South Australian Initiatives in Medication Reconciliation - wins, losses and performance indicators

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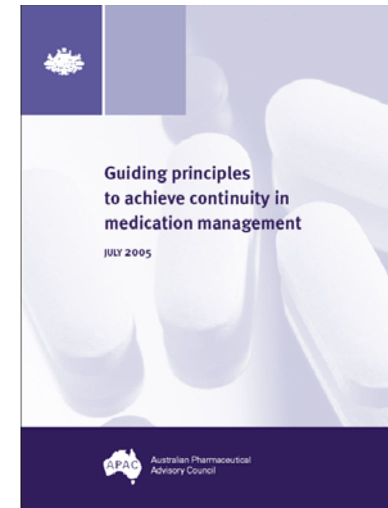
Pharmaceutical Reforms

- > PBS
- > APAC guiding principles
  - Guidance and strategies for preventing medication errors at transitions across care settings
- > Medication reconciliation activities underpin many of the principles



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APAC guiding principles and medication reconciliation

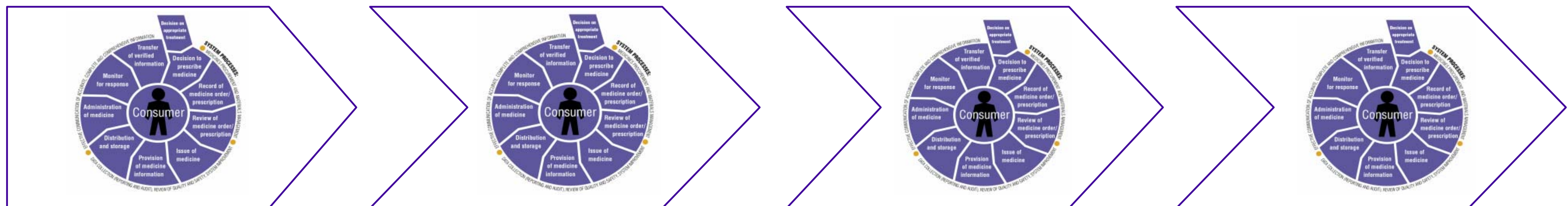
1. Leadership
2. Responsibility
3. Accountability

9. Communicating medicines information

10. Evaluation

Admission to next episode

Discharge to next episode



Current episode of care

During episode

4. Accurate medication history
5. Medication review & reconciliation
6. Medication action plan
7. Medicines information to consumers
8. Ongoing access to medicines (discharge reconciliation)

Prior to the Reforms….

- Medication histories
  - often incomplete or incorrect
  - used to commence treatment for the patient
  - no standard location and multiple variable medication histories throughout the notes
- Medication action plan
  - Documentation of interventions and changes to therapy difficult to find in notes, if done…
- Discharge
  - Ad hoc pharmacy discharge reconciliation
  - Local hospital data
    - 3 errors per discharge prescription[1]
    - 3 to 6 errors per discharge summary[1,2]

1 Wallace C *et al.* RAH review 2007
2 Tan D *et al.* RAH review 2005

Implementing APAC

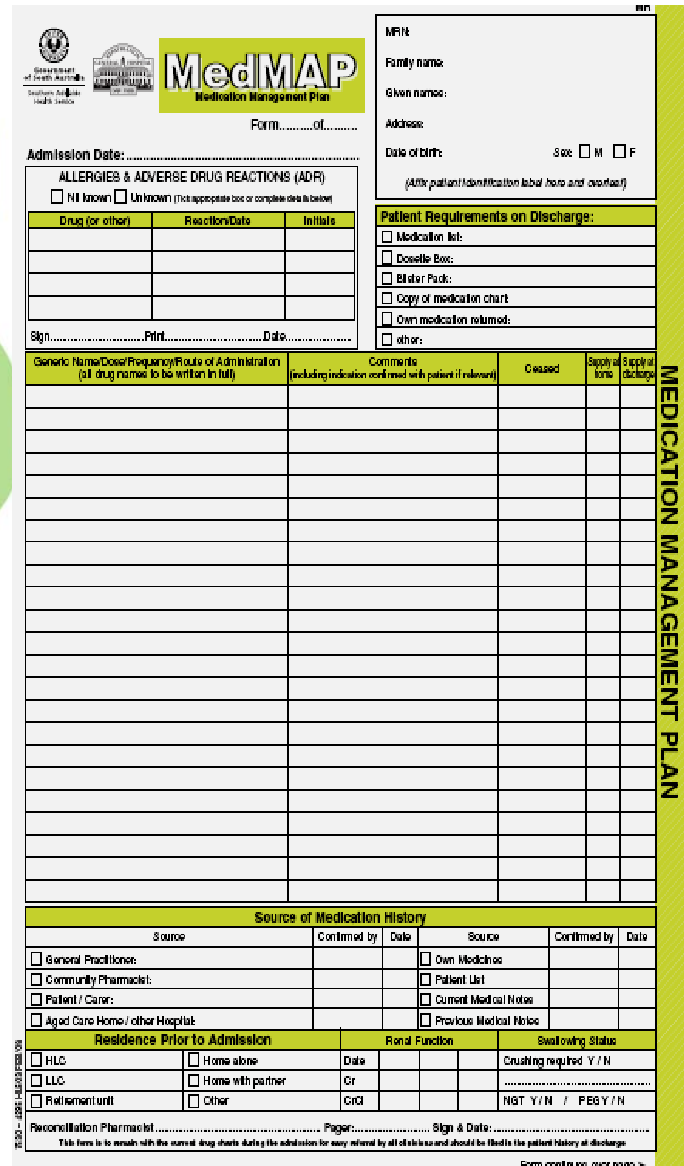
> Supported by new pharmacist FTE
- Based on SHPA clinical pharmacy ratios
- Staged recruitment of 76 FTE across 6 metro hospitals
- Includes ED coverage

> ↑ pharmacy trainee positions

> Note: existing clinical pharmacy service
- Very low FTEs (1 per 100beds)
- No ED pharmacy services
- No standard service
- No measurement

Hospital	FTE	APAC focus
RAH	5	ED, Pre-admission
FMC	3	Ward- based clinical services
TQEH	2	ED, discharge
RGH	2	Pre-admission, Acute Referral Unit
WCH	1	Discharge
LMH	1	ED, medical team

MedMAP



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MedMAP
Medication Management Plan

Form.........of.........

MRN:
Family name:
Given names:
Address:
Date of birth: Sex: ☐ M ☐ F
(Affix patient identification label here and overleaf)

Admission Date: ....

ALLERGIES & ADVERSE DRUG REACTIONS (ADR)
☐ Nil known ☐ Unknown (Tick appropriate box or complete details below)

Drug (or other)	Reaction/Date	Initials

Sign.........................Print.........................Date.................

Patient Requirements on Discharge:
- ☐ Medication list:
- ☐ Dosette Box:
- ☐ Blister Pack:
- ☐ Copy of medication chart
- ☐ Own medication returned:
- ☐ other:

Generic Name/Dose/Frequency/Route of Administration (all drug names to be written in full)	Comments (including indication confirmed with patient if relevant)	Ceased	Supply at home	Supply at discharge

MEDICATION MANAGEMENT PLAN

Source of Medication History

Source	Confirmed by	Date	Source	Confirmed by	Date
☐ General Practitioner:			☐ Own Medicines		
☐ Community Pharmacist:			☐ Patient List		
☐ Patient / Carer:			☐ Current Medical Notes		
☐ Aged Care Home / other Hospital:			☐ Previous Medical Notes		

Residence Prior to Admission		Renal Function				Swallowing Status
☐ HLC	☐ Home alone	Date				Crushing required Y / N
☐ LLC	☐ Home with partner	Cr				....
☐ Retirement unit	☐ Other	CrCl				NGT Y/N / PEG Y/N

Reconciliation Pharmacist.............................. Pager:.................. Sign & Date:..............................

This form is to remain with the current drug charts during the admission for easy referral by all clinicians and should be filed in the patient history at discharge

Form continues over page ➤

MEDICATION MANAGEMENT PLAN

Community Health Care Team

General Practitioner: .... Phone: ....
.... Fax: ....
Community Pharmacy: .... Phone: ....
.... Fax: ....

MRN:
Family name:
Given names:
Address:
Date of birth: Sex: ☐ M ☐ F
(Affix patient identification label here and overleaf)

Patient Presentation

Presenting Complaint ....
Previous Medical History:..

Lab Results

Medication Risk Assessment

COMPLIANCE
Is the patient compliant with their medication? ☐ Yes ☐ No..............................

PATIENT ASSESSMENT

Has hearing issues	☐ Yes	☐ No	Can read/comprehend labels	☐ Yes	☐ No	
Has cognition issues	☐ Yes	☐ No	Can understand English	☐ Yes	☐ No	
Vaccination history						
Fluvax	☐ Yes	☐ No	If NO, language spoken is:..............................			
Pneumococcal	☐ Yes	☐ No	Can open bottles / measure liquids	☐ Yes	☐ No	☐ Not an issue
Other	☐ Yes	☐ No	Swallowing issues	☐ Yes	☐ No	
Other information:..............................			Other information..............................			

Medication Usually Administered By: ....
Dose Administration Container Used (specify): ....Filled By: ....

Medication Issues

Discharge Medication Plan (✓ tick and sign tasks completed)	COMPLETED
Patient's destination on discharge:	Signature & Date:
☐ Education: ☐ Patient Info Leaflet: ☐ CMI:	
☐ Medication Action Plan faxed to: ☐ GP ☐ Community Pharmacy ☐ Care Home	
☐ Community Pharmacy contacted and will fill dose administration container	
☐ Home Medicines Review (HMR) recommended	
☐ Primary Care provider contacted	
☐ Community Pharmacy servicing Aged Care Home faxed the medication chart	
☐ Other	

Medication Follow-up Plan for Discharge

Discharge Pharmacist.............................. Pager:.................. Sign & Date:..............................

This form is to remain with the current drug charts during the admission for easy referral by all clinicians and should be filed in the patient history at discharge

FGH acknowledge the significant contribution of Flinders Medical Centre, Northern Sydney Central Coast and Queensland Health Safe Medication Practice Unit.

APAC Working Group

- > Multidisciplinary
  - pharmacy, medical, nursing
- > Review guiding principles
  - Application to hospital practice
- Evaluation
  - KPI development
- SA Handbook
  - “The how to”, tools, guidelines etc

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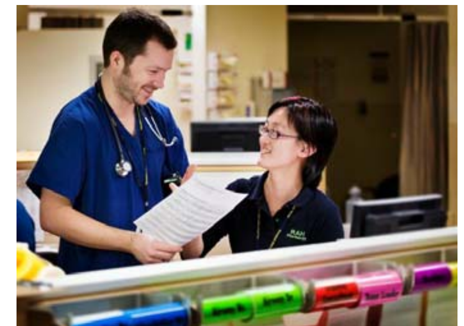
Measuring APAC

- 21 key performance indicators
  - 12 clinical activity (6 med rec)
  - 9 policy
  - detailed definitions and measurement
  - based on existing indicator sets eg NSWTAG, SHPA
- Baseline data collection
  - existing data eg NIMC audits
  - targeted reviews
- Approved by CEO & regional executives Scope



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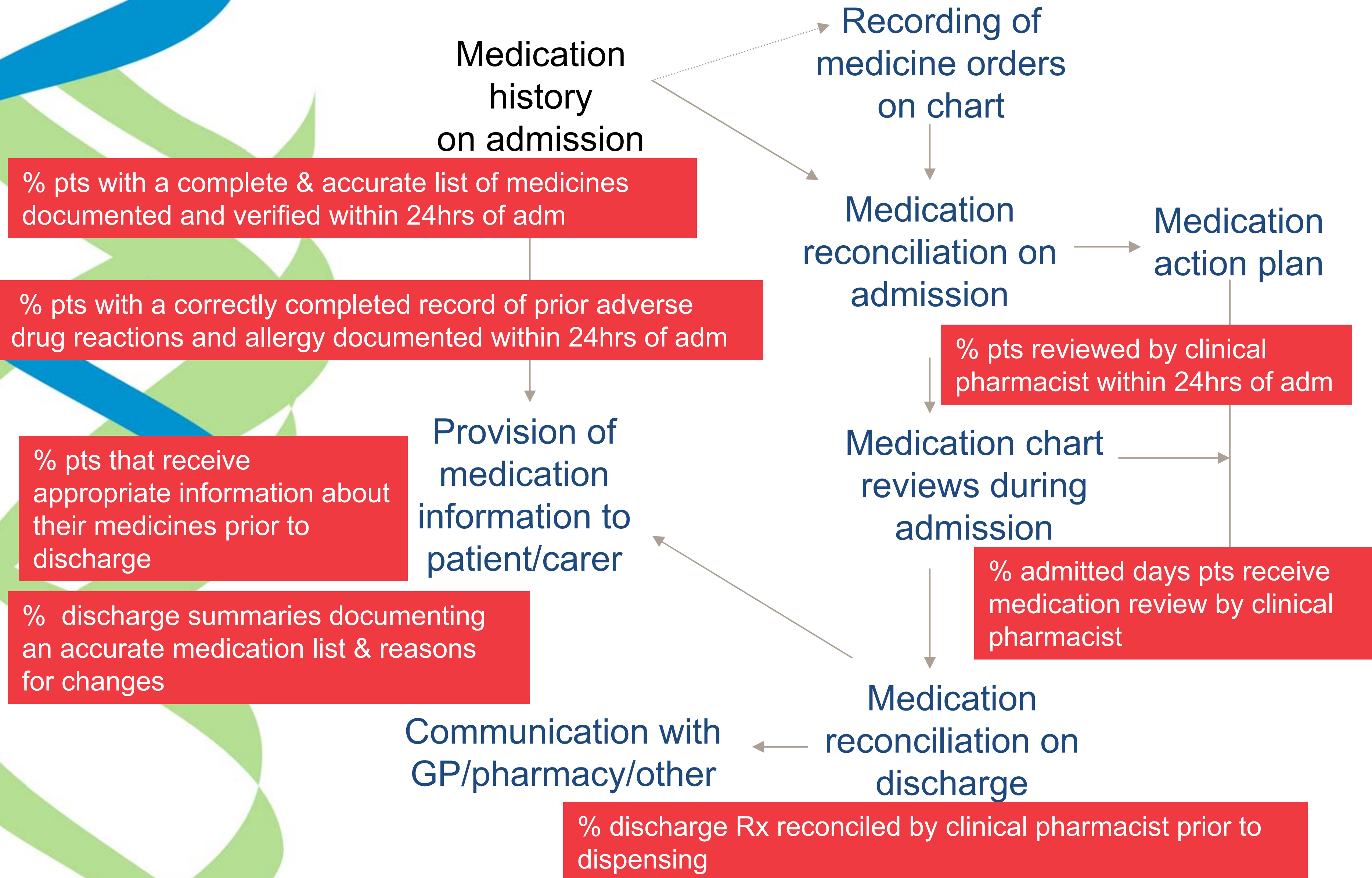
Medication Reconciliation and APAC



APAC 4.2

Percentage of inpatients that have a complete and accurate list of their current medications (including over-the-counter and complementary medications) documented and reconciled within a day of admission

Purpose:

To assess the number of patients that have a complete and accurate medication history documented within a day of admission to hospital – to measure the effectiveness of processes that promote continuity of care in medication management.

Background and evidence:

Adverse drug events (ADEs) are commonly caused by lack of effective communication, especially in the transition between the community and hospital setting.[1] A complete and accurate medication history ensures continuity in medication management – an Australian Pharmaceutical Advisory Council guiding principle.[2] Documenting and verifying the medication history as early as possible in the episode of care avoids duplication of recording and potential discrepancies.[2]

Key Definitions:

A complete and accurate medication history means a list of current medications including prescription and over-the-counter medications, and complementary health care products.[2]

Documenting a complete and accurate medication history involves:

1. **Obtaining a list of current medications**: A formal interview is conducted at admission to document a complete and accurate list of each patient's current home medications (what they are taking prior to admission). The information for each medication on the list should include:
   - medicine (active ingredient name and/or brand name, strength, dose form where relevant);
   - dose, route and administration frequency (as actually taken by the consumer);
   - recently changed/ ceased medicines
   - adverse drug events/ allergies.[2] and
   - where relevant: when started/duration of therapy, action/indication (as reported by the consumer)
2. **Verifying the list** of current medications: Seeking to confirm with at least a second source that the information obtained at interview is supported. Details can be confirmed by caregivers, general practitioners, community pharmacies, aged care facilities or by physically reviewing the patient's medications.
3. **Recording** the date and time of documentation and the name of the person that recorded the history.[2]

Within a day of admission means by the end of the next calendar day.

Data collection:

Sample selection: A random sample of patient records involving patient stay longer than 24 hours

Suggested sample size: Random sample of 10% of bed numbers. (Minimum 10).

Methodology: Review medical record for documentation regarding current medication list, confirmation of medication list and date of documentation.

Calculating the indicator:

$$\frac{\text{Numerator}}{\text{Denominator}} \times 100\%$$

Numerator = Number of inpatients who have a complete and accurate list of their current medications (including over-the-counter and complementary medications) documented and reconciled within a day of admission

Denominator = Number of records in sample

References:

1. Second National Report on Patient Safety: Improving Medication Safety: Australian Council for Safety and Quality in Health Care, 2002.
2. Guiding principles to achieve continuity in medication management: Australian Pharmaceutical Advisory Council, 2005:1-55.

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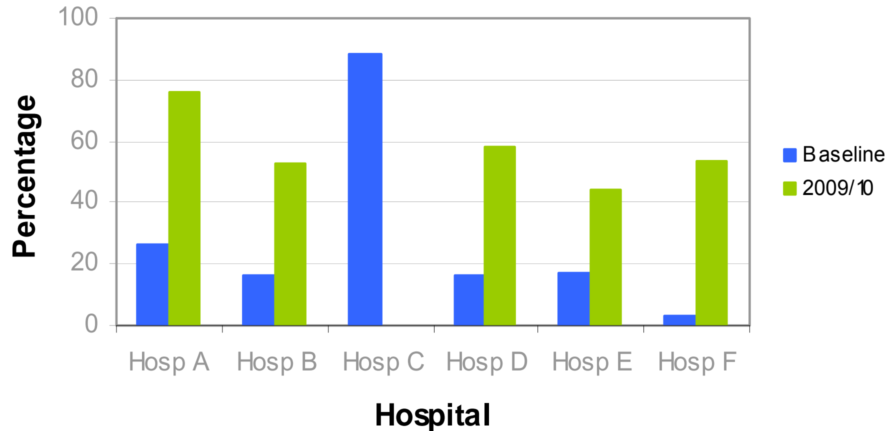
Results – Principle 4

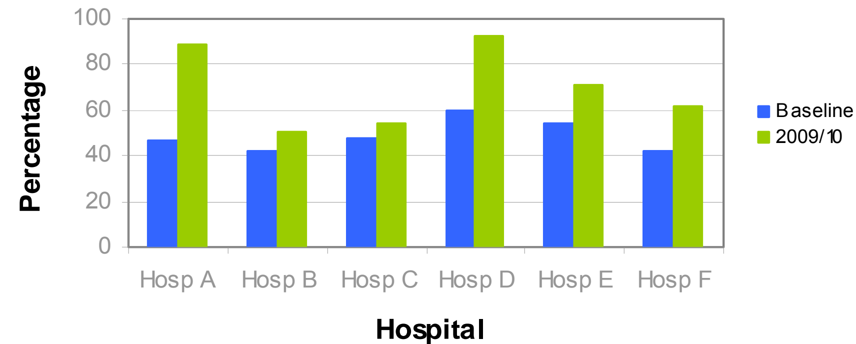
SA APAC 4.2:

Percentage of inpatients that have a complete and accurate list of their current medications (including OTC and complementary) documented and verified within a day of admission



SA APAC 4.3:

Percentage of inpatients that has a correctly completed record of prior ADR and allergy documented within a day of admission



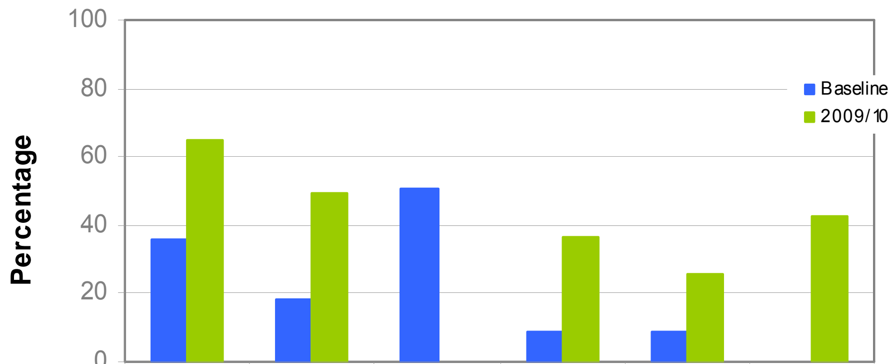
Medication History ....wins

- Histories accurate, verified
- Not just a list….
  - Medication review
  - Management issues
  - …starts the action plan
- Engaging patients and carers in medication management
- Standardises documentation and location
  - Form stored in front of active medication chart
  - Becomes part of the patient's medical record
- Becoming the source – referred to by all practitioners
  - On admission, transfer and discharge
  - Medical staff support, referrals

Results – Principle 5

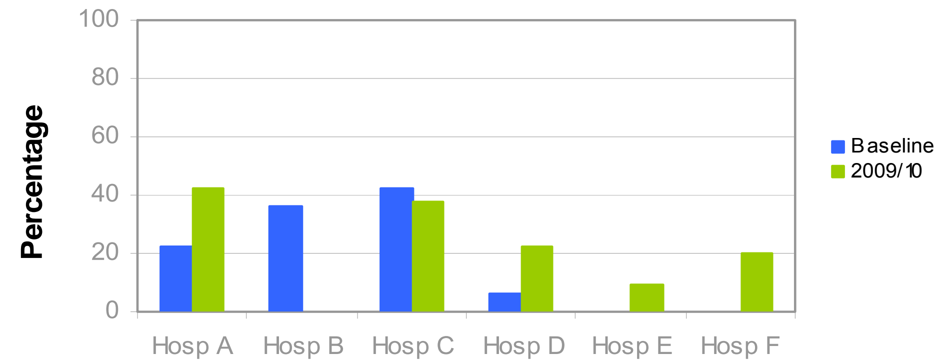
SA APAC 5.2:

The percentage of patients reviewed by a pharmacist within 24 hours of admission



SA APAC 5.3:

The percentage of admitted days that patients receive medication review by a pharmacist



Medication Reconciliation ....wins

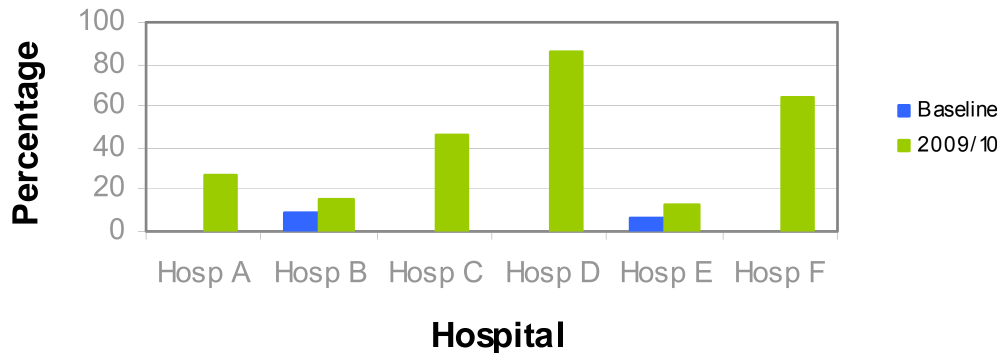
- More efficient for prescribers to write up meds when accurate history available
  - Reduced unintentional discrepancies
- More efficient for ward pharmacists to undertake medication reconciliation if history available from ED /POAC
- Earlier resolution of medication management issues
- Planning for discharge eg warfarin counselling

Results – Principle 8

SA APAC 8.2:

The percentage of discharge prescriptions reviewed and reconciled by a pharmacist prior to dispensing

8.2 Discharge Prescription Review & Reconciliation



Discharge location: Ward/clinic: Q6 Discharge date: 21/01/09 Time: 11 am/pm

Hospital prescription 82890270
ROYAL ADELAIDE HOSPITAL
NORTH TERRACE
ADELAIDE SA 5000
PHONE: +61 8 8222 4000

Provider no. 0060030H
Patient's Medicare number: 9876 54321 1 1
Pharmaceutical benefits entitlement or DVA number

UR number: 0231234 Ward: Q6
Name: Jane Citizen
Address: 14 Medicare Way Adelaide
DoB: 18/05/1945
Fill in or attach patient label

Print patient's name

Safety Net entitlement card holder | Concessional or dependant RPBS beneficiary or Safety Net concession card holder | ✓ PBS | RPBS | Chemo Access

Drug name and form	Strength	Dose, route and frequency	Quantity	Rpts	Supply Y/N	Approval number if required
Metoprolol tab	50mg	½ PO twice daily	100	–	Y	–
Alendronate tab	70mg	T PO once weekly	4	–	Y	2646
Ciprofloxacin tab	500mg	T PO twice daily	28	–	Y	Z5691XY
Cephalexin cap	500mg	T PO QID, 7days	14	1	Y	Reg 24
Warfarin tab	1mg	take 5mg at night	50	–	Y	
Warfarin tab	2mg	for 2 days, then	50	–	Y	
Warfarin tab	5mg	as per GP	50	–	Y	
Morphine Sulphate SR tab	10mg	T PO twice daily	20 twenty	–	Y	
Diazepam tab	5mg	T PO TDS, prn	6	–	Y	
Chlorpromazine Syrup	25mg/5mL	50mg PO TDS	100 mL	–	Y	

Drug hypersensitivities
DO NOT LEAVE BOX BLANK

Prescriber's name: A Sample Prescriber number: 564321
Signature: Date: 20/01/09
Pager number: 1703 Clinical unit: gastro
Please turn over for privacy note

I certify that I have received this medication and the information relating to any entitlement to free or concessional pharmaceutical benefits is not false or misleading.

Date of supply / / Patient or agent's signature Agent's address

Patient or pharmacist copy

> Patients being supplied with correct medications

> Patients being supplied with required medications only

- Reduced costs and risks of medication mismanagement

> Active participants in care

> Reduced workload for dispensaries

> Improved discharge times

Impact of discharge reconciliation

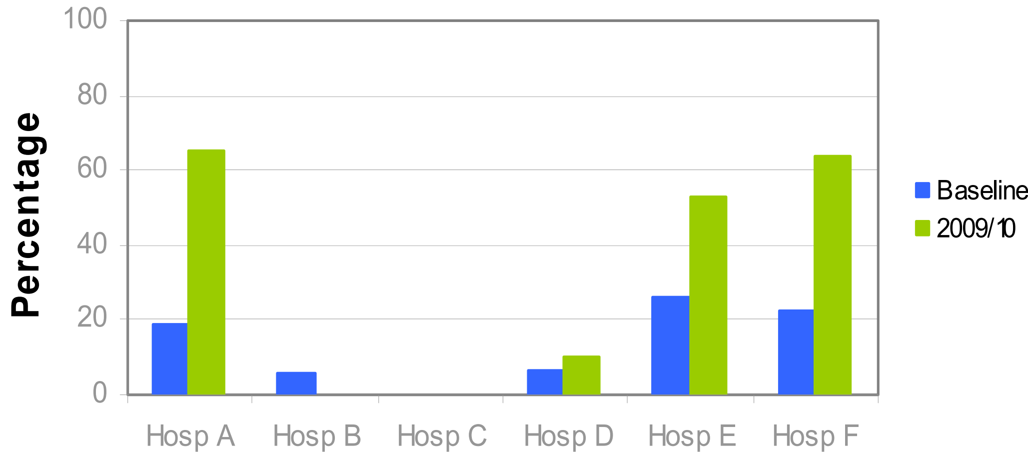
- Items requested by doctor compared to those required after pharmacist reconciliation

Date	Rx	Items	Meds removed	Meds added	Reduction in meds for supply
Jan 08	53	324	119 (36.7%)	11 (5.0%)	33.3.%
Feb 08	86	621	245 (39.5%)	14 (3.6%)	37.2%
Total	139	945	364 (38.5%)	25 (4.1%)	35.9%

Results – Principle 9

SA APAC 9.2:

The percentage of discharge summaries that document an accurate medication list and the reasons for all medication therapy changes from medications taken prior to admission



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PATIENT IDENTIFICATION
MRN: 000000-HOSP *Sex:* Female
Name: PATIENT, MARY
DOB: 10/11/1931 *Age:* 77 y
Address: 1 ANY DR NORTH ADELAIDE SA 5006

SEPARATION SUMMARY

Admission Date: 03/08/2009
Separation Date: 04/08/2009
Dest. on Separation: Home
Date Time Sent: 05/08/2009 08:45
Attending Doctor/Consultant Peter Doctor

Problem List
Principal Diagnosis: Gastro-oesophageal reflux disease
Complications: Nil
Secondary Diagnosis:
- Diabetes mellitus poorly controlled
- Ischaemic heart disease – x2 CABG 5 yrs ago
- Hypercholesterolemia
- Hypertension
- Ulcerative colitis
- Hiatus hernia
- Benign thyroid tumour
- Hysterectomy
- Appendectomy
- Varicose vein stripping

Procedures
Primary Procedure: Nil

Legal Orders, Advance Directives, Infectious Risk – Please note all descriptions specific to the patient may not have been recorded. For other information contact the source hospital for this document.

Clinical Synopsis

77 yo lady presented with central chest pain which gradually resolved within one hour. Pain felt like indigestion but was also similar to the sensation prior to her 2004 CABG. She is not on regular PPIs. Her husband took her pulse and said it felt irregular. On examination, vitals were normal, pulse regular. Other examinations normal. ECG normal SR.

Bloods: CBE showed chronic anaemia (Hb 101)
MBA20 NAD
Serial troponins <0.02, CK not raised.

She was started on regular pantoprazole and is now pain free. Serial ECGs show no further changes and she was discharged with advice to continue with regular PPIs.

Selected Investigations

Laboratory:

Date	Test Name
03/08/2009 15:30	COMPLETE BLOOD EXAM
03/08/2009 22:30	CARDIAC TROPONIN
	BIOCHEMICAL ANALYSIS

Communication of medication information…wins

> Supports more accurate information to GPs in medical separation summaries
  - Electronic summaries
  - Reconciliation of prescriptions by pharmacists prior to dispensing

> Pharmacy contact with primary care providers
  - Community pharmacies
  - Residential care facilities
  - GPs

> Policy indicators
  - In health service level agreements….not developed….

> Activity indicators
  - Ongoing data collection
  - Outcome data - interventions, re-admissions
  - Medication action plan

> Workforce and resources
  - Fiscal pressures, budgets
  - Training
  - Changes to pharmacist roles
  - Integration of med rec roles across multi-d team

> Continuity of care and expectations

Summary

- Introduction of medication reconciliation as component of APAC
- Significant improvements – reconciliation
  - Admission
  - Discharge
- Continuity of care - communication
  - Hospital
  - Primary health care providers
  - Residential care facilities
- Ongoing quality improvement

- SA Health
- APAC Working Group
  - Olimpia Nigro
  - Sharon Goldsworthy
  - Lisa Spurling
  - Chris Doecke
  - Sean Turner
  - Anna McClure
  - Dr Josephine Thomas
  - Kathy Read
  - Lauren Whitten
  - Kaye Barratt

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