MEDICATION MANAGEMENT IN RESIDENTIAL CARE FACILITIES FOR OLDER PERSONS

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1. INTRODUCTION

The aim of this document is to provide guidelines to improve and regulate medication management practices in residential care facilities for older persons (old age homes) as well as to maintain safe medication management practices within the provided legal framework.

The registered professional nurse in charge of the nursing services of a residential care facility for older persons is responsible for the administration of all medication of the facility. In his/her absence, the designated professional nurse will accept responsibility for the administration of medication.

For the purpose of this document, there will be referred to "residential care facility" as "facility".

2. SCOPE OF PRACTICE WITHIN LEGAL FRAMEWORK

It is very important that the management of medication in all facilities for older persons adhere to all relevant legislation. Health care givers must be familiar these legislation and a set of all these documents must be made available to all health care givers in the facility.

The following legislation has a direct impact on the management of medication in facilities for older persons:

2.1 Acts and Policies

The following Acts with Amendments are applicable to medication management:

- Nursing Act (No. 33 of 2005)
- National Health Act (No. 61 of 2003)
- National Drug Policy
- Medicines and Related Substances Act (No. 101 of 1965) as amended
- Pharmacy Act (No. 53 of 1974) as amended
- Mental Health Care Act (No. 17 of 2002)

2.2 South African Nursing Council (SANC)

The following are SANC Regulations, Policies and Guidelines:

- R.387: Acts or omissions in respect of which the Council may take disciplinary steps
- R.2598: Regulations relating to the scope of practice of persons who are registered or enrolled under the Nursing Act, 1978
- R.1648: Regulations regarding the conduct of Enrolled Nursing Auxiliaries which shall constitute improper or disgraceful conduct
- R.1649: Regulations regarding the conduct of Enrolled Nurses which shall constitute improper or disgraceful conduct

2.3 Policies and Guidelines

- The Rights of Nurses
- Standard Treatment Guidelines and Essential drugs list

2.4 Medication Management Policy

Each facility must have a written policy that includes protocol on Medication Management. The purpose for such policy is to provide guidelines for the facility and to:

- ensure high standards of care for the residents
- protect residents and staff by ensuring safe methods of medication administration
- enable facility, public and professional accountability
- encourage a standard code of practice for all staff

The policy should contain the following information:

- The positions of staff and their medication related responsibilities at the facility
- Whether there is direct or indirect supervision of a registered professional nurse and what safety measurements are in place
- Custody of all medication prescribed or a description of the conditions whereby residents may take charge of their own medication
- The procedures for prescribing medication by medical practitioners and other authorised prescribers, both in the case of a written prescription and an oral instruction
- The process by which the prescriptions/orders are obtained
- The precautions for safe and proper storage of medication

- Action to be taken if a medication administration error is identified
- Standard operating procedures with regards to record keeping of medication administration
- The procedure for disposal of redundant and expired medication
- A statement of confidentiality of residents' medical records
- Provisioning of medication management training
- Measurements in place to ensure quality assurance
- Revising procedures of the policy

The **protocol** should include more specific detail, i.e. who is responsible for:

- Taking charge of the key to the medication room/cupboard
- Preparation of medication rounds
- Administration of medication
- Recording details of medication prescribed for residents
- Recording medication administration
- Supplying over-the-counter (Schedule 0 to 2) and complementary (traditional, homeopathic, herbal or alternative) medication to residents
- Disposal of redundant and expired medication

Note that the administering of medication should be strictly in line with the scope of practice of any registered health care giving staff in the facility

3. PERSONAL MEDICATION OF RESIDENTS

The registered professional nurse in charge bears all responsibility for all medication received in the facility. As there are so many different sources from where medication can be obtained by residents, it is desirable that all medication in the facility should be centralised at the nursing stations and controlled by the registered professional nurse in charge. This will eliminate unnecessary medication related complications problems such as medication interactions. Best practice would be that when an older person is admitted to a facility, he/she should hand all medication in his/her possession to the registered professional nurse in charge. All medication must further be noted on the resident's administration card and the medication will be kept separately per individual.

4. STORAGE OF MEDICATION

All pharmaceutical products should be stored in a safe and proper manner and by adhering to the following:

- Medication should be stored in a double locked room and/or locked cupboard or medication trolley. Individual medication should be locked in cupboards installed in the residents' rooms
- Adhere to special storage conditions and temperature, moisture and ambient light should be taken into consideration as to where the best place would be to store medication while taking note of the following:
  - All medication should be stored at temperature below 25º C
  - All thermo-labile medication should be stored in a refrigerator between 2º C and 8º C and separate from any other product, preferably in a locked container or separate fridge
  - Use a maximum/minimum thermometer to make twice daily checks on storage temperature.
  - Keep a daily record of temperatures.
  - Failure to adhere to specific storage requirements may reduce the effectiveness of the medication
- Residents' medication should be separated from each other with their names clearly indicated on each package
- Medication should be stored in the original dispensed packs with expiry dates and batch numbers being visible
- Medication should be kept in their original dispensed containers until being handed out especially foil or blister unit-dose packs must be kept unopened in the original dispensed pack until the dose is given
- Labels must not be removed from medication containers
- Delegated staff that had the appropriate training should check all medication for expiry dates and deterioration once a week and every time when new stock has arrived. Expired and discontinued medication must be kept separate in a secure place for later disposal according to approved protocols
- Medication rooms and /or cupboard should be kept hygienic at all times and pest control procedures must be in place
- Procedures should be in place for the disposal of medical waste and sharps

5. SPECIFIED SCHEDULE 5 AND 6 MEDICATION

Schedule 5 and 6 medication must be under the supervision of the registered professional nurse in charge.

Storage of schedule 5 and 6 medication

- This medication must be stored in an appropriate cupboard and preferably in the nursing station for maximum control. This cupboard must also be secured against the wall and securely locked
- The nurse in charge who is on duty must keep the key of the cupboard in safekeeping

Record keeping of schedule 5 and 6 medication

- Specified Schedule 5 and Schedule 6 registers must be in place with separate record keeping per preparation per resident
- The registered nurse who hand out these medication must complete and sign the register after every hand out with a second nurse being present as witness and should also sign the register
- A second nurse must control Schedule 6 medication and sign the register accordingly
- These registers must be balanced monthly and an authorised pharmacist must balance and check these registers at the end of March, June, September and December

6. ORDERING AND RECEIVING MEDICATION

The following procedures should be in place when ordering and receiving medication:

- Medicines must be authorised in writing (prescription or on resident's administration card) and signed by a medical practitioner or authorised prescriber. In an emergency the medical practitioner can give telephone instructions and this must be entered on the resident's prescription card and signed by the doctor as soon as possible on the next visit.
- All dispensing on prescriptions, either from the medical practitioner of the facility, outpatients departments, clinics or private medical practitioners, must be done by a

pharmacist or authorised person according to all legal, professional and ethical requirements and these dispensing must be done according to the Good Pharmacy Practice. The recommended route though is that patient-ready medication packs be prepared at the hospital that attend to state-subsidised patients.

- All preparations in containers must include the following information on the label:
  (Note: No abbreviations should be used due to risk of misinterpretation)
  - approved name, quantity and strength of the medication;
  - generic name of the medication;
  - the schedule;
  - name of the patient and his/her file number;
  - dosage of the medication;
  - dose frequency;
  - duration of treatment;
  - special administration instructions;
  - date of issue;
  - expiry date;
  - specific storage requirements and / or warnings; and
  - address of the body which supplies the medication (e.g. depot / supplying pharmacy).
- When the medication is sent from the depot / supplying pharmacy / clinic to the facility, the following procedures should be in place:
  - The nurse in charge must receive and check all medication received from the depot / supplying pharmacy against the residents' administration card/prescription.
  - She/he must complete the administration card while keeping the prescription with the administration card
  - Lock all checked medication away in the designated medication room or cupboard.

7. ADMINISTRATION OF PRESCRIBED MEDICATION

The following is important when administering prescribed medication:

- Medicine may only be administered to a resident if the medication was obtained through a written prescription from a medical practitioner or authorised prescriber, and dispensed by a pharmacist or practitioner who is authorised to prescribe
- All administrations must be strictly according to the medical practitioner's/ authorised prescriber's prescription with no deviation unless permission has been granted
- The nurse must ensure that the right resident receives the right medication in correct quantities at the right time. Check the name of the resident against the prescription and name on the medication container
- Make sure the resident has fluids to take with the medication, and that any special instructions for administration (e.g. after meals, before meals, etc.) are complied with.
- Medication should not be left for the resident to take later, make sure that the resident has actually swallowed his/her oral medication
- If a resident finds it difficult to swallow a big tablet, do not crush the tablet as some tablets then become inactive. Rather enquire from the pharmacist whether another dosage form is available, such as a syrup
- The resident must be carefully observed for any possible adverse reaction and any reaction must be reported as soon as possible to the prescriber and the pharmacist
- The nurse who administers medication must complete and sign the administration card directly after the resident has taken the medication. The administration card should also allow the recording of withheld doses, refused doses or extra doses given in the event of wastage
- Schedule 5 and 6 medication administration must be recorded on the administration card and entered into the applicable register
- If the resident did not take his/her medication for whatever reason, this should be recorded and reported to the senior staff member as soon as possible
- If the wrong medication is given, report this **immediately** to the senior staff member on duty, who must inform the doctor and an Incident Report must be completed

7.1 Administration of medication in dose containers

Although the administering of medication directly from the original dispensing packages is the correct and safest method, dose containers (pill boxes) can be used and if they are used, the following is important:

- The refilling procedure must be included in the facility's Medication Management Policy
- The containers should ideally be filled on a daily basis and if not possible, not more than three days' medication at a time
- A separate container must be used for every administering
- Each container must clearly indicate the personal particulars of the resident, his/her room number and dosage-time
- The registered nurse administering the medication should initial the tick sheets each time the container is filled (see Appendix A for an example of a "Tick Sheet")

7.2 Administration of medication to residents capable of taking own medication

Residents who are capable of taking their own medication, should be allowed to do so, however this arrangement is optional and not compulsory to the facility. These residents should also be evaluated whether they are capable of storing and administering their own medication and after a resident has been found capable to administer his/her own medication, follow-up assessments should be done at least three monthly (or when necessary) to monitor his/her capability (see Appendix B for an example of a Self-Administration Assessment).

The following is important with regards to residents taking their own medication:

- The standard operating procedures for residents capable of taking their own medication must be included in the facility's Medication Management Policy
- Where a resident requested to manage his/her medication and is capable thereof the resident and his/her family must sign an indemnity form
- The rooms of these residents must have a medication locked cupboard
- If the resident can manage his/her medication monthly, a maximum of one month's supply (in the original dispensing packages) may be given to the resident to administer on his/her own
- If the resident can manage his/her medication daily, the medication may be placed on a daily basis in a dose container for the resident to administer medication on his/her own at prescribed times

- A tick sheet should be used and preferably kept in the resident's room that indicates which medication is being used and where the medication is by prescription, the prescription must be attached to the tick sheet

7.3 Administration of over-the-counter medication

Each facility should have a Medication Management Policy that includes a protocol and over-the-counter medication should be addressed in this document. The protocol should also be approved and signed by a medical practitioner.

A small stock of over-the-counter medication for the relief of minor ailments can be kept at the facility while taking note of the following:

- Over-the-counter medication should be kept separate from all other medication in the medication cupboard
- Record every administration on the administration card
- It should not be used for more than five (5) days and if symptoms persist a doctor should rather be consulted
- No bulk quantities of medication above schedule 1 must be kept on the premises of the facility unless the medical officer in charge takes responsibility in the form of a standing order for the administration of these medication (examples of such medication are Loperamide and Ibuprofen)
    - These medication may only be administered in an emergency by a registered nurse
    - A record of the doses administered must be kept for in the event of an adverse reaction so that the medication, dosage and the person who administered the medication can be identified
- Over-the-counter medication may cause a reaction to other prescribed medication and it is advisable to always check with the supplying pharmacy for any adverse reactions before administering over-the-counter medication (see Appendix C for "Adverse effects of over-the-counter drugs and effects on prescribed drugs")
- Older persons quite frequently demonstrate what may appear to be a disease or ailment whereas it might be an adverse drug reaction due to drug accumulation (very common among this class of slow metabolisers and eliminators), and/or drug interactions with both prescription and over-the-counter medication.

8. REVIEW OF MEDICATION

The Medication and Substances Act of 1965 requires that all prescriptions be reissued on a six monthly basis, while Schedule 6 medication requires a new prescription every month. The following is important with regards to the review of medication/treatment:

- A registered professional nurse in consultation with the doctor and pharmacist must review each resident's medication at least every six months and schedule 6 medication monthly
- The nursing personnel must when a prescription is nearing towards the end, bring it promptly under the medical practitioner's attention
- To identify any unnecessary, harmful and/or inappropriate medication use, the following is important when reviewing the resident's medication:
  - Review the resident's current medication and if the medication is taken appropriately
  - Review the use of prescribed and over-the-counter medication
  - Identify whether many drugs are used at the same time (also referred to as polypharmacy) and review the necessity of each drug and do adjustments if necessary

9. EMERGENCY MEDICATION

An emergency trolley must be available and must be furnished with the required equipment, apparatus and medication required to immediately handle an emergency situation (see Appendix D for minimum items).

The following is important with regards to an emergency trolley:

- All items must be clearly marked and grouped in such a way that the items are available for each phase of the resuscitation
- The emergency trolley must be stored in the most strategic but secure place and not be kept in a locked cupboard or room
- All personnel must at all times know where to locate the trolley
- All items must be checked at least once a week, as well as after each use and a checklist must be kept close to the trolley

- All pieces of apparatus must be tested at least once a week to determine whether they are still in working condition
- The expiry dates of the emergency trolley stock must be indicated on the checklist so that three (3) months before it expires it can be removed and replaced
- A register for the emergency trolley must be kept and every time the trolley is used, the following must be indicated:
  - Name of the patient (resident)
  - Preparation used
  - Preliminary treatment
  - Name and signature of the health professional responsible for administering emergency treatment
  - Date and time
- The relevant medical practitioner of the patient who has been treated, must complete and confirm the prescription in writing within 48 hours and the stock must be obtained from the depot / supplying pharmacy against this prescription, but must be clearly indicated as 'emergency tray stock'
- If the patient belongs to a medical fund the prescription is then handed in to a retail pharmacist to replace the stock

10. MEDICATION MANAGEMENT CONTROL

All medication management control measures must be included in the Medication Management Policy and measures to control medication management are the responsibility of the registered professional nurse in charge and should include the following:

- Specific control measurements must be in place, such as
  - weekly checking of:
    - ★ proper medication storage, that includes temperature recordings;
    - ★ tick sheets and administration cards
    - ★ emergency medication
  - monthly checking of expiry dates and deterioration; and
  - 6-monthly reviewing of residents prescriptions and medication (prescribed and over-the-counter)

- A registered professional nurse and another category nurse must balance the registers for Specified Schedule 5 and 6 medication at the end of each month and the pharmacist of the depot / supplying pharmacy must be informed in writing of any discrepancy in stock. The pharmacist must do an investigation and legal steps must be taken where necessary.
- Specified schedule 5 and Schedule 6 items have to be balanced and checked 3 monthly by a pharmacist.
- A designated pharmacist of the depot / supplying pharmacy must inspect the facility's medication management at least once a year and it is advisable that a pharmacist assistant inspect the facility on a quarterly basis and specific attention must be given to the following:
  - Ordering, receiving and storage of medication (prescribed, over-the-counter and emergency)
  - Administration procedure
  - Record-keeping, that includes patient administration cards and registers for scheduled drugs

Note: It is not good practice for a facility to keep any medication stock other than patient-ready packs for the prescribed medication for specific patients as many medico-legal problems will be avoided.

11. IN-SERVICE TRAINING

An in-service training programme on the management of medication must be in place and at least two training sessions per year must be arranged for all the health professionals of the facility where the designated Pharmacist of the depot / supplying pharmacy must be the key role-player in this training programme.

The training programme must include the following:

- Drug administration and storage principles (drug supply management)
- Basic knowledge of commonly used drugs including drug interactions, side-effects and adverse effects
- Management of trauma

Details of all medication management in-service training rendered must be recorded.

TICK SHEET (EXAMPLE)

Resident's Name:									**Month:**								**Year:**				**Supervisor Signature**
Medicine Name	**Day 1**				**Day 2**				**Day 3**				**Day 4**				**Day 5**				**Day 6**				**Day 7**				
	Time				**Time**				**Time**				**Time**				**Time**				**Time**				**Time**				
Enalapril 10mg	DP				AC				DP																				
Furosemide 20mg	DP				AC				DP																				
Slow K 600mg	DP	DP	DP		AC				DP																				
Zopiclone 7.5mg				MB				MB				MB																	
Medicine Name	**Day 8**				**Day 9**				**Day 10**				**Day 11**				**Day 12**				**Day 13**				**Day 14**				
	Time				**Time**				**Time**				**Time**				**Time**				**Time**				**Time**				
Medicine Name	**Day 15**				**Day 16**				**Day 17**				**Day 18**				**Day 19**				**Day 20**				**Day 21**				
	Time				**Time**				**Time**				**Time**				**Time**				**Time**				**Time**				
Medicine Name	**Day 22**				**Day 23**				**Day 24**				**Day 25**				**Day 26**				**Day 27**				**Day 28**				
	Time				**Time**				**Time**				**Time**				**Time**				**Time**				**Time**				
Medicine Name	**Day 29**				**Day 30**				**Day 31**																				
	Time				**Time**				**Time**																				

APPENDIX B

MEDICATION: SELF-ADMINISTRATION ASSESSMENT

Instructions:

Complete in order to assess a resident's ability to self-administer medication.

Check the appropriate response below for each item listed

The resident must be able to perform each step indicated below prior to beginning self-administration of medication

Name:		**Age:**	**Room/Unit:**	
ASSESSMENT CRITERIA		**UNABLE**	**ABLE WITH ASSIST**	**FULLY CAPABLE**
1	Can correctly read (or explain) aloud instructions for use on **medication** container			
2	Can correctly state what each medication is for			
3	Can correctly state what **time** medication are to be taken			
4	Can correctly state the proper **dosage** of each medication			
5	Can demonstrate ability to open medication containers correctly			
6	Can correctly measure the appropriate amount of medication from the container			
7	Can demonstrate ability to self-administration of medication			
8	Can demonstrate ability to close medication containers correctly			
9	Can demonstrate secure storage for medication kept in room			

List medication and dosages as listed by the resident in criteria 1 , 4 & 5

Medication_____ Time ____ Dosage_____	Medication_____ Time ____ Dosage_____
Medication_____ Time ____ Dosage_____	Medication_____ Time ____ Dosage_____

ASSESSMENT RESULTS

The resident is deemed able to safely self-administer medication_____

The resident is suitable to be given the medication daily / monthly _____

The resident is deemed unable to safely self-administer medication, for the following reasons: _____

_____

Signature: _____ Date: _____ Next medicine review will be on: _____

Main source: *Crutchfield, D.B., Medication Management and the role of the consultant pharmacist in assisted living facilities. Journal of the American Society of Consultant Pharmacists. 1998; (13).*

APPENDIX C

ADVERSE EFFECTS OF OVER-THE-COUNTER DRUGS AND EFFECTS ON PRESCRIBED DRUGS

OVER-THE-COUNTER DRUG	ADVERSE EFFECTS	PRESCRIBED DRUG	EFFECT ON PRESCRIBED DRUG
Antacids: ▪ Calcium carbonate, magnesium- and aluminium compounds	▪ Excessive use to be avoided. ▪ Calcium containing medicines may cause hypercalcaemia ▪ Magnesium containing medicines may cause hypermagnesaemia, and may have laxative effect when used alone	▪ Antibiotics ▪ Cardiovascular drugs: - Hypertension - Cardiac glycosides *(e.g. Digoxin)* ▪ Thyroid drugs ▪ Iron preparations	Decrease drug absorption by up to 90%
Cough mixtures ▪ Dextromethorpan	▪ May cause drowsiness, which is aggravated by alcohol ▪ May cause tachycardia, palpitations, nausea GITdisturbances, arrhythmias	▪ Phenothiazines ▪ Benzodiazepines ▪ Tricyclic antidepressants *(e.g. imipramine, amitriptyline)*	May aggravate central depressant effect
NSAIDs/analgesics *(e.g. indomethacin, aspirin)*	▪ GIT disturbances, erosion, peptic ulceration, bleeding ▪ Fluid- and sodium retention may occur ▪ Drowsiness and other CNS effects. ▪ May interfere adversely with BP and cardiac failure control	Furosemide	May reduce the diuretic and anti-hypertensive efficacy – especially with indomethacin
		Spironolactone	Efficacy of Spironolactone is diminished – especially with aspirin and indomethacin
		Beta blockers *(e.g. propranolol, atenolol)*	Decreased efficacy. Indomethacin seems to have the most marked effect
		Calcium-channel blockers: ▪ Nifedipine	May lead to protein displacement of either drug and unexpected potentiation of effects
		▪ Verapamil ▪ Amlodipine	Mutual displacement from plasma proteins may lead to unexpected increased effects
		ACE Inhibitors *(e.g. enalapril, perindopril, captopril)*	May diminish the anti-hypertensive and anti-failure effect of all ACE inhibitors
		Antidiabetic agents *(including Insulin)*	Hypoglycaemic effect may be enhanced
		▪ Agents inhibiting platelet aggregation *(penicillins)* ▪ Thrombolytics ▪ Anticoagulants *(Heparin, Warfarin)*	Increased risk of haemorrhage
		▪ Arthritis drugs *(e.g. Colchicine)* ▪ Steroids	Decreased efficacy
		Anticonvulsant drugs	Can cause toxicity

(Source: South African Medicines Formulary, 2005; Daily Drug Use, 2001)

APPENDIX D

EMERGENCY TROLLEY: MINIMUM ITEMS

1. AIRWAY

To obtain an open airway the following minimum items should be available

- Mouth-gag
- Spatulas
- Gauze swabs
- Suction apparatus
- Airways

2. INTUBATION

- Laryngoscope with blades
- Endotracheal tubes – different sizes – 6.5, 7 and 7.5
- Magill's forceps
- Ambubag

3. GENERAL

- IV administration sets
- Alcohol swabs
- Needles and cannulae
- IV Fluids:
  - Normal Saline
  - 5% Dextrose
- Medication should be limited to:
  - Adrenaline
  - Aminophylline
  - Promethazine
  - Hydrocortisone

  Where the responsible medical officer provides written instructions additional items may be considered.

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- South African Medicines Formulary, 2005; Daily Drug Use, 2001
- Crutchfield, D.B., Medication Management and the role of the consultant pharmacist in assisted living facilities. Journal of the American Society of Consultant Pharmacists. 1998; (13)

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