In this issue we include information to assist you to conduct a formal medication review with your patients. As GPs we informally review a patient’s medication every time a prescription is written.

The Enhanced Primary Care new MBS items offer opportunities to conduct a formal medication review

The review is part of a Health Assessment, Care Plan or Case Conference in addition to long consultations in the surgery or home. A medication review will be annual where it is part of the Health Assessment or DVA Health Assessment, however should be done at any time that it is clinically indicated.

‘Medication review’ is a formalised and comprehensive review process

The aim is to optimise the therapeutic management of your patients by assessing any need for changes in medications and ensuring the patient’s understanding of the medication regimen.

Provide reviews for patients at risk

Medication misadventure is a common cause of morbidity and at times mortality. Suggested ‘triggers’ for medication review are provided inside.

Ask the patient about all medications and provide counselling on use

Evidence shows we often are not aware of all the medications the patient is taking, especially over-the-counter and complementary medicines. The review involves a complete medication history with the patient and provision of education about wise use of medicines.

Please find enclosed PPR issue no. 7, a medication review form and a sample leaflet to copy and give to patients explaining the purpose of the exercise and asking them to bring all the medications to the medication review appointment.

Yours sincerely

Dr Stephen Phillips
Chair, NPS Board
Medication Review

What is a medication review?
You probably review each patient’s medication every time you write a new prescription. In this PPR ‘medication review’ is used to refer to a retrospective critical review of all prescribed, over-the-counter and complementary (herbal) medications. It is undertaken to optimise therapy and minimise medication related problems.

A medication review may be undertaken in the surgery or home. Desirable frequency will vary from patient-to-patient. For example: for elderly patients and/or those with chronic but stable illness, an annual review may be appropriate; for patients with unstable disease, review at critical times such as on discharge from hospital.

Medication reviews are widely carried out by: GP’s and accredited pharmacists working together as a primary health care team; by GP’s, accredited pharmacists and nurses in institutional settings; and by clinical pharmacists, medical specialists and nurses in a hospital setting.

Reviews may be undertaken by the GP alone, using drug information resources however, it is often more valuable to involve an accredited, clinical or appropriate community pharmacist, medical specialist or community nurse.

Medication review may be conducted as part of the new Medicare Benefit items.

1. Health Assessment
Items 700-706
Health assessment for the elderly in the surgery or patient’s home, for patients aged 75 years and over (or 55 years and older for Aboriginal and Torres Strait Islander people). Must include a medication review.

2. Care Plans
Items 720-728
For patients with chronic illness and multidisciplinary care needs involving ≥ 2 health care providers. Includes discharge care plans from hospital. The patient must agree to the management goals.

3. Case Conferencing
Items 740-773
Case conferencing with other providers in planning care for people with chronic conditions and multidisciplinary care needs. Includes discharge case conferencing from hospital.

4. Other
As part of a long consultation or home visit where clinically appropriate. As part of a DVA Health Assessment.
Medication review

Who should have a medication review?
The “triggers” in the table below identify patients who may benefit from a comprehensive medication review and show how they can be used within the framework of the new MBS items.

<table>
<thead>
<tr>
<th>Triggers for medication review</th>
<th>Health assessment</th>
<th>Care plan</th>
<th>Case conference</th>
<th>Long cons./home visit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual Health Assessment or ‘medicine check’</td>
<td>✓</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>New patient to your practice</td>
<td>✓</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Polypharmacy -patient using ≥ 5 medications or ≥12 daily doses</td>
<td>✓</td>
<td></td>
<td></td>
<td>✓</td>
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<tr>
<td>Patient using psychoactive medications</td>
<td>✓</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Patient with ≥3 co-existing disease states</td>
<td>✓</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Elderly people with cognitive impairment, living alone</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Patient with compliance/concordance problems</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Patient with a complicated medication regimen - especially if taking drugs with high risk of adverse effects or which require therapeutic monitoring e.g. amiodarone, warfarin</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Post hospital discharge - especially if medication has changed</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Multiple prescribers including specialists and/or other GPs</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Recently initiated medications or ≥4 changes to medication regimen in last year</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Adverse event e.g. recent fall, allergy</td>
<td>✓</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Patient has unexpected response to medication</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Change in health status</td>
<td>✓</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>In response to a clinical audit</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>In response to a computer alert</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>In response to abnormal laboratory/clinical chemistry results</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>

Quick checklist for medication review

▲ Gain consent and cooperation of the patient, explain what you hope to achieve

▲ Allocate a specific appointment and allow sufficient time e.g. within health assessment or book a long consultation

▲ Take an accurate and complete medication history, preferably sighting all medications
   It may also be helpful to see unfilled prescriptions currently held by the patient

▲ Complete the medication review form (provided) with the patient

▲ Clarify the treatment goal for each medication e.g. reduction of blood pressure to target level

▲ Identify potential problems and assess clinical relevance

▲ Follow up on actions and continue to monitor.
In more detail ………

1. Taking a medication history

Use a non-judgmental technique and open-ended questions.
▲ Facilitated by physical inspection of all medications (the “brown paper bag” approach).
▲ Ask about:
  ▲ all prescription drugs, prescribed by you and other doctors
  ▲ over-the-counter (non-prescription) medications
  ▲ complementary (herbal, alternative, vitamin) products
  ▲ eye drops, inhalers, patches and topical treatments, as patients often forget to mention these also, alcohol, tobacco and illicit drugs.
▲ Ask about the patient’s pattern of medication use
  For example: frequency, regularity, method and reason for use.
▲ Ask about perceived drug efficacy.
▲ Record all adverse drug events
  For example: allergic reactions, adverse reactions and other possible related events, such as falls.
▲ Discard any out-of-date medications or repeat prescriptions for drugs which are no longer needed.

2. Problem identification

The aim is to solve or avoid any medication-related problem/s that interfere with the desired patient outcome. Some problems may require further investigation.
▲ Are there any untreated indications?
▲ Is this the most appropriate drug for the indication(s)?
  Is the drug effective and is the treatment goal being achieved?
  Have there been changes in evidence/best practice since it was first prescribed?
  Have appropriate non-drug measures been instituted?
▲ Is there an ongoing need for this drug?
  Have any drugs been initiated to treat adverse drug effects?
▲ Is the dose, frequency and formulation appropriate?
  Has the dose been individualised for the patient? Consider weight, age, renal function, etc.
▲ Is there duplication?
  Drugs in same therapeutic class, generic-brand duplication
▲ Does the patient have contraindications to any medications?
  Consider disease states, pregnancy, renal function, liver function, drug allergies etc and consider therapeutic alternatives
▲ Are there any actual or potential adverse effects occurring?
▲ Are there any clinically important interactions (drug-drug, drug-food)?
▲ Is the drug effect and/or side effects monitored appropriately?
▲ Are there any problems with compliance/concordance?
▲ Could the regimen be simplified?
▲ Is the regimen cost-effective for the patient and taxpayer?

Continues on back page...
3. Action/plan

▲ In most cases no change is required
   i.e. treatment is appropriate and therapeutic outcomes have been achieved

▲ Dose/frequency changes
   For example: doses are sub-therapeutic or medication is taken improperly

▲ Discontinue medication
   For example: an inappropriate drug is being used

▲ Add an alternative or a new medication or institute non-drug therapy
   For example: drugs used are ineffective or therapeutic outcome has not been achieved

▲ Document in medical record

▲ Implement monitoring

▲ Medication counselling/instructions for patient/carer

▲ Research information on drug
   Such as approved product information, reference texts, drug information service, manufacturer, specialist, community or clinical pharmacist, clinical pharmacologist

▲ Contact or refer to other health professional
   For example: pharmacist, community nurse, other treating doctors, hospital/health service.

4. Communication with the patient

▲ Explain the purpose of the medication review and the benefit for the patient, this will establish trust to ensure complete medication history and disclosure of compliance

▲ Does the patient understand how to take the medication and any special precautions?
   Check that written consumer medicine information has been provided where appropriate

▲ Consider appropriate aids for compliance, equipment for administration or monitoring
   Referral to a pharmacist may assist, also check use and maintenance of equipment such as nebulisers, spacers, peak flow meters, and blood glucose level meter.

Acknowledgment

The medication review form design is based on the work of medication review projects conducted in Divisions of General Practice (DINCOM GP with Central Coast, Central Sydney, Fremantle Regional and Osborne Divisions of General Practice; Domiciliary Medication Review Project, University of Sydney with St. George and Canterbury Divisions of General Practice; and QUM-Medication Review in Inner SE Melbourne Division of General Practice).

References:


### Medication Review Form

**Medication History**

<table>
<thead>
<tr>
<th>Medication (generic/brand name and strength)</th>
<th>Prescribed dose/ frequency</th>
<th>Actual dose/ frequency/ method of use</th>
<th>Treatment goal (reason for medication)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tr>
</tbody>
</table>

**Medication Problems**

- None
- Not aware of medication
- Continuing need
- Dose/frequency/formulation
- Duplication
- Other

- None
- Contraindications
- Adverse effects
- Drug interaction
- Serum levels/biochemistry required
- Compliance

**Plan of Action**

- No change
- Action

Actions/instructions to patient eg: dose change, cease, new medication, medication counselling, compliance aids.
Calculating an Estimate of Renal Function

Renal function declines with age. The estimated creatinine clearance rather than the serum creatinine indicates renal function. Use a formula such as Cockcroft-Gault to estimate renal clearance, especially in the elderly who may have a normal serum creatinine.

\[
\text{Creatinine clearance} \quad Cl_{cr} (\text{mL/min}) \quad (\text{males}) = \frac{(140 - \text{age}) \times (\text{body weight (kg)})}{815 \times \text{serum creatinine (mmol/L)}}
\]

- Creatinine clearance <10 mL/min - renally excreted drugs may be contraindicated
- Creatinine clearance 10-25 mL/min - significant dosage adjustment will be necessary for renally excreted drugs
- Creatinine clearance 25-50 mL/min - most renally excreted drugs will need dosage adjustment

Note this formula is invalid in severe renal insufficiency or with rapidly changing renal function.

Drug Interactions: See [www.nps.org.au](http://www.nps.org.au) for information on interactions with the top 10 drugs used on PBS.

Other resources: Australian Medicines Handbook; Therapeutic Guideline series