablet FOUR times a day when required				New - Temporary

The following medicines were CEASED by your hospital doctor during your hospital visit:

<u>Date Ceased</u>	<u>Medicine</u>	<u>Brand Name</u>	<u>Explanation</u>
01/05/2006	Flucloxacillin 500mg Capsules	Flopen	no longer required

Allergies and Adverse Drug Events:

<u>Medicine</u>	<u>Reaction</u>	<u>Event Date</u>
Tramadol hydrochloride	vomiting	05/11/2003

Medication Action Plan – sharing medication issues

- Promotes structured process for medication history
- Provides a place to record medication issues, actions and outcomes
- Includes discharge planning information
- Kept with current medication chart

Medication Action Plan (MAP) & Handover

Queensland Government
Queensland Health

MEDICATION ISSUES AND ACTION PLAN

Date of admission: 19/07/106
Ward / Clinic: GEN MED
Facility/Service: GP
Consultant: SMITH

Date Identified	Issue Identified	Proposed Action	Person Responsible	Date of Action	Result of Action
20/7	TSH not checked recently	Check TFT & adjust Thyroxine if required	RMO	20/7	TFT checked All OK.
20/7	Statins ceased? Rhabdo	Review prior to D/C - restart lower dose - 8 to pravastatin	RMO		
20/7	Acute decline in renal function	Recommend withdrawal of Perindopril & Indapamide Review ACE with view to restart prior to D/C	RMO	20/7	Contacted Dr Ivess a ceased or renal chart as per instructions
20/7	Carvedilol dose low	Recommend titrate to 25mg bd or max tolerated	RMO	20/7	↑ dose to 0.25mg bd
20/7	Compliance issues	Counsel patient & discuss strategies for administration aid	pharm		

DO NOT WRITE IN THIS BINDING MARGIN

Issues – pg 1

MEDICATION ACTION PLAN AND HANDOVER

Please see over

SWXK - V1.00 - 07/2008 - PHZ

KEEP WITH ACTIVE MEDICATION CHART - DO NOT REMOVE

(Affix patient identification label here and overleaf)

URGENT & ADVERSE DRUG REACTIONS (ADRs)
 Unknown Unknown Unknown Unknown

URN: 000 000
Family name: GEORGIE
Given name: PHYLLIS JOYCE
Address: 27 HAPPY ST
CONTENEVILLE
Date of birth: 21/08/1954 Sex: M F

GP: 288 Pharm 288 Pharm Date: 20/7
1st Clinician to Print Patient Name and Check Label Correct: 288 Pharm

MEDICINES TAKEN PRIOR TO PRESENTATION TO HOSPITAL

Date	Medicine (Trade name) / Strength / Form	Dose	Frequency	Indication (confirm with patient)	How long Source or when started	Initials & Profession	Dr's Plan to Withdraw or Change	Reconcile
20/7	Thyroxine 50mg	125mcg	mane	Hypothyroid	>10yrs	288 Pharm	✓	✓
-	Perindopril	4mg	mane	HF/HTN	>5yrs	288 Pharm	✓	✓
-	Indapamide 2.5mg	2.5mg	mane	-	-	288 Pharm	✓	✓
-	Carvedilol	3.125mg	bd	-	6mths	288 Pharm	✓	✓
-	Simvastatin	80mg	nocte	↑ chol	6mths	288 Pharm	✗	✓
-	Aspirin	100mg	mane	prevent blood clots	>5yrs	288 Pharm	✓	✓
-	Swisse Women's MultiVit	-	mane	supplement	yes	288 Pharm	✓	✓

DO NOT WRITE IN THIS BINDING MARGIN

Med hx – pg 3

Reviewed by admitting Registrar: Signature: Date: Reviewed by Consultant: Signature: Date:

RECENTLY CEASED OR ALTERED MEDICATIONS (prior to presentation to hospital)
Finished course of methotrexate 2/52 ago (wrt)

CONFIRMATION OF MEDICINE LIST ABOVE

Source	Confirmed by	Date
<input type="checkbox"/> General Practitioner (GP)		
<input type="checkbox"/> Community Pharmacist (CP)		
<input checked="" type="checkbox"/> Patient (P) (Carer)	288 Pharm	20/7
<input type="checkbox"/> Nursing Home (NH)		
<input checked="" type="checkbox"/> Own Medicines (OM)	288 Pharm	20/7
<input type="checkbox"/> Community Nurse (CN)		
<input type="checkbox"/> Patient List (PL)		
<input type="checkbox"/> Previous Admission (PA)		

Main benefits

- Capture of medication histories on admission
- Generation of a Medication Action Plan
- Generation of discharge medication records for patients
- Discharge medication profiles that can be sent to GPs and community pharmacists
- Information available to be viewed by other users

This will facilitate the transfer of accurate and comprehensive medication related information on discharge

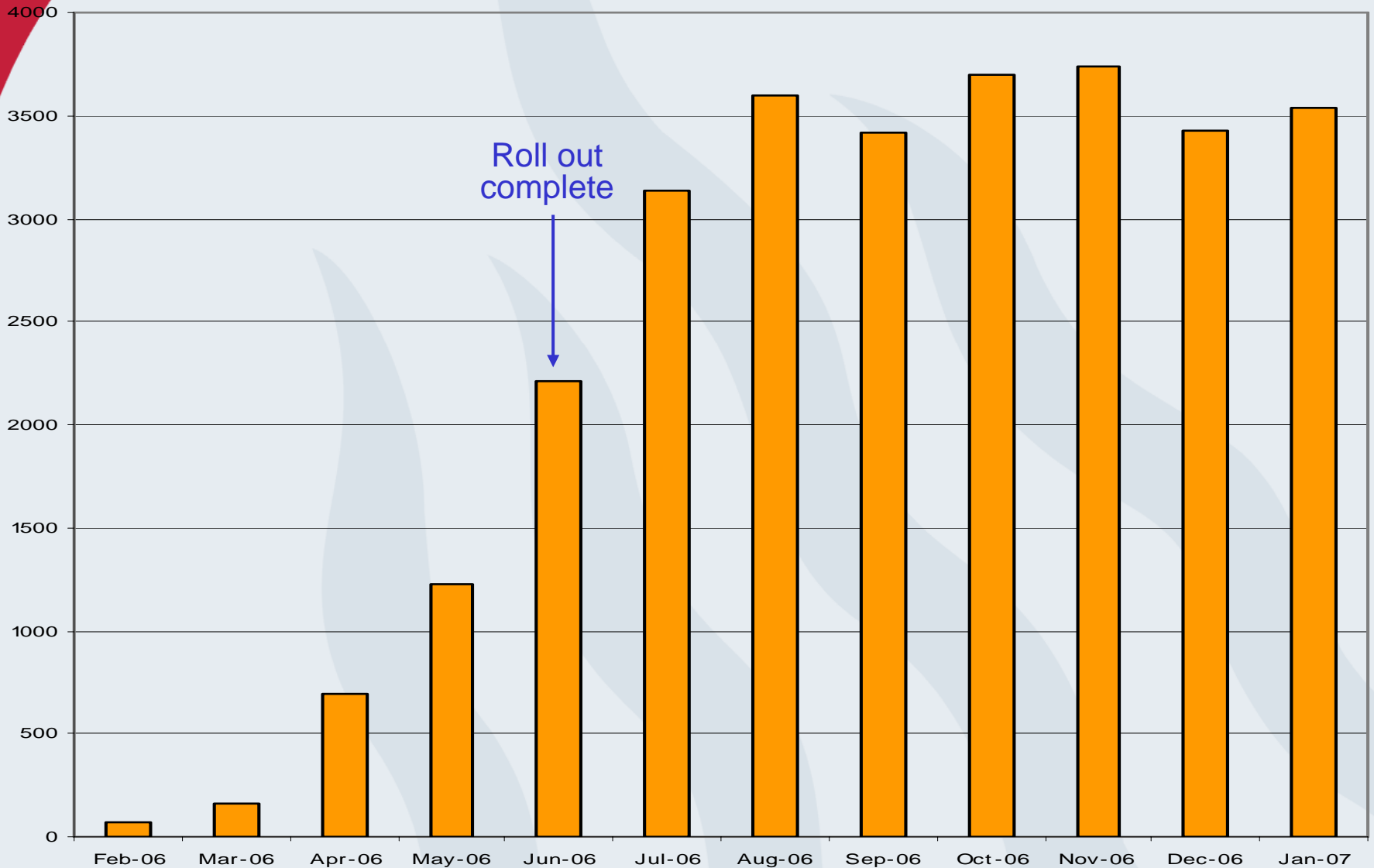
Secure Transfer to Community Providers

- General practitioners
 - GP Software unable to receive our HL7 message
 - Utilising current GP Connect system
 - Requires change to HL7
 - Very basic display options – plain text
- Community Pharmacies?
- Aged Care Facilities
 - Little computerisation

Outcomes

- Rolled out to 46 sites
 - ~60% sites integrated into daily work practice
 - Uptake across wide range of facilities
- Some sites ~80% discharges dispensed in pharmacy receiving Discharge Medication Record
- Supplying discharge medication information to discharge summary systems

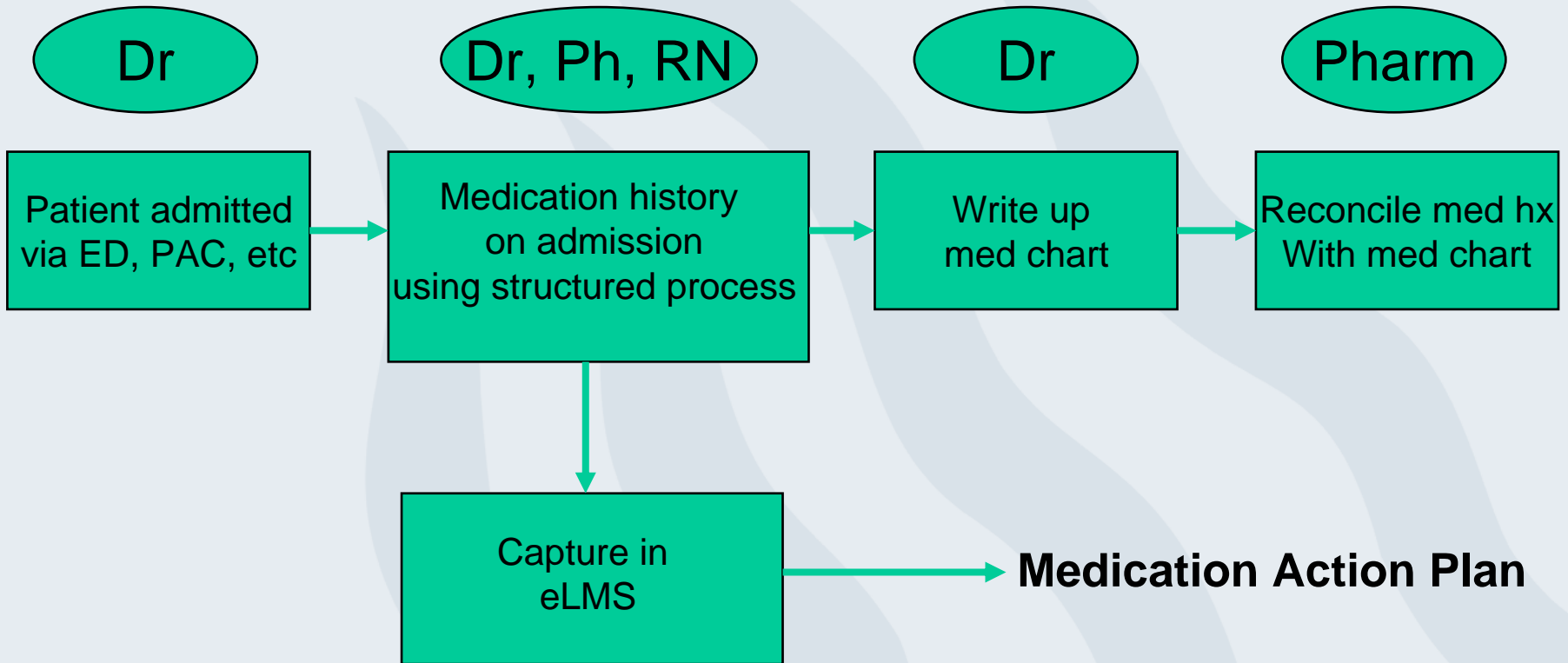
Number of Discharge Medication Records All sites



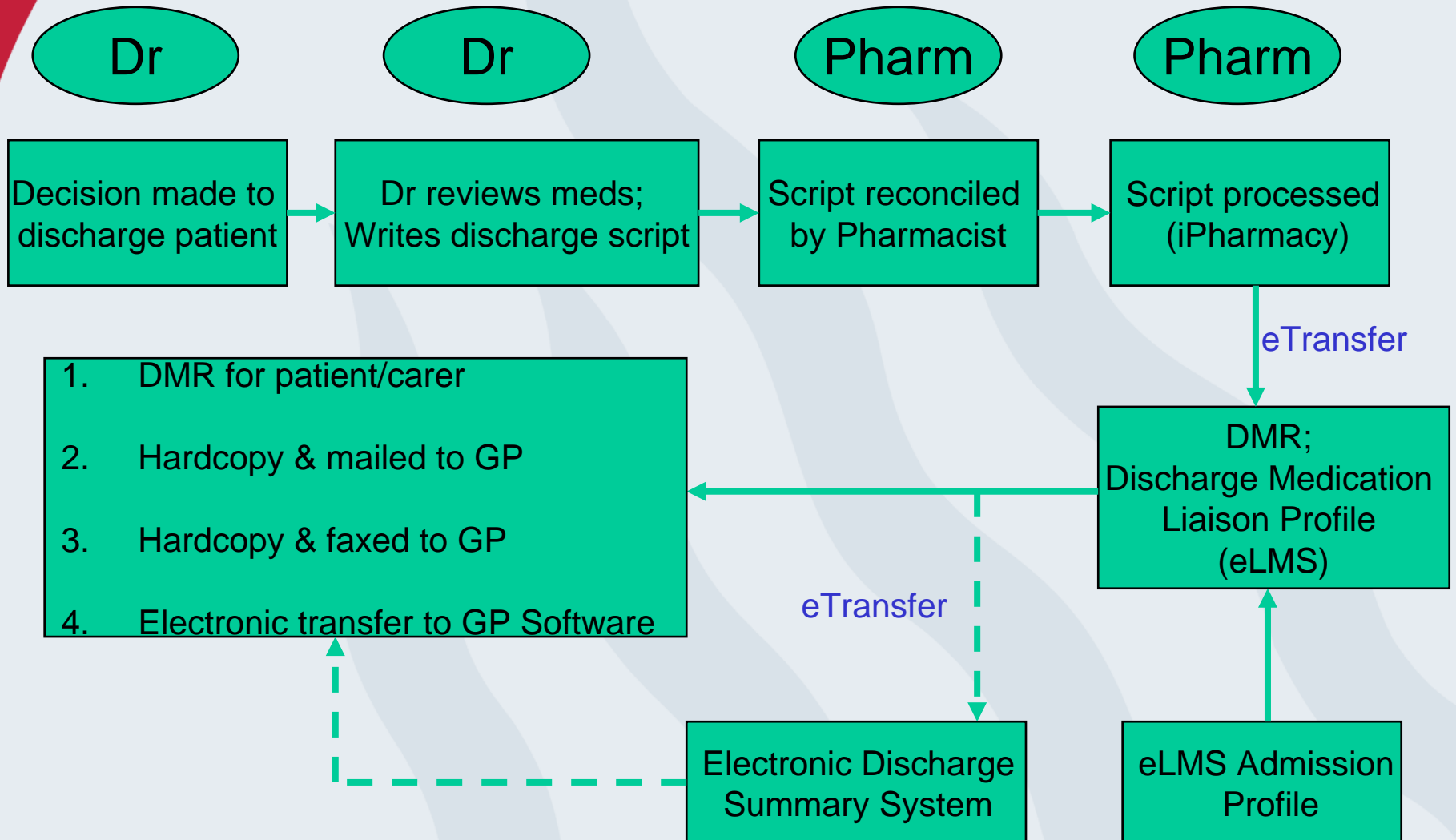
Resolving other issues

- 7-day Interim Nursing Home Medication Chart
 - Facilitate ongoing medication management and administration
 - Co-ordination between hospital, GPs, Aged Care Facilities and community pharmacies

Admission Work Flow



Discharge Work Flow



Problems

- Require appropriately trained staff to ensure information is gathered correctly
- Discharged patients leave hospital with out seeing hospital pharmacist
 - Many PBS prescriptions leave hospital without a pharmacist review
- Clinical IT is vital but NOT the answer to everything
- Limitations in GP software

Key Messages

- Communication of complete and accurate information paramount
- There is always vulnerability at handover points
- Need to ensure involvement of all parties
- Need to look beyond hospital boundaries

Future

- Continuity of care for patient's returning to Aged Care Facilities
- Continued promotion of work practices
- Links to electronic prescribing