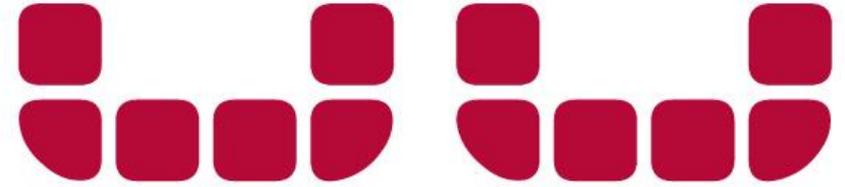




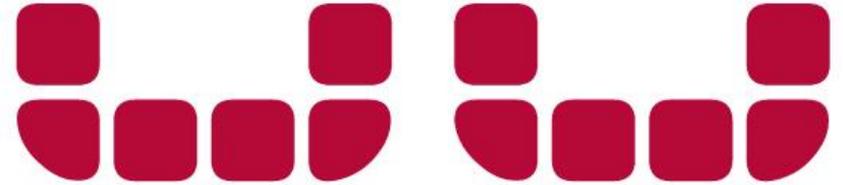
Government of **Western Australia**
Department of **Health**



Medication Safety

Western Australian Medication History and Management Plan (WA MMP)

Patient Safety and Clinical Quality Directorate

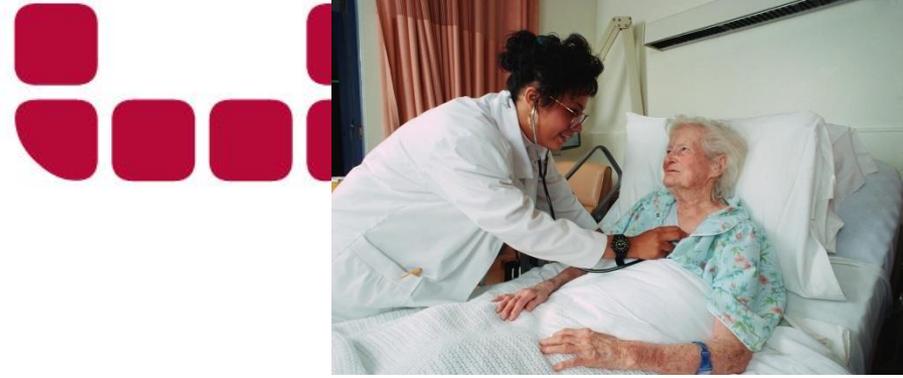


The starting point

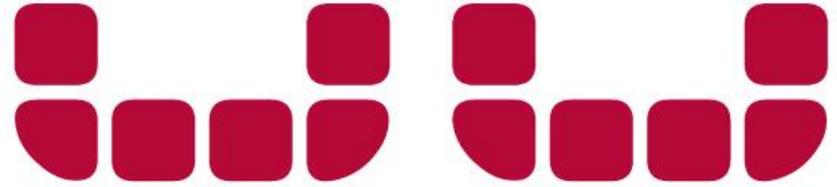
- Medicine errors result in approximately 140,000 hospital admissions per year (2-3% of all admissions).
- Over half of all hospital medication errors occur at the interfaces of care (admission, transfer and discharge).
- On admission, 1 in 2 patients have one regular medication omitted unintentionally, leading to:
 - Approximately 33% moderate discomfort/clinical deterioration
 - Approximately 6% severe discomfort/clinical deterioration
- The process of medication reconciliation can reduce the risk of these medication errors occurring.

What can go wrong?

(Example 1)



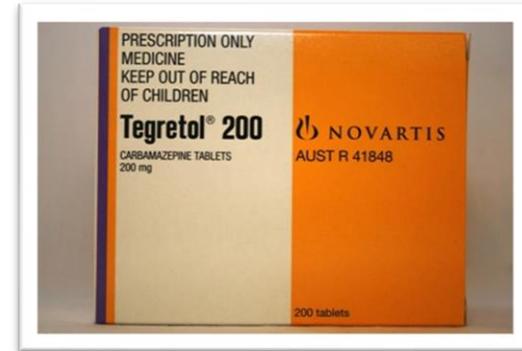
- On admission, a patient was charted for carvedilol (Dilatrend®) 25mg twice daily (hypertensive and heart failure agent).
- The patient was only taking carvedilol 6.25mg twice daily at home.
- Result: The patient received four doses of the higher strength, and developed leg oedema.
- A leg ultrasound test was ordered to rule out deep vein thrombosis before the error was discovered.

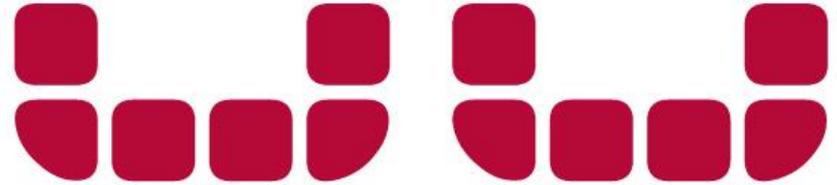


What can go wrong?

(Example 2)

- An elderly patient was transferred from another hospital on the public holiday Good Friday after having sustained wounds after a seizure.
- On admission, the patient was prescribed carbamazepine 1250mg bd as per patient.
- The patient received two doses before she became confused and vomited coffee ground vomit and was transferred to Intensive Care Unit.
- The carbamazepine level was 31mg/L (normal range : 6-12mg/L).
- The GP was contacted – the patient was actually taking levetiracetam (Keppra®) 1250mg bd.





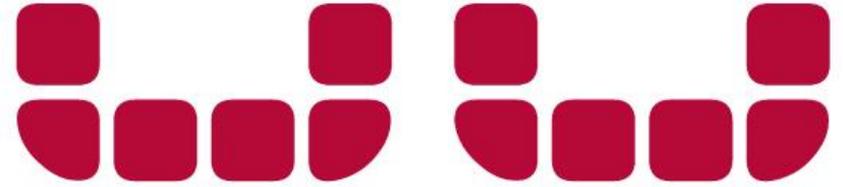
The High Risk Patient

- Majority of patients aged between 75-85 years (tertiary hospital admissions)
- Factors that make a patient high risk are:
 - > 65 years of age
 - > 5 regular medications
 - > 2 co-morbidities
 - Use of high risk medications
 - Difficulty managing medications (includes vision and cognitive impairment, literacy and language difficulties)



The more medications a patient is taking

The higher the risk of adverse drug events



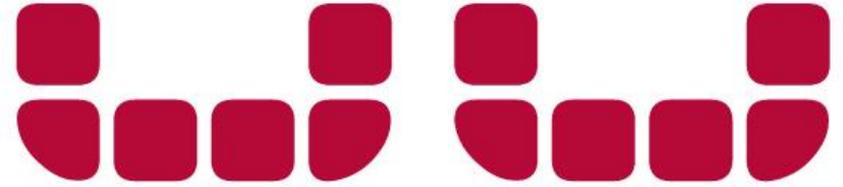
High Risk Medications

High risk medications are defined as “medicines which have a heightened risk of causing significant or catastrophic harm when used in error”.

A list of high risk medications should be determined by each site.

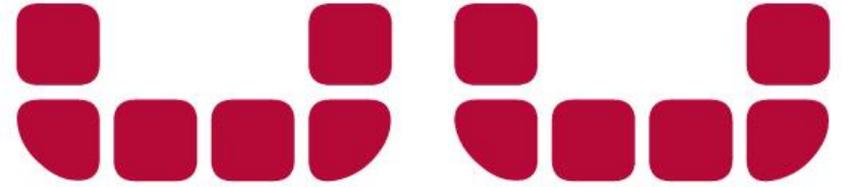
This list may include:

- APINCH medications
(Anti-infectives, potassium/electrolytes, insulins, narcotic [opioid] analgesics and neuromuscular agents, chemotherapeutic agents, heparin/anticoagulants)
- Medicines with a low therapeutic index
- Medicines that represent a high risk when administered via the wrong formulation or route (e.g. slow release and immediate release oxycodone, phenytoin liquid and capsules)



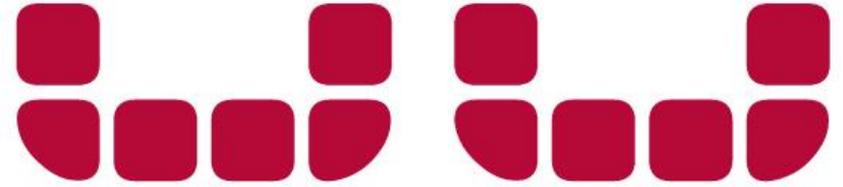
Background

- The Western Australian Medication History and Management Plan (WA MMP) was developed by the WA Medication Safety Network to meet WA Health requirements for medication reconciliation.
- The WA MMP is designed to meet the requirements of:
 - The Australian Pharmaceutical Advisory Council's Guiding Principles to achieve continuity in medication management
 - The WA Pharmaceutical Review Policy
 - The National Safety and Quality Health Service Standards (Standard 4 : Medication Safety)
 - The Australian Safety and Quality Goals for Health Care Priority Area 1.1 – Medication Safety



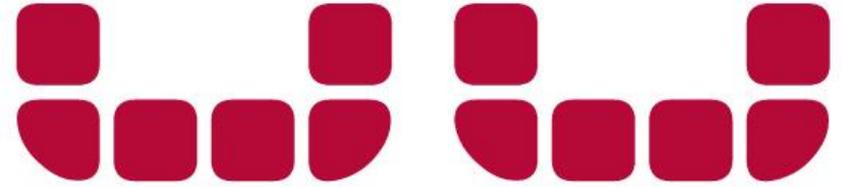
Purpose

- The WA MMP is designed:
 - to record the medicines taken prior to presentation at hospital
 - for reconciling patients' medicines on admission, intra- and inter-hospital transfer, and on discharge.
- To be used by medical, pharmacy and nursing staff to accurately and comprehensively record a best possible medication history (BPMH) on admission, that is available at the point of care.
- It is recommended that it is kept with the current WA Hospital Medication Chart (Adult) or WA Paediatric Hospital Medication Chart (WA PHMC) while the patient is in hospital.



Purpose (continued)

- It can be used as an alternative to the “Medications taken prior to presentation to hospital” section on WA HMC.
- The WA MMP can be used for adult and paediatric patients.
- It is not to be used to record orders for medicines or administration of medicines.
- It is also intended to be used as a record of medication issues and actions taken during the patient’s admission.
 - This information can be referred to during patient’s admission, and used during preparation of discharge summary and prescriptions.



What is medication reconciliation?

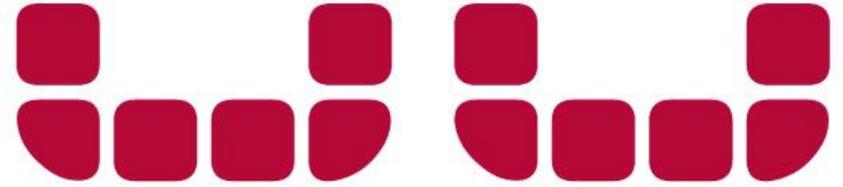
The medication reconciliation process has 4 parts:

1. Medication history

- A formal interview on admission to obtain and document the patient's medication history

2. Confirmation

- Seeking to confirm with the patient and a second source that information obtained is correct



What is medication reconciliation? (continued)

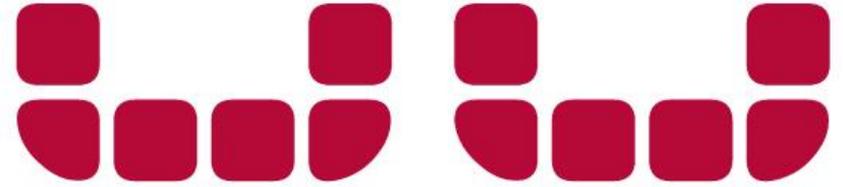
3. Reconciliation

- On admission: Checking that medications listed in the medication history match medications ordered by the admitting doctor or that changes are explained
- On discharge/transfer: Checking that medications on discharge summary and prescriptions match what is written in medication history and WA HMC and explain any changes

Bring any discrepancies identified to the attention of the prescriber.

4. Medication liaison

- Ensuring that medication information is communicated between all involved in the patient's care – including the patient



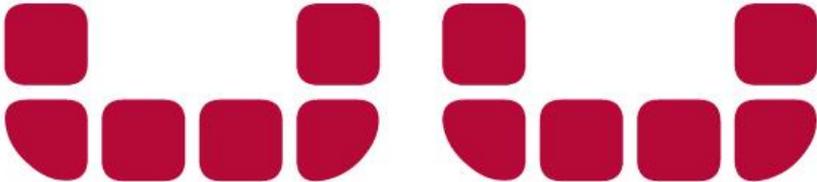
Considerations when documenting on WA MMP

- Consider privacy issues when writing on the form (may be kept at end of end where visitors and other persons may have access).
- Facts should be clear, objective, relevant, correct and within context.
- Avoid phrases which imply another practitioner has made an error or missed something significant.

“suggest” or “consider” (preferred)

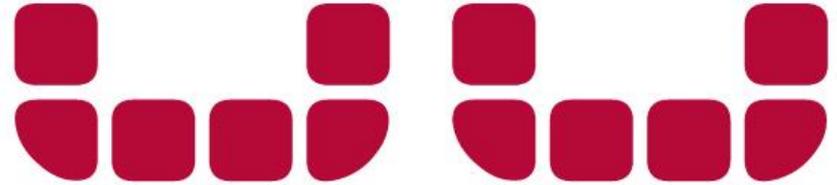
vs

“do” or “needs”



Considerations when documenting on WA MMP (continued)

- Avoid using unsafe abbreviations. Use only accepted abbreviations. (Refer to [Australian Commission on Safety and Quality in Healthcare's Recommendations](#))
- Write legibly in ink. No matter how accurate or complete the information, it may be misinterpreted if it cannot be read.
- Use ball point pen (black preferred, blue, purple for pharmacists), do not use water soluble ink, erasers, correction tape or fluid.



Identification of patient

Complete the patient identification by EITHER:

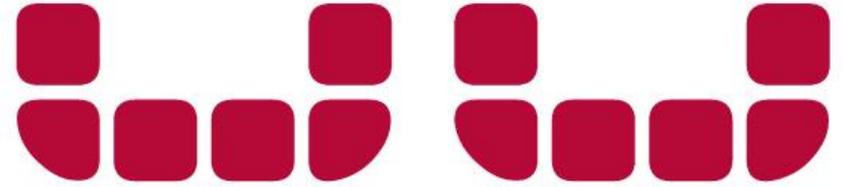
- affixing the current patient identification label

OR

- as a minimum, write the patient name, UR number, date of birth and sex to be written in legible print.

UMRN:		
Family Name:		
Given Name(s):		
Address:	F1243234 Smith, Anna	Female
DOB:	123 Apple Street Perth 6000	DOB:10/08/1994

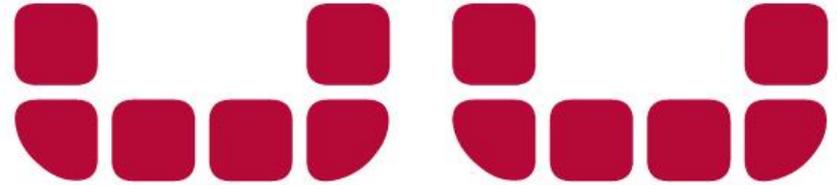
appropriate box) **1st user to print patient name and check label correct:** Smith, Anna



Patient Location

- Clearly indicate the patient's ward location and team on the front page of the WA MMP.
- If the patient is transferred to a different ward or team, update the WA MMP accordingly.

SITE _____	
MEDICATION HISTORY AND MANAGEMENT PLAN	
WARD _____	TEAM _____



Allergies and Adverse Drug Reactions

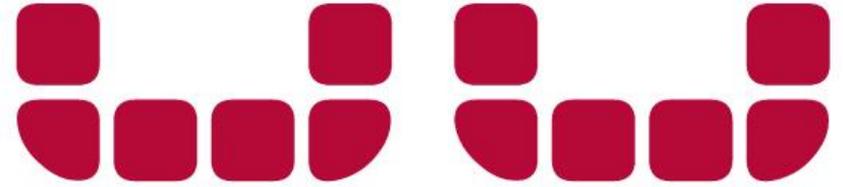
- This section is to be cross-referenced to the allergy and adverse drug reaction section on the WA HMC.
- Medical, nursing staff and pharmacists are required to complete “Allergies and Adverse Drug Reactions (ADR)” details for all patients on the WA HMC.

(Use “allergy” as prompt as patients more familiar with the term)

ALLERGIES & ADVERSE DRUG REACTIONS (tick appropriate box) <input type="checkbox"/> Nil Known <input type="checkbox"/> Unknown <input type="checkbox"/> Reaction – refer to HMC
--

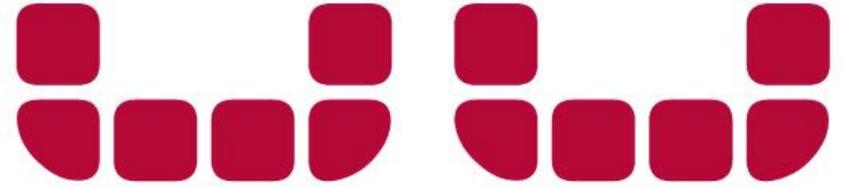
- “Nil Known”: If patient is unaware of previous allergy or ADR
- “Unknown”: If allergy and ADR status is unknown
- “Reaction”: If allergy or ADR is identified → place ADR sticker in the box, and document medications responsible.

Document the reaction details and date of reaction on the WA HMC.



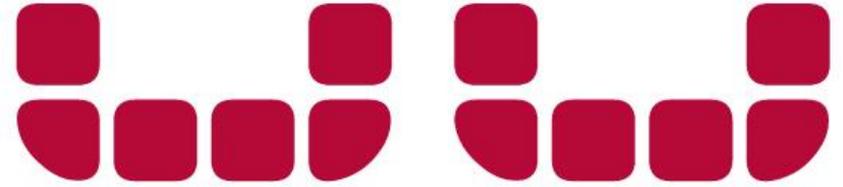
Medication Issues and Management Plan

- Any medication management issues and required actions can be documented in the “Identified Medication Management Issues” section of the form.
- This area can be used:
 - to document any issues identified through the process of admission medication reconciliation (e.g. omission, incorrect dose, incorrect drugs, etc.)
 - to document any issues identified through the process of medication review (e.g. dose adjustments required, potential and actual drug interactions, etc.)
 - as a handover document between clinicians
 - on discharge (or transfer) to prompt communication of outstanding issues or actions to the next healthcare provider.



Medication Issues and Management Plan (continued)

- To document a medication issue, complete the following:
 - Date (and time) that the issue was identified
 - A description of the issue
 - Any action that is required
 - Name and contact number of person identifying the issue
 - The person responsible for that action
- Once the action has been completed, document the date of action and a description of the results/outcome of the action. This may be completed at a different time to the identification of the issue.
- Where permitting, direct verbal contact with prescriber is preferred in addition to documenting the detected issue.

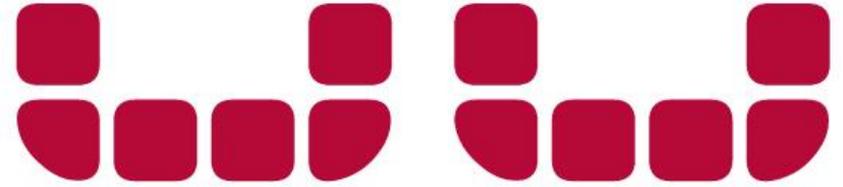


Medication Issues and Management Plan (continued)

Any URGENT medication issue/s should be brought to the attention of the attending medical officer AS SOON AS POSSIBLE using more direct forms of communication such as telephone or pager.

Medication Issues and Management Plan (continued)

Identified Medication Management Issues			
Date / Time	Issue Identified and Proposed Action	Person Responsible	Result of Action
8/8/22	<p>Patient usually takes telmisartan 40mg mane. Not charted. Please review and chart if appropriate</p> <p>Issue identified by: A.B (pharmacist) Contact number: Pager 650</p>	<p>Dr Smith</p> <p>Contacted <input checked="" type="radio"/> Y <input type="radio"/> N</p>	<p>Charted</p> <p>Date/Time: 8/8/22</p>
10/8/22	<p>Patient in acute kidney injury. Consider withholding telmisartan and meformin</p> <p>Issue identified by: A.B (pharmacist) Contact number: Pager 650</p>	<p>Dr Smith</p> <p>Contacted <input checked="" type="radio"/> Y <input type="radio"/> N</p>	<p>Withheld, review serum creatinine</p> <p>Date/Time: 10/8/22</p>
14/8/22	<p>Patient's renal function back to baseline. Consider restarting telmisartan and meformin</p> <p>Issue identified by: A.B (pharmacist) Contact number: Pager 650</p>	<p>Dr Smith</p> <p>Contacted <input checked="" type="radio"/> Y <input type="radio"/> N</p>	<p>Monitor UECs and consider restarting if stable</p> <p>Date/Time: 14/8/22</p>

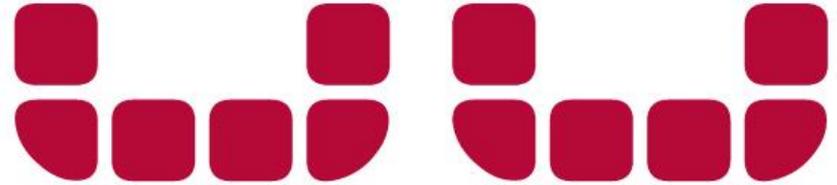


Medication History Checklist

- The checklist is a tool to assist in determining a patient's complete medication history on presentation to hospital.

<u>Checklist:</u>	<input type="checkbox"/> Dose administration aid: _____		
<input type="checkbox"/> Oral medications/liquids	<input type="checkbox"/> Inhalers	<input type="checkbox"/> Topical	
<input type="checkbox"/> Eye/Ear/Nose	<input type="checkbox"/> Injections	<input type="checkbox"/> OTC	<input type="checkbox"/> Complementary

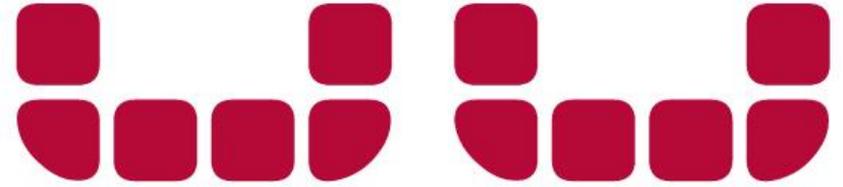
- It is recommended that the checklist is routinely used as part of the medication history interview with the patient or carer to help structure the interview, and obtain as much information as possible.



Recent Medication Changes in the Past 4 weeks

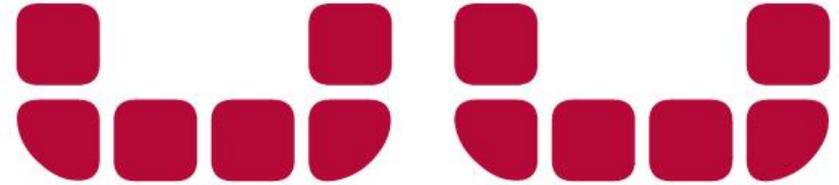
Recent Medication Changes in the Past 4 weeks (including reason for change and by whom)

- Recently ceased or recent changes to medicines can be recorded in this section of the form along with other relevant information, such as the reason for the change.
- Recent changes to a patient's medicines may highlight the possibility of an adverse drug event which may have been the cause of the patient's admission.



Medication History (continued)

- Record the patient's complete list of medicines normally taken prior to admission (prescription, non-prescription and complementary medicines)
- If a patient is not taking any regular medicines, the “Nil Regular Medications” box can be ticked, and the person confirming this should sign.
- For each medicine, document :
 - medication details (generic/trade name, strength, form, route)
 - dose and frequency



Medication History (continued)

- Each medicine taken prior to admission should be checked against those prescribed on the WA HMC.
 - Use the ‘Medication Status Legend’ to note the plan for each medicine:

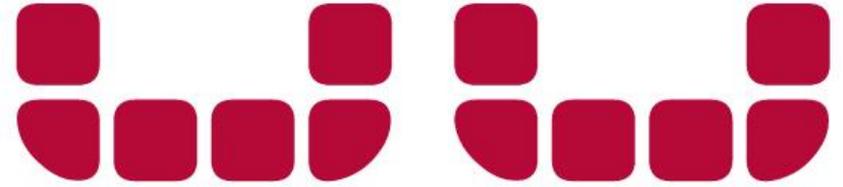
Medication Status Legend Reconciled with HMC and Discharge Plan columns
NEW: New medication √: Continued Δ: Changed X: Ceased
W: Withheld ↑: Increased dose ↓: Decreased dose □: Not charted

- If they match (medication, strength, dose and form), place a tick in the “Reconciled with WA HMC” column.
- Document doctor’s plan (if known) in “Reconciled with WA HMC” column – i.e. withhold, cease, change.
- If the medication is not charted and no reason for withholding has been identified, annotate a box, ‘□’ in the “reconciled with WA HMC” column to indicate follow up is required

Medication History (continued)

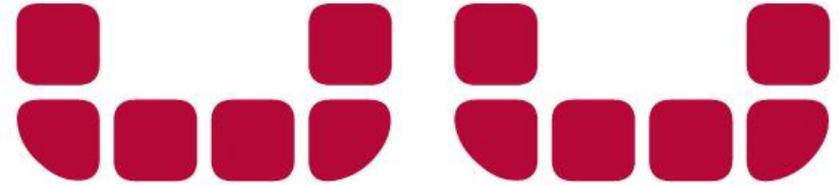
- The “Comments” section may be used to document extra information that might be pertinent.

Medication History – Medications Taken Prior to Admission <input type="checkbox"/> Nil Regular Medications				
Medication Generic Name / Trade Name, Strength and Form (i.e. SR, wafers etc.)	Dose, Frequency & Route	Reconciled with HMC at admission	Comments	Discharge Plan (Refer to Legend)
Tiotropium 18microg cap (Spiriva®)	1 cap mane INH	W	Withheld whilst on ipratropium 2.5mg nebs QID	
Temazepam 10mg tab	1 nocte po	↓	Decreased dose to PRN only	
Aspirin 100mg tab	1 mane po	X	Ceased, no clear indication	
Paracetamol SR 665mg tab	2 TDS po	Δ	Changed to liquid as patient has difficulty swallowing	
Atorvastatin 40mg tab	1 mane po	✓		



Medication History (continued)

- Most hospitals use this section to document medication taken prior to admission (as suggested in the title of the table), however if hospitals choose to include newly-initiated/prescribed medications that are intended to be continued at discharge in this section, the term “NEW” should be clearly documented in either the “Reconciled with WA HMC” or “Discharge Plan” accordingly.
- If doctor’s plan is not known, clarify with attending medical officer.

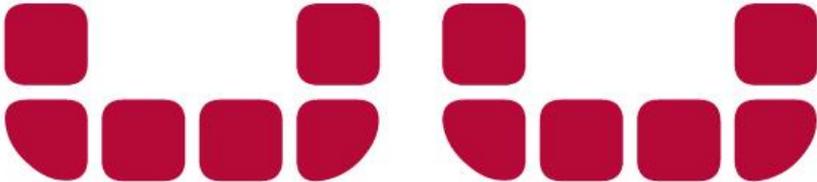


- Other information :

- Indicate date and time of admission
- Document date and time medication history was completed or amended, with initials of person obtaining medication history
- If multiple forms are required, indicate the number of forms in existence.

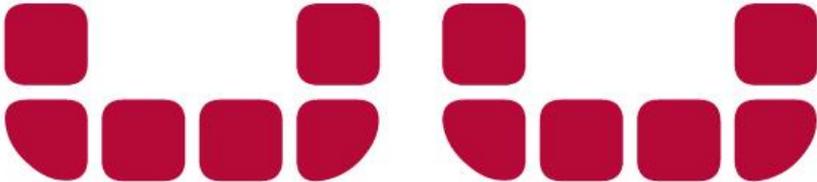
Admission Date: ___ / ___ / ___ Time: ___ : ___

Date/Time Completed: ___ / ___ / ___ : ___ Name: _____ Page: _____ Doctor Pharmacist Nurse



Medication History (continued)

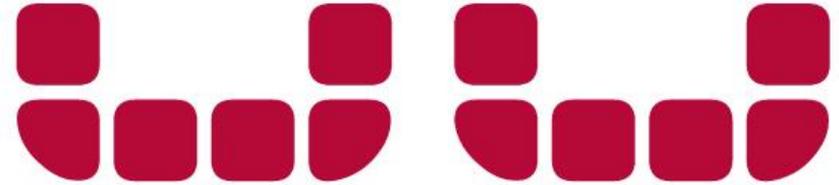
- On discharge :
 - Medications on discharge/transfer are to be reconciled with the WA HMC, prescriptions and discharge summary.
 - Document the doctor's plan for each medication (refer to legend) in "Discharge Plan" column
 - If Consumer Medicines Information is provided, document "CMI" in "Discharge Plan" column, in addition to actual discharge plan (i.e. continue, increase, decrease, NEW).
 - Further space for documenting medication management at discharge is on the back page of the form.



Patient Identification and Location

- Complete patient ID section as per the front of the form.

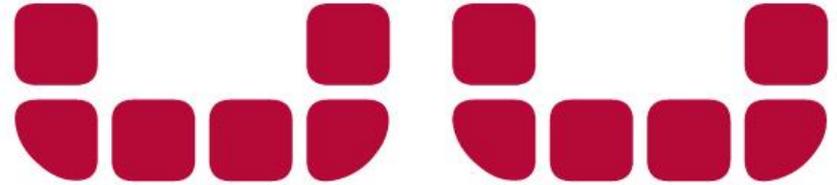
<p>Abbreviation Key</p> <p>GP – General Practitioner CP – Community Pharmacist CF – Care Facility CMI – Consumer Medicines Information D/C – Discharge ADR – Adverse Drug Reaction T/F – Transfer POM – Patient’s Own Medications</p>	<p>UMRN: Family Name: Given Name(s): Address: DOB:</p> <p style="text-align: right;">SEX <input type="checkbox"/> M <input type="checkbox"/> F</p> <p style="text-align: center; color: gray; font-size: 2em; opacity: 0.5;">AFFIX LABEL HERE</p>
--	--



Patient Presentation

- This section can be used to document important medical history pertinent to the patient's medication management.
- The patient's weight and height can be documented in this section.
 - Ideal Body Weight (IBW) and Body Surface Area (BSA) may be calculated and noted here (for dose adjustments)
- The patient's renal function on admission can be recorded here to assess whether any dose adjustment is necessary.
- Document whether the patient has a history of smoking

Patient Presentation			
Presenting Complaint _____	Date _____	RENAL FUNCTION ON ADMISSION	
Past Medical History _____	Wt _____ kg	Date	SCr
_____	IBW _____ kg	OTHER TEST RESULTS	
_____	Ht _____ cm		
Current smoker: <input type="checkbox"/> Yes <input type="checkbox"/> No NRT offered: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Declined	BMI _____ kg/m ²		
<input type="checkbox"/> Recreational substances <input type="checkbox"/> Alcohol intake	BSA _____ m ²		



Pre-Admission Medication History

- Confirmation of the medicines list with a second information source improves the accuracy and completeness of the list.
- Prior to contacting a patient's community pharmacy or GP, it is important to obtain consent from the patient (or carer/guardian if the patient is unable to) to contact the primary healthcare provider.
- If consent is not given, document in the Discharge and Transfer Medication Plan section.

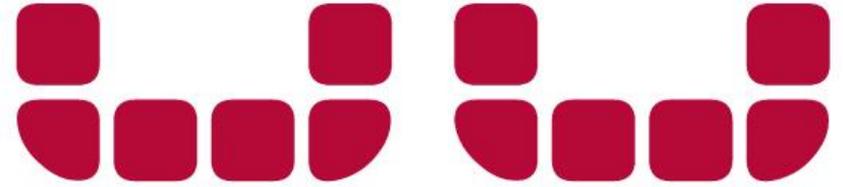
→

<u>Community Liaison</u>
<input type="checkbox"/> Patient denied consent to contact GP/CP
<input type="checkbox"/> Copy of medication list faxed to GP/Clinic
<input type="checkbox"/> Liaison with CF regarding D/C medications
<input type="checkbox"/> Medication list/prescription faxed/emailed to CP
<input type="checkbox"/> Fax front of WA Anticoagulation Chart to GP

Sources of medicines list

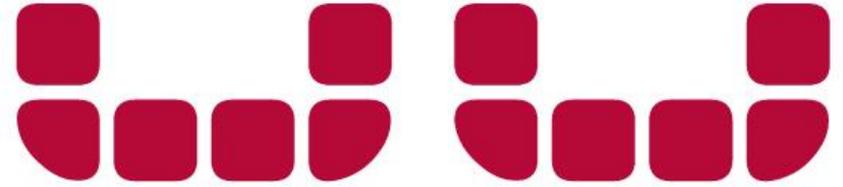
- Tick the source(s) used, document who confirmed it, and the date where relevant.
- Document contact details of the patient's GP, community pharmacy or nursing home/hostel for future reference for discharge medication reconciliation.
- If speaking to patient/relative/carer, indicate which person has been interviewed and record their name

Pre-Admission Medication History Has Been Confirmed with Two Sources					
(<input type="checkbox"/> Nil Regular Medications <input type="checkbox"/> Second Source deemed unnecessary Sign _____)					
<input checked="" type="checkbox"/> CP <i>SQ Pharmacy</i> Ph: <i>93456789</i> Email:	Sign <i>AB</i>	<input type="checkbox"/> Patient <input checked="" type="checkbox"/> Relative <input type="checkbox"/> Carer Name if not patient _____	Sign <i>AB</i>	<input checked="" type="checkbox"/> Own Medications <input type="checkbox"/> POM S8/S4R <input type="checkbox"/> POM Fridge Consent to use <input type="checkbox"/>	Sign <i>AB</i>
<input type="checkbox"/> CF Ph: Fax: Email:		<input type="checkbox"/> Outpatient Clinic Notes Location: _____ Date: <u> </u> / <u> </u> / <u> </u>		<input type="checkbox"/> Patient's own medication list Date updated: <u> </u> / <u> </u> / <u> </u>	
		<input checked="" type="checkbox"/> Previous admission at: <u>Ward 4</u> Hospital: <u>Bentley Hospital</u> Date of D/C: <u>13/07/2022</u>	Sign <i>AB</i>	<input checked="" type="checkbox"/> My Health Record	Sign <i>AB</i>
<input checked="" type="checkbox"/> GP <i>Dr A Smith</i> Ph: <i>9234 5678</i> Email: <input type="checkbox"/> GP letter/medication list Date: <u> </u> / <u> </u> / <u> </u>	Sign <i>AB</i>	Dose Administration Aid (D.A.A.) <input type="checkbox"/> Nil <input type="checkbox"/> Blister Pack <input type="checkbox"/> Sachet <input type="checkbox"/> Dosette <input type="checkbox"/> Other: _____ Date Packed: <u> </u> / <u> </u> / <u> </u>	Sign <i>AB</i>	<input type="checkbox"/> Other (specify):	



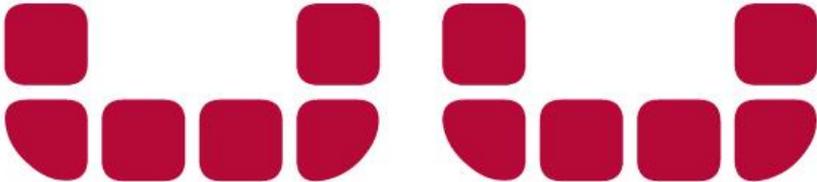
Sources of medicines list (continued)

- If using previous hospital discharge information, document the specific ward within the relevant hospital, indicate with a circle if the patient was discharged or transferred and include either the admission or discharge date.
 - e.g. If discharged from same hospital:
Previous admission at: *Bentley*
Hospital : *Ward X*
Date of **D/C** / T/F: 30/08/2021
- Specify type of Dose Administration Aid (DAA) if used as a source, and date packed (to ensure DAA is current)



Medication Risk Assessment

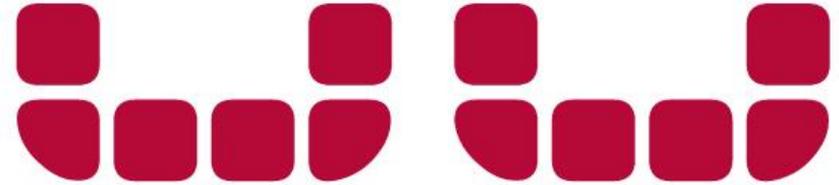
- The ‘Medication Risk Assessment on Admission’ and ‘Swallowing Status on Admission’ allows documentation of the patient’s:
 - adherence issues
 - level of independence prior to admission and on discharge
 - ability to self-administer medicines (e.g. with or without DAAs)
 - ability to swallow medicines and preference for oral dosage forms.



Medication Risk Assessment(continued)

Medication Risk Assessment on Admission	
Can open bottles/measure liquid: <input type="checkbox"/> Yes <input type="checkbox"/> No	Can understand English: <input type="checkbox"/> Yes <input type="checkbox"/> No
Compliance with medications: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unclear	Can read: <input type="checkbox"/> Yes <input type="checkbox"/> No
Medications managed by:	Can see/read labels: <input type="checkbox"/> Yes <input type="checkbox"/> No
Swallowing Status on Admission	
<input type="checkbox"/> Nasogastric Tube <input type="checkbox"/> PEG/RIG	Oral liquid preferred: <input type="checkbox"/> Yes <input type="checkbox"/> No
Thickened Fluids <input type="checkbox"/> Level 2 <input type="checkbox"/> Level 3 <input type="checkbox"/> Level 4	Crushing required: <input type="checkbox"/> Yes <input type="checkbox"/> No

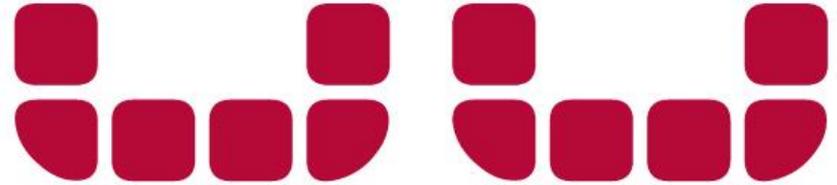
- These sections identify issues which may require action by nursing, pharmacy or medical staff regarding supply and supervision of medicine administration on discharge.



Discharge and Transfer Medication Plan

- A checklist of common tasks which occur on discharge or transfer to a healthcare facility all for each task to be considered, completed if appropriate and documented is listed here.

Discharge and Transfer Medication Plan	
<p><u>Education Provided to Patient</u></p> <p><input type="checkbox"/> Interpreter required <input type="checkbox"/> ADR Brochure</p> <p><input type="checkbox"/> Medicine information leaflet: _____</p> <p><input type="checkbox"/> CMI: _____</p> <p><input type="checkbox"/> Verbal counselling to patient/carer <input type="checkbox"/> Not required/declined</p> <p><input type="checkbox"/> Medication list provided on discharge</p>	<p><u>Community Liaison</u></p> <p><input type="checkbox"/> Patient denied consent to contact GP/CP</p> <p><input type="checkbox"/> Copy of medication list faxed to GP/Clinic</p> <p><input type="checkbox"/> Liaison with CF regarding D/C medications</p> <p><input type="checkbox"/> Medication list/prescription faxed/emailed to CP</p> <p><input type="checkbox"/> Fax front of WA Anticoagulation Chart to GP</p>
<p><u>Medication Reconciliation at Discharge</u></p> <p><input type="checkbox"/> Discharge medications reconciled with medications prescribed at discharge on HMC</p> <p><input type="checkbox"/> Pharmacist involvement in discharge summary</p>	<p><u>Patient's Medications at Discharge</u></p> <p><input type="checkbox"/> Patient's Own Medications reviewed</p> <p><input type="checkbox"/> Patient's Own S8, S4R and Fridge items reviewed</p> <p><input type="checkbox"/> Dose Administration Aid required - Packed by: _____</p>

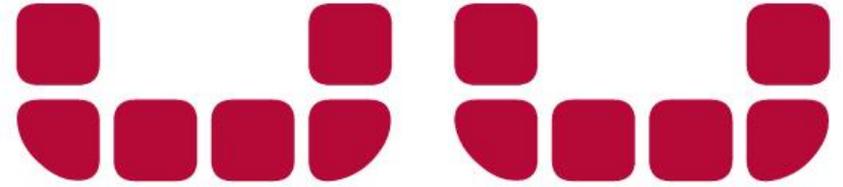


Discharge and Transfer Medication Plan (continued).

- The Medications at Discharge section allows for a record of whether medications were required whether dispensed at the hospital or a reconciled prescription was provided to the patient to be dispensed at a community pharmacy.

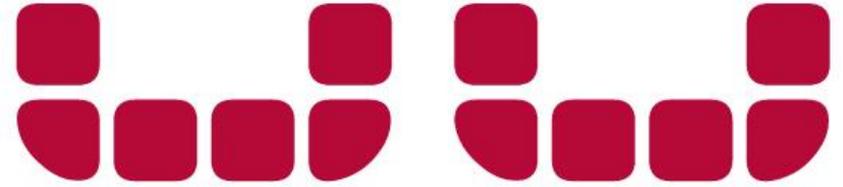
Nil Medications required Dispensed at hospital Prescription given to patient Prescription posted to CP

- If the discharge prescription is to be faxed to community pharmacist, document this in the pharmacist comments and medication issues section.



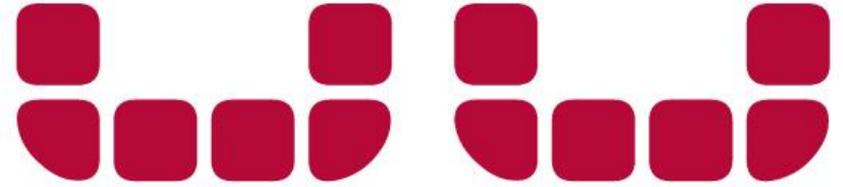
Pharmacists Comments and Medication Issues (continued)

- When the medicines on the WA MMP have been reconciled against the WA HMC, discharge prescriptions and discharge summary, the final discharge reconciliation section of the chart should be ticked and the entry signed and dated.
- Also tick the boxes to indicate if a medication plan or consumer medication list has been provided in addition to medication reconciliation on discharge.



References

- [WA Medication Review Policy MP0104/19](#) Effective from 29 May 2019. Clinical Governance, Safety and Quality Policy Frameworks
- Australian Commission on Safety and Quality in Health Care. [National Safety and Quality Health Service Standards – Medication Safety Standard](#). [cited 2022 Sept 18].
- Australian Commission on Safety and Quality in Health Care. *Recommendations for Terminology, Abbreviations and Symbols used in the Prescribing and Administration of Medicines* (December 2016). [Internet]. [cited 2017 April 10]. Available from : <https://www.safetyandquality.gov.au/wp-content/uploads/2017/01/Recommendations-for-terminology-abbreviations-and-symbols-used-in-medicines-December-2016.pdf>
- Office of Safety and Quality. *Consumer Adverse Drug Reaction Information*. Clinical Alert Policy webpage [Internet]. [cited 2017 April 11]. Available from : <http://ww2.health.wa.gov.au/~media/Files/Corporate/general%20documents/>



Contact Information

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