GP Residential Aged Care Kit

Information Sheets

1. How to use this kit
2. After hours medical care
3. Tools for residential aged care
4. Using 'Medical Director'
5. Clinical guidelines (Feb–Sept 2004)

Produced by the North West Melbourne Division of General Practice – Revision Date: 31/08/2004

Acknowledgements

This kit is being developed by the 'After Hours Primary Medical Care for Residents in Aged Care Homes Project', based at the North West Melbourne Division of General Practice (NWMDGP).

The project is funded for two years to December 2004, by a service development grant from the Commonwealth Department of Health and Aging, to improve after hours medical care for residents of aged care homes.

Authors of the kit are Denise Ruth and Rita Wong, with a substantial contribution from Noel Stewart for the RAC patient summary & plan electronic template and Information Sheet: Using 'Medical Director'.

We thank all those who supported the project by contributing to the Project Advisory Group, Reference Groups and directly in the design of the resources and tools that are contained within this kit:

- Aged Care Homes in the North West Aged Residential Care Network, particularly Lionsville Lodge Hostel, Gladswood Lodge Hostel, Marivale Community Nursing Home and Cyril Jewell House
- NWMDGP General Practitioner and Consumer Representatives
- Carers Association Victoria
- Metropolitan Ambulance Service
- Melbourne Medical Locum Service
- Australian Locum Medical Service
- Melbourne Health
- Northern Health
- Campbell Research & Consulting

Contents of this kit and the companion Aged Care Home After Hours Kit comply with privacy legislation for use of health information in the care of aged care home patients.

Melbourne Health Human Research and Ethics Committee approved the project and its evaluation.

Disclaimer

For more information

Resources and updates will be made available on www.nwmdgp.org.au

Telephone Rita Wong or Dr Denise Ruth on 03 8345 5600. Email admin@nwmdgp.org.au

How to use this Kit

- Purpose of the Kit
- Privacy statement
- Expression of interest

Purpose of the Kit

The GP Residential Aged Care Kit contains practical information and tools for GPs to:

- Provide continuing medical care for their patients in aged care homes.
- Work with ACH staff and other service providers to ensure delivery of timely and appropriate care after hours.

The kit is presented as a series of information sheets in a folder, which can be kept at the general practice, and updated as new materials become available. Each information sheet offers tools for incorporation into your practice systems.

An electronic version of resources for use in Medical Director or other software will be made available on CD and the Division's website www.nwmdgp.org.au. The kit will be revised, based on feedback during the project, and a final version produced for wider distribution in December 2004.

An Aged Care Home After Hours Kit, which complements this kit, has also been produced for Aged Care Homes (ACH) in the north west Melbourne area.

Privacy statement

Since December 2001, all private health service providers are required to abide by ten National Privacy Principles (added to the Privacy Act 1988) when collecting, using, disclosing and storing health information. In Victoria, public and private health service providers are bound by the Health Records Act 2001, which contains a similar set of principles.

In practice, when a resident is admitted to an aged care home, he or she is asked to sign a consent form. This means that health information in the resident's record can be shared routinely between residential aged care staff and health service providers involved in the provision of medical care. This includes all the health information referred to in the GP and the aged care home kits: the RAC patient summary & plan, medication chart, pathology results, transfer letter, referral letter and hospital discharge letter. Where practicable residents should be advised when information is to be shared.

Expression of interest

General practices and individual GPs are invited to participate in the project at whatever level is of benefit to your patients.

Will you please complete the form below and return to the 'After Hours Primary Medical Care for Residents of Aged Care Homes Project' at North West Melbourne Division of General Practice. Phone Rita Wong or Dr Denise Ruth on 8345 5643 if you wish to discuss details.

I / my general practice am/is interested in using/participating in the following interventions:

- ☐ All interventions
- ☐ RAC patient summary & plan
- ☐ Residential aged care (RAC) patient register
- ☐ Using EPC items for care of RAC patients
- ☐ RAC patient review reminder system
- ☐ Practice visit from project team to help implement tools in the general practice
- ☐ Aged care home treatment guidelines (will be introduced February - September 2004)
- ☐ Service directory (available March 2004)
- ☐ Clinical audit of residential aged care patients (available April 2004)
- ☐ I/We do not wish to participate in any part of the project at this time

Signature: …… Print Name: ……

Practice name ……

Practice address ……

Phone: …… Fax: ……

Date: ……/……/……

Fax to Rita Wong on 03 8345 5622
Thank you

After hours medical care

- Medical needs of the residential care population
- Needs assessment for after hours care
- After hours service plan

Medical needs of the residential care population

Of the Australian population over 65 years of age, 6% people live in residential aged care (RAC) facilities. Of these, over half are over 85 years of age and 72% are female. (Australian Institute of Health and Welfare 2002) They are a large and growing population group with complex medical needs related to chronic illness, physical disability and dementia. (Scherer 2001) Over the last 5 years, the proportion of residents classified as high care has increased, due to community care packages enabling people to stay in the community longer, before entering residential care at a more dependent level. (Flicker 2002) The prevalence of medical conditions among residents in high care (nursing homes) are estimated to be: over 80% sensory loss, 60% dementia, 40-80% chronic pain, 50% urinary incontinence, over 45% sleep disorder, 30-40% depression, and 30% falls. (National Aged Care Alliance 2003) The incidence of hip fractures is about 7% per year. (Pocock 1999)

There are major structural impediments to providing primary medical care, with the fragmentation of residential care services and health services including general practice, aged care and allied health. The current Australian residential aged care subsidy and accreditation systems provide for accommodation, lifestyle support, personal and nursing care, but fail to adequately address resident's health care needs. (Scherer 2002) General practice reforms have also failed to meet the needs of elderly people in residential care. Australians over 65 years of age have an average of 9.4-12.6 general practice consultations per year, with the number increasing with age. (Commonwealth Department of Health and Aged Care 2000) However, since 1998 there has been a slight decline in GP attendances to residential care patients, with an increased reliance on older male GPs. (Lewis and Pegram 2002)

RAC patients are high users of after hours medical care (ie outside regular general practice hours Monday to Friday 8am to 6pm), due to their complex medical needs, limited access to day time services, and inability to travel to community-based after hours services.

To help meet the medical needs of RAC patients, this information sheet focuses on a practical plan for GPs to work with aged care home staff and other service providers to provide continuity of medical care both in hours and after hours.

Needs assessment for after hours care

North West Melbourne Division of General Practice has developed an after hours service plan based on a local needs assessment with GPs, consumers, aged care home staff, medical deputising services, Metropolitan Ambulance Service, and hospital staff providing emergency, acute and aged care services.

The needs assessment described the service delivery system for after hours medical care in north west Melbourne, and analysed the factors influencing what happens when a resident needs medical attention after hours. These are shown in Figure 1.

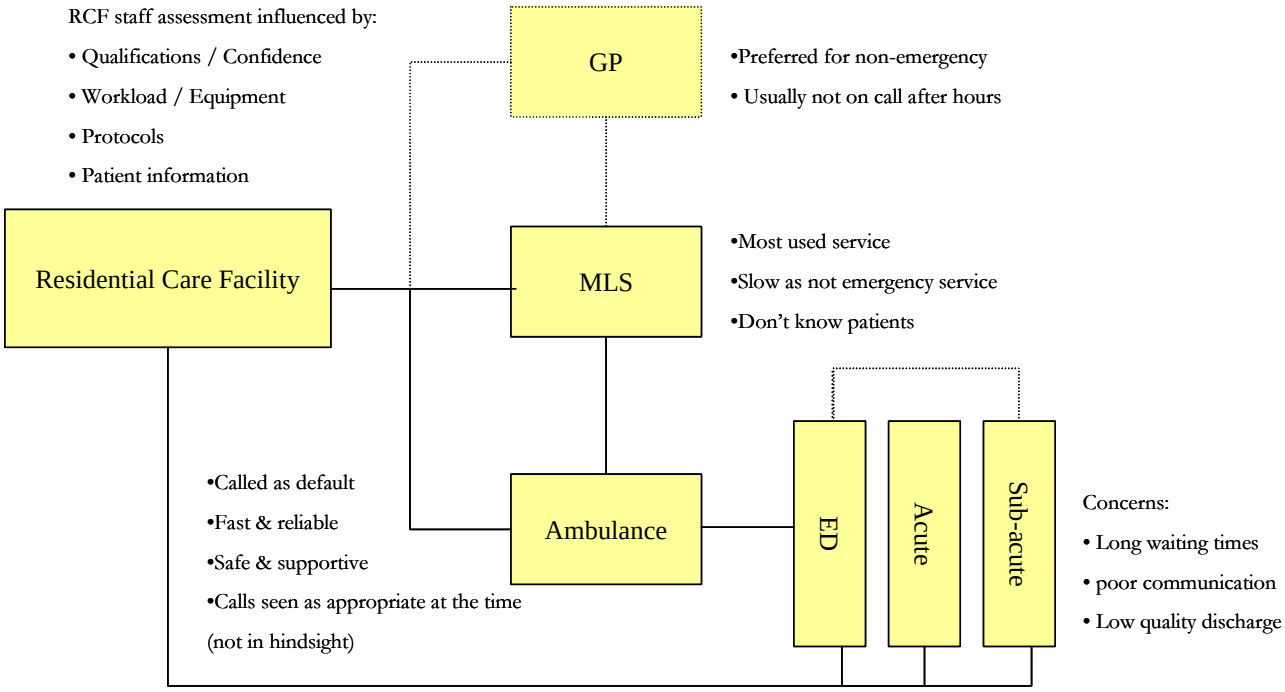

Figure 1. After hours care pathways and influencing factors

The annual demand for after hours services from the 2600 residents in 66 aged care homes in north west Melbourne was estimated as:

- Up to 455 GP attendances
- 2926 Medical Deputising Service attendances (8% patients referred to hospital via Ambulance)
- 2314 Ambulance attendances and transfers to a hospital Emergency Department
- 1148 Hospital admissions (50% of Emergency Department presentations)

Some GPs provided phone advice after hours, but few were available for RAC visits. GPs said they were reducing or withdrawing from residential aged care primarily due to insufficient remuneration and time, and the reduction in available skilled ACH staff. A recent survey of Victorian GPs reported similar barriers and identified the major areas for improvement as GP remuneration and nursing support in aged care homes, followed by medication management, documentation & record management, and training in geriatric medicine. (VACGP 2003)

The main reasons for medical locum visits were falls (19.3%), drug chart rewrites (12.6%), chest infections (8.9%), urinary tract infections (7.4%), other infections including conjunctivitis, cellulitis, viral, wound (8.1%), and insertion of indwelling catheters (5.2%). Very few patients (7%) were transferred to hospital after a locum visit. The common presentation of RAC patients at the Royal Melbourne Hospital Emergency Department were for falls/injury, shortness of breath, altered conscious state, pain, chest pain and replacement of percutaneous endoscopic gastroscopy tubes or indwelling catheters.

Findings of the needs assessment indicated that after hours care could be improved through better communication, GPs providing up-to-date patient information, and clinical care guidelines to assist clinical decision-making by aged care staff and after hours service providers. Also Medical Deputising Services (MDS) could be better utilized by:

- Preventing unnecessary locum visits eg ACHs, GPs and hospitals having alternative arrangements for drug chart rewrites
- Preventing unnecessary hospital attendances eg aged care home staff and locum doctors using patient care plans, protocols and medical equipment for after hours management of patients at the facility.

After hours service plan

The after hours service plan consists of four inter-related initiatives:

1. Aged care home and service provider regional partnership strategy - to link residential care, hospital and community services - to jointly develop interventions, address issues, and develop alternatives to hospital-based care.

2. A RAC patient summary & plan to improve communication and after hours clinical decision-making by staff of the home, locum service, ambulance and emergency department.

3. Transfer letter & discharge letter to improve communication of patient information needed for continuity of care when the patient is transferred between the aged care home and hospital.

4. Good practice protocols & guidelines to guide aged care home staff, and service providers:

    - After hours referral checklist
    - Triage protocols of Medical Deputising Services and Metropolitan Ambulance Service
    - Guidelines for symptom or disease management after hours, eg falls, infections
    - Use of medical equipment box provided for care in the facility (eg sutures, catheters).

The partnership approach and interventions have been designed to:

- Strengthen and enhance existing service delivery arrangements
- Maximise the continuity of care before, during and after the after hours episode, and throughout the service delivery system.

The responsibilities of ACH staff and service providers are shown in Figure 2.

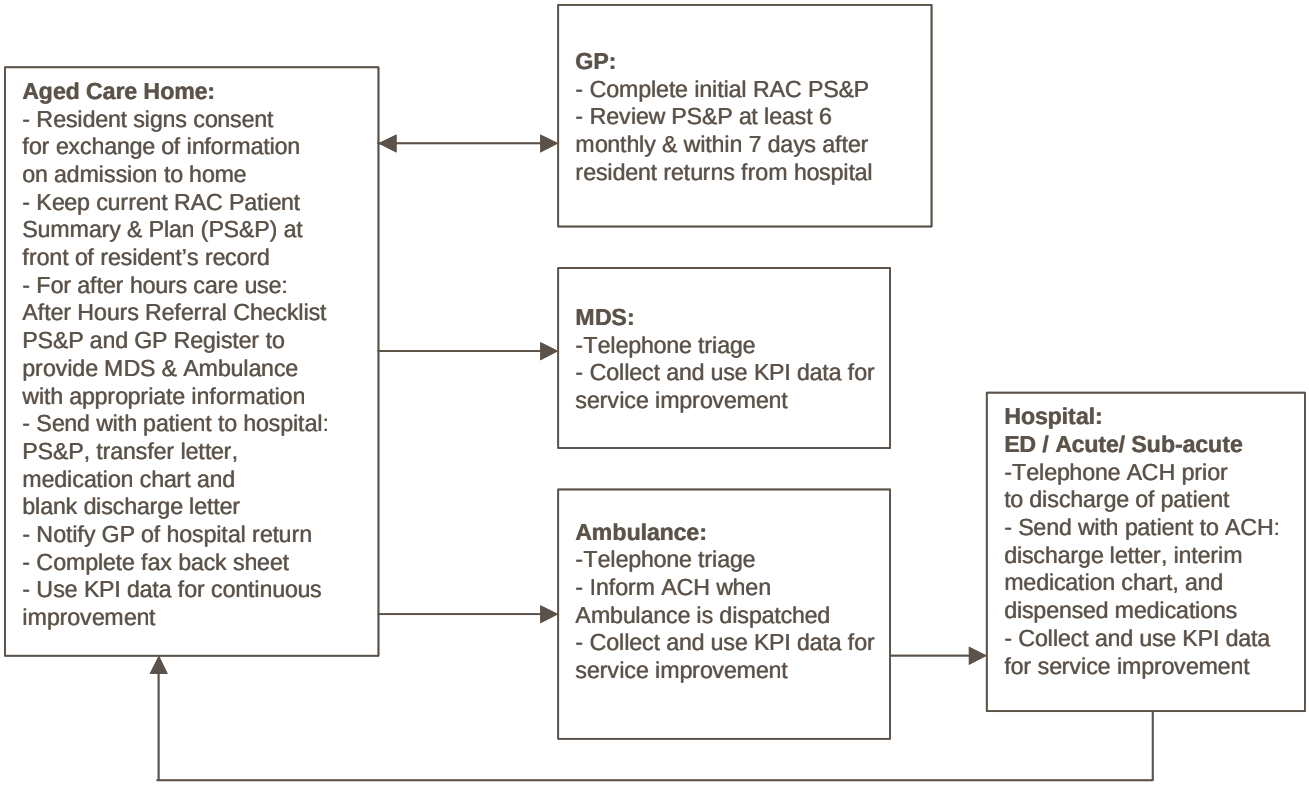

Figure 2: After hours service plan – responsibilities of service providers

Benefits of this service plan for the RAC patient and the GP are shown below. The next two information sheets provide the tools the GP can use in the practice and aged care home to provide continuing medical care.

Benefits to ACH residents:	Benefits to the GP:
❖ Better monitoring of health status ❖ Prevention of after-hours illness ❖ Prevention of hospital presentations ❖ Health information available when and where the resident needs it for their care ❖ Resident and carer wishes are more likely to be documented and respected ❖ More timely and appropriate after-hours medical care ❖ Better continuity of care	❖ Optimise remuneration for residential care ❖ Time saving tools for documenting and monitoring patient care ❖ Better information from ACH staff on sick residents ❖ Access to good practice guidelines ❖ More timely and appropriate after-hours medical care for residents ❖ Better discharge information

References

Australian Institute of Health and Welfare, 2002. Residential aged care services in Australia 2000-1. A statistical overview. AIWH Canberra.

Flicker L, 2002. Clinical issues in aged care: managing the interface between acute, sub-acute, community and residential care. Australian Health Review 25:136-9.

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National Aged Care Alliance, 2003. The aged care – health care interface. Issues paper, at www.naca.asn.au/publications.html.

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Scherer SC, 2001. Australian Society for Geriatric Medicine. Position Statement No. 9. Medical Care for People in Residential Care Facilities. Australian Journal on Aging 20:204-8.

Scherer SC, 2002. Australian Society for Geriatric Medicine. Position Statement No. 10. Residential Aged Care from the Geriatricians Perspective. Australian Journal on Aging 21:46-51.

VACGP, 2003. General Practice / Residential Aged Care Interface Sub-committee Report to the Victorian Advisory Committee on General Practice. Commonwealth Department of Health and Aging.

Tools for residential aged care

- A systematic approach
- Working with aged care homes
- Using MBS items
- RAC patient summary & plan
- References

A systematic approach

The complexity of medical needs of residential aged care (RAC) patients, combined with their social context of dependency on relatives and residential care staff, presents the GP with a major challenge. This necessitates a systematic approach to prevention (eg vaccination for influenza and pneumonia, falls risk reduction), and disease management (eg diabetes, asthma). It also requires a strong emphasis on effective working relations with the resident's relatives, aged care home staff and other service providers.

Effective strategies can be organised at several levels:

- Individual patient and relatives / guardian – eg health assessment, RAC patient summary & plan, advance care planning, specific risk reduction and disease management plans, monitoring and review
- General practice RAC population –- practice organisation, eg involvement of practice nurse; electronic templates, patient register and recall/reminder systems; clinical audit; use of MBS items; practice support visit from this project's staff
- RAC facility – develop working arrangements with each aged care home, eg contact person, communication, attendance times, case conferences, use of MBS items, after hours arrangements, medication reviews, reminders for patient reviews, GP involvement in advisory groups, encourage use of ACH After Hours Kit and participation in this project
- Health care system – multidisciplinary and continuity of care eg RAC patient summary & plan, hospital discharge letters, protocols and clinical guidelines, service directory

As top priority for the GP developing a systematic approach, this information sheet focuses on 3 strategies unique to residential aged care:

1. Working with aged care home staff.
2. Effectively using MBS EPC items for residential care.
3. Having an up to date RAC patient summary & plan as the basis for continuing care for each resident.

The next sheet describes practice organisation tools using features of the 'Medical Director' electronic record.

Working with aged care homes

There are about 835 aged care homes in Victoria, with 62.5% of these located in the Melbourne metropolitan area. (Australian Institute of Health and Welfare 2002)

Local GPs have reported more satisfaction working with aged care homes where they can get to know the staff and systems of care. An Aged Care Home After Hours Kit, which complements this GP kit, has been produced to support residential care staff to work with GPs and other service providers. The Aged Care Home (ACH) Kit is available to the 46 local aged care homes, in the northwest Melbourne area, listed below. (GP Access Branch, 2003)

Aged Care Home Name	Street	Town	P/C
Marivale Community Nursing Home	73 Epsom Road	ASCOT VALE	3032
Victorian Elderly Chinese Hostel	77 Hurtle Street	ASCOT VALE	3032
Cyril Jewell House	68 Hassett Crescent	KEILOR EAST	3033
Edenvale Manor Aged Care Facility	188a Sterling Drive	KEILOR EAST	3033
Holloway Hostel	1 Rotary Drive	KEILOR EAST	3033
Mekong Senior Citizens Hostel	6-12 Trott Place	KEILOR EAST	3033
Riverlea	57 Intervale Drive	AVONDALE HEIGHTS	3034
Anna House Private Nursing Home	12 Athol Street	MOONEE PONDS	3039
Ardmillan Place	5 Chester Street	MOONEE PONDS	3039
Queens Park Aged Care Facility	13 The Strand	MOONEE PONDS	3039
Corandirk Frail Aged Hostel	74a Maribyrnong Road	MOONEE PONDS	3039
Essendon Aged Care Facility	10 Fletcher Street	ESSENDON	3040
Lionsville Lodge Hostel	3 Moreland Road	ESSENDON	3040
Mon Repos Nursing Home	14 Combermere Street	ESSENDON	3040
Trevi Court	95 Bulla Road	ESSENDON	3040
North Western District Private Nursing Home	14 South Circular Road	GLADSTONE PARK	3043
Dorothy Impey Home	196-202 Cumberland Road	PASCOE VALE	3044
Edith Bendall Lodge	11 Park Street	PASCOE VALE	3044
Colton Close Hostel / Nursing Home	1-19 York Street	GLENROY	3046
Glengowrie Aged Care Facility	54 Box Forest Road	GLENROY	3046
Glenlyn Aged Care Facility	34 Finchley Avenue	GLENROY	3046
Glenroy Nursing Home	85-87 Chapman Avenue	GLENROY	3046
Monterey	856 - 858 Pascoe Vale Rd	Glenroy	3046
Plumpton Villa Aged Care Facility	73 Plumpton Avenue	GLENROY	3046
Villa Del Sole Hostel	73 William Street	GLENROY	3046
McLellan House Hostel	2 Robinson Street	BROADMEADOWS	3047
Ottoman Village Aged Care	66 Coleraine Street	BROADMEADOWS	3047
Roxburgh Nursing Centre	90 Lightwood Crescent	MEADOW HEIGHTS	3048
Victoria Manor Aged Care Facility	15 Mladen Court	COOLAROO	3048
St Anne's Hostel Westmeadows	125 Kenny Street	WESTMEADOWS	3049
Brunswick Manor	17 Egginton Street	BRUNSWICK WEST	3055
Gladswood Lodge Hostel	15 Waxman Parade	BRUNSWICK WEST	3055
Boyne Russell House	184-186 Victoria Street	BRUNSWICK	3056
Kanella Aged Care Facility	35 Mitchell Street	BRUNSWICK	3056
Anzac Lodge Private Nursing Home	10-12 Anzac Avenue	COBURG NORTH	3058
Coburg Nursing Home	867 Sydney Road	COBURG	3058
Emily Lenny Nursing Home	24 Sutherland Street	COBURG	3058
Gilgunya Village	23-25 Harding Street	COBURG	3058
Moreland Private Nursing Home	15 Shaftsbury Street	COBURG	3058
Munro Manor	45-47 Munro Street	COBURG	3058
Wesley Aged Care Housing Services	151 Reynard Street	COBURG	3058
Regis Karingal Manor	101f Major Road	FAWKNER	3060
St Basil's Nursing Home/Hostel	24 Lorne Street	FAWKNER	3060
Goonawarra Nursing Home	23-25 Anderson Road	SUNBURY	3429
Lions Club of Sunbury Elderly Peoples Home	29 Timins St	SUNBURY	3429
Corpus Christi	855 Mickleham Rd	GREENVALE	3059

The ACH After Hours Kit encourages ACH staff to develop working arrangements with their attending GPs, eg communication, attendance times, case conferences, use of MBS items, after hours arrangements, medication reviews, reminders for patient reviews, GP involvement in advisory groups, and a nominated contact person for this project in addition to the Manager / Director of Nursing.

Information sheet 4 provides a guide to using 'Medical Director'. Using clinical software can help GPs plan prevention and disease management, and facilitate duplicating clinical notes at the general practice and in the resident's record at the aged care home. There is scope to use information technology for more efficient communication and transfer of medical information, between the residential care facility and GP, and ultimately also with other service providers, eg pharmacist, hospital.

Using MBS items

Currently three types of Medicare rebates are available for GPs attending patients in residential aged care facilities: consultations, case conferences and care plans.

The usual Medicare rebates for consultations at the RAC facility reimburse the GP for routine continuing care, plus travel time. However, the level of reimbursement does not adequately take into consideration the:

- Frailty and multiple complex problems of residential care patients
- Benefits of the GP seeing multiple patients at a facility, so that good working arrangements can be developed with staff
- Complex nature of the care provided during time spent with the patient, eg assessment of multiple medical needs
- Care provided away from the patient, such as:
    - talking with aged care home staff, relatives, pharmacist and other care providers
    - regular review and rewriting of scripts and medication charts
    - writing clinical notes in the resident's record at the home and the patient record at the general practice
    - phone advice
    - arranging referrals

EPC items for case conferences and care plans were introduced in November 2000 to support GP participation in multidisciplinary care in residential aged care facilities.

The northwest Melbourne area has approximately 2,200 residential aged care home beds. However, the EPC item numbers for residential aged care were used only 9 times during January – March 2003. (GP Access Branch 2003)

A recent evaluation of the Enhanced Primary Care (EPC) Medicare Benefits Schedule (MBS) items indicates that GP involvement in case conferencing and care planning in residential aged care facilities was limited, but considered to be useful by those who used the items. The report found that GP awareness was high, but allied health providers, aged care staff and consumers had little awareness and education about the items. (Wilkinson, 2003) Although the highest uptake of these items has been in Victoria, few GPs use them, saying that payment is not sufficient for the time needed to fulfil the requirements. The time taken to inform and involve ACH staff and other participants, and the complexity of forms make EPC items 'too much hassle' to use. (VACGP, 2003) GPs and aged care home staff have reported that the use of items will increase if the processes are simplified and as the items are more widely known by residential aged care staff. (Wilkinson, 2003)

This section gives information to assist you to use the current MBS items effectively. It simplifies the process and paperwork for using and claiming EPC items. GPs and ACH staff need to work together when using EPC items, therefore the aged care home kit explains EPC items and how staff can use them for working with GPs. Discussion with the ACH Manager / Director of Nursing on roles and responsibilities when using EPC item numbers will avoid confusion and doubling up of work.

It has been recognised that the existing EPC items are not adequate for achieving their purpose of improving medical care in residential aged care facilities, and so there is a sustained effort to introduce new items and increase Medicare remuneration further. (AMA 2001) We will inform you of any new developments.

GP consultation at a residential aged care facility

Use of Items

The usual Medicare rebates for consultations at the RAC facility reimburse the GP for routine continuing care. We recommend that Items 43 and 51 be used more readily to reflect the complex nature of the care provided directly to the patient, including documentation and talking with aged care home staff. Item 51 is suitable for conducting part or all of a comprehensive medical assessment on admission of the resident, or when there has been a major change in the patient's condition.

MBS rebate

☐ Item 35 (<20 min) ☐ Item 43 (20-39 min) Item no. 51 (≥45 min)

The fee is for the corresponding item in the GP's rooms plus an amount per patient that reduces with each patient seen. The fee is equivalent to Item 23, 36 or 44, plus $20.60 divided by the no. patients seen (up to 6 patients), and then $1.45 per patient for 7 or more patients.

Case Conference

Use of Items

The purpose of case conference Items is to support multidisciplinary team based management of the health care needs of a patient with a chronic or terminal condition requiring complex care.

Eligible residents are those who suffer from at least 1 medical condition that has been, or is likely to be present for at least 6 months or is terminal, and who require care from the GP and at least 2 other formal health care providers, such as a Registered Nurse, Personal Care Worker, Allied Health Worker, Pharmacist. (Refer to 'Medicare Benefits Schedule Book – A.22 explanatory notes' for more detail.) It is recommended that the resident and a relative be included in discussions, although they are not counted as participants for meeting requirements of the Item numbers.

Case conference Items are suitable for:

- Initial preparation and major review of the RAC Patient Summary & Plan. This involves discussion with 2 other disciplines providing health care to the resident, usually ACH staff (eg: Registered Nurse and Personal Care Worker).
- Discussing a resident's current health needs and planning management with 2 other disciplines providing health care to the resident eg: Registered Nurse, Personal Care Worker, Allied Health Worker, Pharmacist.

The case conference can be initiated and organised by either the GP or the ACH staff.

GPs can claim for five case conferences per patient per year, either as the organiser or a participant.

Completing the streamlined checklist below will meet requirements for case conference EPC Item nos. (This checklist also forms part of the RAC patient summary & plan that is available as an MD template.)

Date of case conference: _____ Time started: _____ Time Completed: _____

Patient or NOK consent gained ☐

Case conference organised & coordinated by: ☐ GP or ☐ Aged Care Home

Participants name & discipline:

1. _____ (GP)

2. _____

3. _____

Other participants (optional):

Patient _____

Relative/s _____

Other service provider/s _____

Outcomes

Medical summary & plan and this documentation of case conference has been:

☐ Placed in resident's record (kept in yellow sleeve for after hours care providers)

☐ Placed in patient record at general practice

☐ Given to all participants

Any other action: _____

Review date set for: _____

Case conference EPC Item completed

MBS rebate

Organising & coordinating a Case Conference in Residential Aged Care Facility

☐ Item 734 (15-29 min)	☐ Item 736 (30-44 min)	☐ Item 738 (≥45 min)
Fee $76.90	Fee $115.25	Fee $153.65
75% $57.70	75% $86.45	75% $115.25
85% $65.40	85% $98.00	85% $130.65

Participating in a Case Conference organised by the Residential Aged Care Facility

☐ Item 775 (15-29 min)	☐ Item 778 (30-44 min)	☐ Item 779 (≥45 min)
Fee $54.85	Fee $87.80	Fee $120.70
75% $41.15	75% $64.85	75% $90.55
85% $46.65	85% $74.65	85% $102.60

A case conference information sheet for residents and their relatives/carers has been developed to provide an overview of case conferencing and how the resident/relative/carer can become involved.

Care plan

Use of Item

Residential aged care facilities are required and funded to produce a care plan for every resident, through a different process than the one described for preparing an EPC multidisciplinary care plan. The resident's care plan has a strong focus on personal and nursing care rather than medical care.

Item 730 is for the GP to contribute to, or review, the resident's care plan prepared by the Residential Aged Care Facility. (Refer to the 'Medicare Benefits Schedule Book – A.21 explanatory notes' for more detail.) It provides an opportunity for the GP to view the plan as a member of the multidisciplinary team and to incorporate medical care information into the resident's care plan.

Item 730 is suitable for:

- Viewing, commenting on, and signing the resident's care plan
- Reviewing the RAC patient summary & plan and giving it to the Aged Care Home for adding to the resident's care plan, after discussion with aged care home staff.

It can be claimed at a maximum of 3 monthly intervals.

The process for reviewing the RAC patient summary & plan involves:

☐ ACH staff request GP to review patient summary & plan for inclusion with resident's care plan

☐ Patient or NOK consent gained

☐ ACH send the RAC patient summary & plan to the GP, who can review, sign and fax back to the ACH
or
ACH hand the RAC patient summary & plan at a GP visit. The GP can then take it back to the surgery, review the information, sign and fax it back to the ACH the next day

☐ Add the RAC patient summary & plan to resident's care plan and GP patient record

☐ Set next review date _____

EPC Item 730 completed.

MBS rebate

☐ Item 730 (Fee $39.80, 75% $29.85, 85% $33.85)

RAC patient summary & plan

An up to date health summary for patients is a general practice accreditation standard. The RAC patient summary & plan provides essential information:

- For continuing medical care by the GP and
- To improve communication, continuity of care and after hours clinical decision-making by staff of the home, locum service, ambulance and hospital emergency department.

Preparing an effective patient summary is best done with input from the patient, their relatives and aged care home staff. We recommend that a copy be kept at the front of the resident's file for easy access after hours. The health assessment can be remunerated as a long RAC visit, and the discussion of the problems and plan remunerated as a case conference, as outlined in the previous section.

The 'MD Recall/reminder system' described in Information sheet 4, can be used to ensure patient summaries are reviewed at least every 6 months. The ACH After Hours Kit also contains information on the EPC items and a recall/reminder system, so you may wish to discuss whom will initiate review of the patient summary & plan. The EPC care plan item requires ACH staff initiate this.

After return of the resident from hospital, ACH staff will fax to the GP the hospital discharge letter with the interim medication chart, and the patient summary & care plan, for review within 7 days.

This information sheet presents a paper version of the RAC patient summary & plan. An electronic template is available on CD or at www.nwmdgp.org.au. Information sheet 4 describes how to install and use the template in Medical Director.

References

AMA, 2001. GP services to residential aged care facilities. Discussion paper, Australian Medical Association.

Australian Institute of Health and Welfare, 2002. Residential aged care services in Australia 2000-1. A statistical overview. AIWH Canberra.

GP Access Branch, 2003. Series H ON PC.sas at 06JUN03, Department of Health & Ageing Canberra.

VACGP, 2003. General Practice / Residential Aged Care Interface Sub-committee Report to the Victorian Advisory Committee on General Practice. Commonwealth Department of Health and Aging.

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Using 'Medical Director'

- RAC patient summary & plan template
- Patient register
- Recall system

'Medical Director' software can be used to more easily track and manage patients with chronic and/or complex medical problems, such as residential aged care patients.

A RAC patient summary & plan template can be quicker to produce than a paper version and provide a legible accurate electronic record in the patient file. It can be readily copied for the residential aged care staff and other service providers to use, and easily accessed and updated at the time of patient review. A patient register and recall/reminder system can assist the GP to systematically monitor and follow up patients.

This information sheet shows you how to:

1. Set up and use an electronic template for completing and reviewing a RAC patient summary & plan.
2. Establish a patient register of aged care home patients for group recall/reminder eg: for flu vaccinations, or clinical audit.
3. Set up and use a recall/reminder system, eg for review of RAC Patient Summary & Plan, pneumonia vaccinations

The most up-to-date electronic template is available from www.nwmdgp.org.au, or on CD from the Divisional office 03 8345 5600.

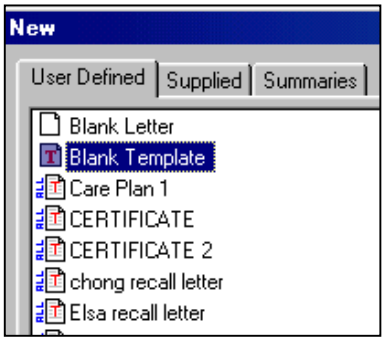
RAC patient summary & plan template

Setting up the template for use involves importing the RAC Patient Summary & Plan template into Medical Director, and adding aged care home (ACH) addresses to the Medical Director address book.

Completing a RAC patient summary & plan involves opening the template, which automatically includes information from the patient's medical history, and then adding additional information required for clinical management and remuneration. This section explains how to enter patient information (eg allergies, past history) into Medical Director and then "populate" your template with this information; use some of the Letter Writer features of Medical Director to assist you to fill out additional information; and save and print the RAC patient summary & plan.

Import the template into Medical Director

As part of this kit you will receive a CD or floppy disk that contains the *RAC Patient Summary& Plan* template.
Insert the CD or floppy disk into the disk drive.



1. Open Medical Director and then open Letter Writer.
2. From the File menu select either New or Modify Template and double click on Blank Template.
3. From File menu select Import.
4. Navigate your way to the floppy disk or CD and you will see a file called RAC Patient Summary & Plan Template. Double click on it to open.

This will place the RAC Patient Summary & Plan template text into the Blank Template. Click on any of the <<field:fields>> to check that that they have imported correctly as fields. The field should turn grey, like this: <<Field:Field Name>>

5. From the File menu select Save as template.
6. Type in *RAC Patient Summary & Plan* for the Template Name and then click on Save.
7. Once again click once on one of the fields <<xxxxxx:yyyy>> and if it turns to a grey background then the field has successfully transferred across.

Add Aged Care Homes to the address book

The Aged Care Home details are taken from the Medical Director Address Book. You must ensure that Address Book is up-to-date with the details.

Please note: the category "Aged Care Home" may not be in the drop down list when selecting category. To correct this, while in a patient record, go to the Tools menu, select Options, then select the Lists tab and click on the Address book categories button. Type in AGED CARE HOME and click on the Add button and then the Save button. When you return to the Address Book to add an entry, AGED CARE HOME will appear in the category drop down menu.

1. With the patient record open click on the File menu and select Address Book (or click on the Address Book icon in the toolbar)
2. Click on the New Company button at the bottom of the screen and type in the Aged Care address details and when complete, select the category 'Aged Care Home' and click on the Add button.
3. Repeat the process for each Aged Care Home facility.

Refer to information sheet 3, page 2 for a current list of Aged Care Homes.

Before you use the template:

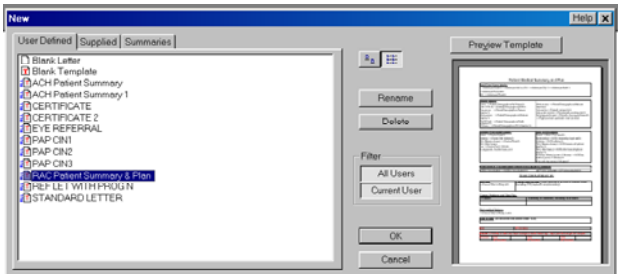
1. Check that the patient's medical history is up-to-date – click on the Past History tab and make sure under the Summary column of the listed conditions/diagnoses there is a Yes. If a history item has No under the Summary column, right click on it and then select Edit. Click in the Summary checkbox.

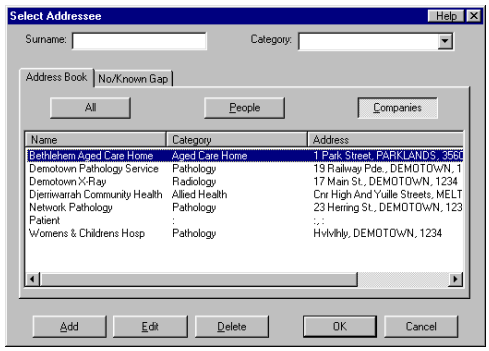
   Only those history items that have Yes in the summary column will appear in the RAC patient summary & plan template.

2. Check that the relevant allergies have been added to the patient record – click on the File menu and select Patient Details. Click on the Allergies/Warnings tab and then type in the patient's allergies (if any).
3. Make sure the Address Book is up-to-date and has the relevant aged care home facilities listed.

Use the RAC patient summary & plan template

1. With a patient's record open click on the LetterWriter button on the toolbar.
2. From the File menu select New.
3. The standard set of Medical Director templates is now displayed.
4. Select the RAC PATIENT SUMMARY & PLAN and click on OK.
5. Select the appropriate aged care home and click on OK – the address details will be added to the template.
6. Fill out the User Defined Fields window when it appears – press the tab key on the keyboard to jump to the next field.
7. Click OK when complete.
8. Proceed with filling in the rest of the form.
9. Checkboxes – these can be checked by highlighting the checkbox and typing an x





- make sure that you don't use the Shift or Caps Lock keys
- highlight only the checkbox, not any surrounding area
- if you make a mistake go to the Edit menu and select Undo

Patient register

Establishing a patient register of aged care home patients involves using the customized fields to set up a register in the database, and then entering ACH patients into the register.

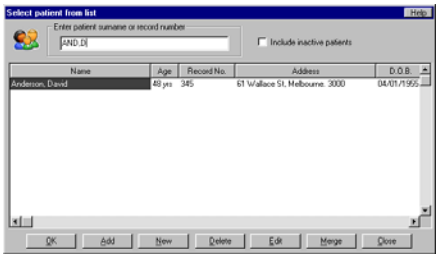
Using the register involves searching the database for ACH patients, and then saving, printing, and using the list for recall/reminder, clinical audit etc.

Create a patient register - change customised fields

To set up a register of patients who are residents of Aged Care Homes, you need to set up *Customised Fields* in Medical Director.

When changing customized fields, the change will be reflected in the whole program, i.e. the change will show in all patient files.

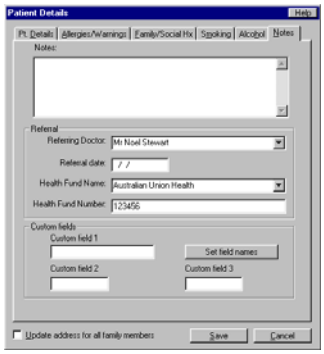
What to do



1. Open the Medical Director program and at the initial *Select patient from list* screen, type in the first 3 letters of the patient surname, followed by a comma and then the first letter of the first name, eg. AND,D

   Click on the OK button and this will open that person's record.

2. Once the patient's record is open click on the Edit menu and select Patient Details (or press <F10>).



3. The *Patient Details* screen will display a series of tabbed headings. Click on Notes.

   In the lower half of this dialog box you will see a heading called *Custom Fields*. Click on the Set field names button and a new dialog box will appear.

4. In *Field 1* highlight and delete the *Custom field 1* text. In its place delete the existing text and type in *Aged Care Home*.

   Note: If *Custom field 1* has already been replaced by other text select *Custom field 2* or *Custom field 3*.

5. Click on the Save button and then Save again.
6. Close the patient's file by clicking on the *Close this* patient's *record* button.

When prompted to save a record of this visit click on No.

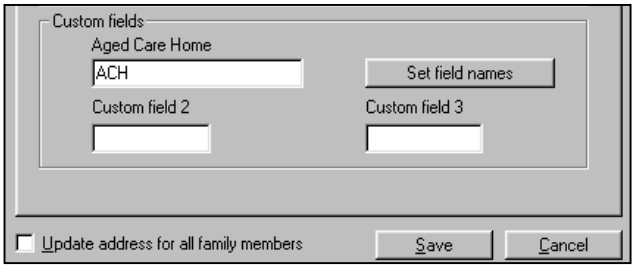
How to enter patients into the aged care home register

In the previous section you have completed the setup of the Aged Care Home patient register and it is now ready to accept patients that have been identified as residents of Aged Care Homes.

The following steps will need to be repeated for each patient that is a resident of an Aged Care Home.

What to do

1. Open an aged care resident patient record by typing in the first 3 letters of the patient surname, followed by a comma and then the first letter of the first name, eg. AND,D (for David Anderson). Click on the OK button and this will open that person's record.
2. Once the patient's record is open click on the Edit menu and select Patient Details (or press <F10>).
3. The *Patient Details* screen will display a series of tabbed headings. Click on Notes.



4. Under *Custom Fields* you will see a field heading *Aged Care Home*. Under this heading type *ACH* (or your preferred choice of identification) in the blank box and click on Save.

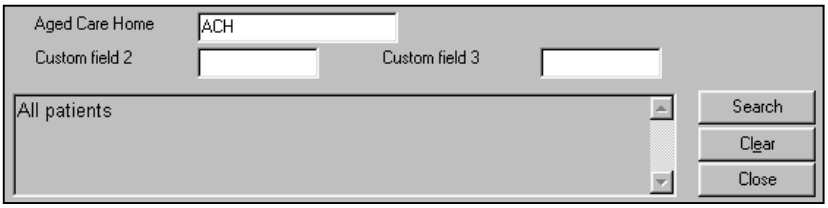
Note: Text in this field is not case sensitive.

5. Clicking on the *Open next patient's record* button (or press <F2>) and when prompted to save a record of this visit click on No.
6. Select another patient that has been identified as a resident of an Aged Care Home and repeat steps 3-6 above.

   Repeat these steps for each patient that has been identified as a resident of an Aged Care Home.

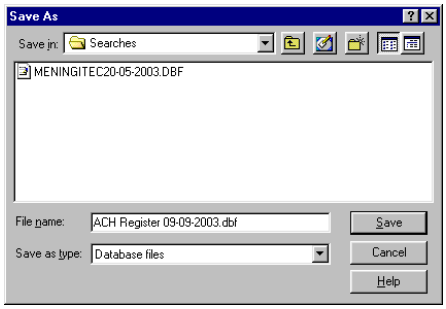
Using the aged care home patient register

1. With no patient record open click on the Search menu and select Databases.
2. Under Aged Care Home, type in ACH (or your preferred choice of identification).



3. Click on the Search button
4. Medical Director will display a list of Aged Care Home Patients with other relevant identifying information.

This register can be saved by clicking on the Save button at the bottom of the screen – when prompted for a *File name:* type in *ACH Register* plus the date, eg. *ACH Register 09-11-2003.dbf* and then click on Save.



Clicking on the Print button will print a copy of the register.

Recall/reminder system

The recall/reminder function is used to allow you to track when the RAC Patient Summary & Plan is due for review. This is usually set at 6 monthly intervals. The system provides a "recall" icon and message as a prompt or reminder when the review is due and can be used to send out reminder letters to recall the patient to attend for review.

Medical Director will automatically update the recall/reminder date if the patient summary has been updated prior to the due date – this will be particularly useful if the General Practice decides to co-ordinate & organise a Multi-disciplinary Case Conferences for which the remuneration received is greater than participating in a multi-disciplinary case conference.

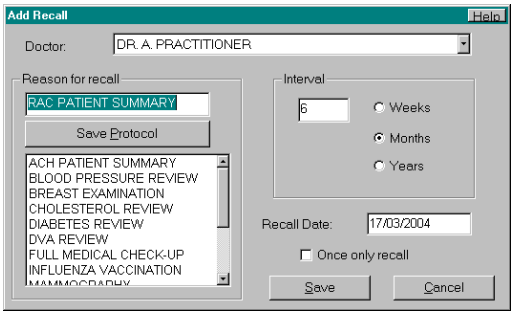
There are two ways to remind or recall patients for their review:

- You may most commonly use an "individual" recall which is generated while in the patient's medical record, and displays the recall icon on opening the record, if the review is due.
- Occasionally you may do a "bulk" when you call up all your aged care home patients by using the Search database function and then adding a recall/reminder for all of the listed patients – you may use this method for annual flu vaccinations.

Before using the recall/reminder system you can to set up a *Recall reason protocol* that can be used for all patients you wish to review.

Setting the Recall reason protocol

1. Open any patient record.
2. From the Clinical menu select Recall (or press Control + R).
3. Click on the Add button.
4. Next to reason for recall type in: RAC PATIENT SUMMARY & PLAN
5. Set the Interval to 6 months and click in the Once only recall box.
6. Click on the Save Protocol button – this Recall reason for call is now set for *all* patients.

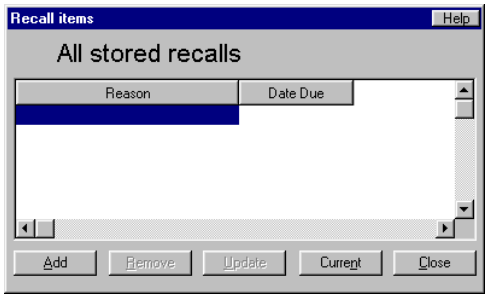


7. Click on the Cancel button.
8. Click on Close.

Recalling or reminding patients from the patient's record

This method will be used by the GP while still within the Patient record.

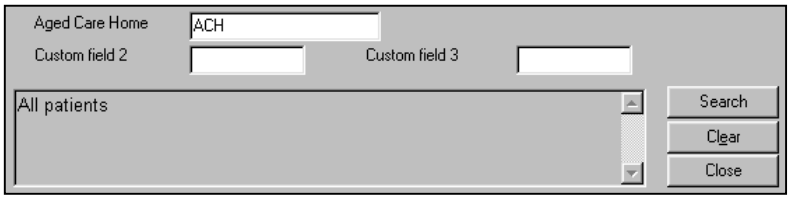
1. Open one of the patient's records.
2. From the Clinical menu select Recall and the Recall items window is displayed.(Clicking on the Current button will display the Recalls for the next 30 days.Clicking on the Show all button will display all stored recalls).
3. Click on the Add button.
4. From the Recall list, select RAC PATIENT SUMMARY & PLAN by clicking on it once.
5. The Interval should already be set to 6 months (you set this protocol earlier). If it is a "one off" recall click on the Once only recall box. Click on Save.



Bulk recalling of patients using the Search database function

This method will most likely be used by Practice Staff when wanting produce a list or send reminder letters to recall all patients that have been recorded, eg as aged care home residents. It is unlikely however that you will want to "bulk" recall all the patients on the register.

What to do

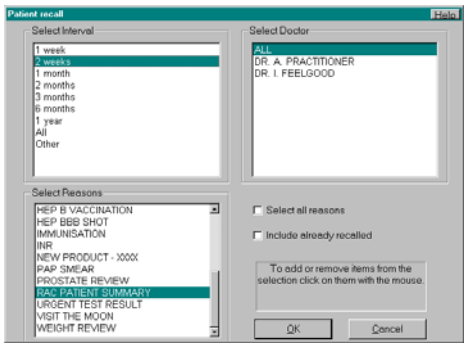


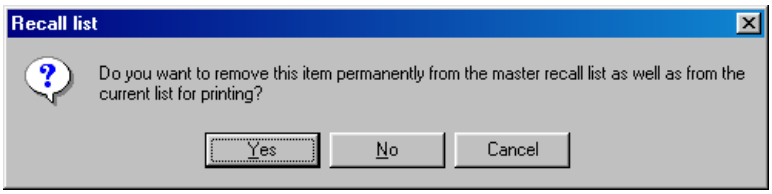
1. With no patient record open click on the Search menu and select Databases.
2. Under Aged Care Home, type in ACH (or your preferred choice of identification).
3. Click on the Search button
4. Medical Director will display a list of Aged Care Home Patients with other relevant identifying information.
5. Click on the Recall button.
6. Under reason for recall click on RAC PATIENT SUMMARY & PLAN and click on the Once only recall box.
7. Click on the Save button – this will add a recall for ALL patients in the list, not just the highlighted patient.
8. Click on the Close button.

Creating recall/reminder lists

The following search will create a list of patients that need their RAC Patient Summary & Plan reviewed within the next 2 weeks (depending on the preferred interval selected) and provide enough patient details to allow the practice staff to co-ordinate and organise case conferences on behalf of the GP.

1. Close any patient record that may be showing – from the File menu select **Close patient** (or click on the **Close this patient's record** button).
2. From the **Search** menu select **Recalls**.
3. In the **Select Interval** box select **2 weeks**.
4. Click once on the RAC PATIENT SUMMARY recall reason.
5. A list of patients fitting the criteria will be displayed. If you don't wish to include a patient in the printed list click on the patient's name and then press the delete key on the keyboard.





By clicking **Yes** you are able to remove the patient from the recall list as well as the list on the screen.

6. Click on the **Print** button at the bottom of the screen – the list generated here can be used to co-ordinate and organise case conferences on behalf of the GP.

Using MD Records on laptop at an Aged Care Home

Transfer Patient Data to laptop for use at an Aged Care Home

Patient records can easily and securely be transferred between Medical Director on the practice network and a laptop for reading, writing and printing from patient records at the Aged Care Home (ACH).

Setting up a laptop for use of MD at the Aged Care Home involves:

- installing MD on the laptop
- adding the ACH printer details (if needed)
- connecting the laptop by cable to the network at the practice.

The laptop can be used as a stand alone at the ACH or be connected to the ACH printer for printing documents such as prescriptions, RAC patient summary and plan, progress notes and pathology requests.

Using MD records on a laptop at the ACH involves downloading patient data to the laptop, using MD at the ACH, and uploading revised patient records at the surgery

MD on the laptop retains all features, including passwords for protecting patient confidentiality.

All patient data is stored securely at your surgery, and needs to be available when visiting patients at an ACH. This is achieved by temporarily copying data from the surgery to a laptop to be used in the ACH. Medical Director will automatically merge the new data entered in medical records at the ACH with data held at the surgery when the laptop is re-connected at the surgery. Even if patient records are updated at the surgery by another GP while data is held on the laptop, updated data on the laptop will still merge, and not overwrite, the data at the surgery. However, simultaneous changes to demographic data may not be correctly updated.

Set up MD on laptop

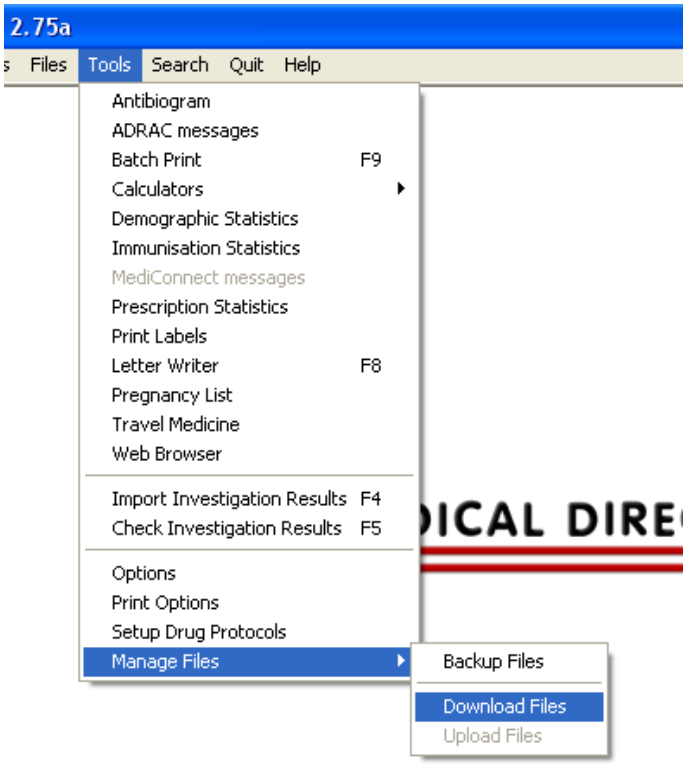
*Follow the instructions as per the **Medical Director** installation disk*

Download medical records to laptop

This copies data from the surgery server to the laptop. It is usually quicker to copy all data, rather than just the ACH patients. Copying all data allows patient data to be available for all patients, including those not previously categorised as ACH patients.

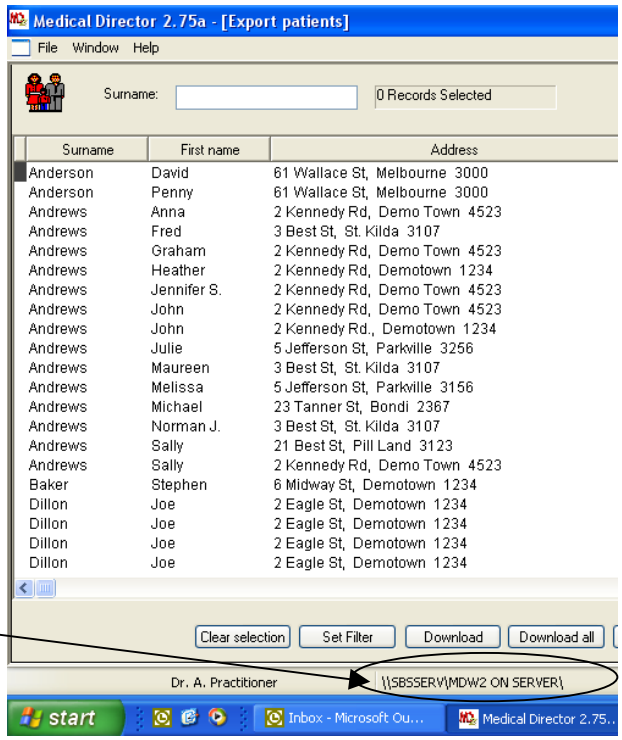
1. Close the Patient window, and remain in the Main menu
2. From the Main Menu, select Tools,
3. From the cascading menu select Manage Files,
4. From the cascading menu select Download Files.

This will instruct Medical Director to transfer patient data to your laptop. The next step is to instruct Medical Director to download selected patients or all patients.

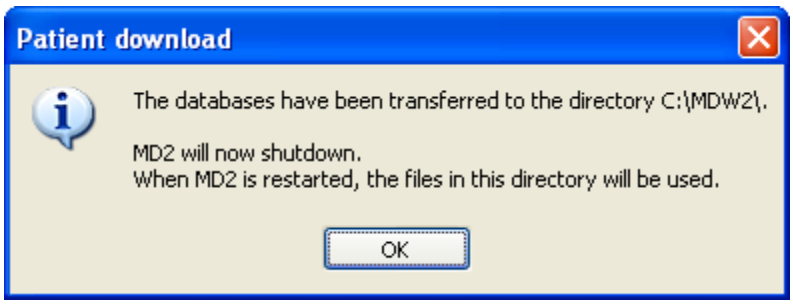


5. Double-click on the area labelled "Download all". This will transfer all the patients to your laptop.

6. This part of the screen refers to the file location for your Medical Director data, prior to downloading to the laptop. You will need to refer to this information later.

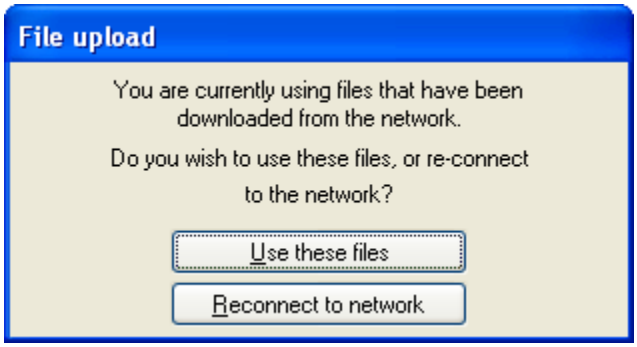


7. When all the patients are downloaded to your laptop, the dialog box on the right will appear. The laptop can now be taken to the ACH. Please note that Medical Director is showing the patient data has been transferred to a different file location, to that referred to, in para. 6 above. (avoid this widow!! – last line of paragraph at top of page)



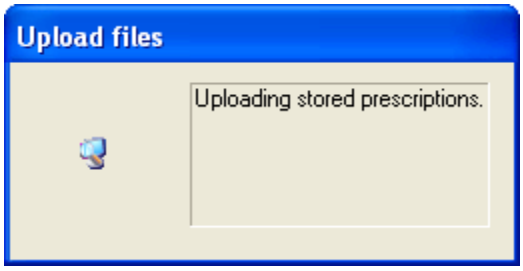
Use MD on laptop at ACH

1. At the ACH, commence Medical Director, and the dialog box on the right will pop up.
2. Select the option "Use these files".
3. You will be presented with Medical Director screens for use.
4. Connect computer to printer.
5. Please observe that the bottom of the Medical Director screen now displays "C\MDW2", instead of the surgery file location, as in para. 6 above. If you wish to print scripts, referrals or other printing, please go to the section below, labelled "connecting to Printer"



Upload medical records from laptop

1. When returning to the surgery, connect your laptop to your network, start Medical Director, and the screen on the right will appear.
2. This time, select the option "Reconnect to network".
3. Medical Director will upload and merge records for those patients whose records you have altered. A dialog box labelled "Upload files" will display, together with a list of files being uploaded and the relevant patient names.
4. When complete, you will be presented with your normal Medical Director screens.
5. Please check that the bottom line of the Medical Director screen shows the location of the patient data the same as in para. 6 above.

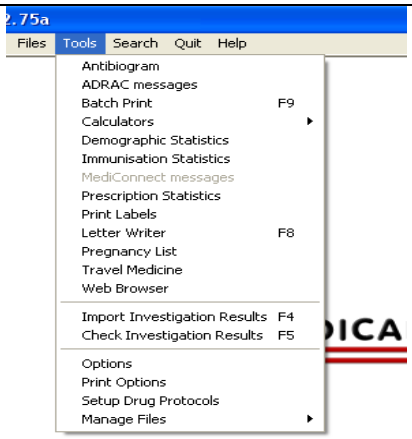
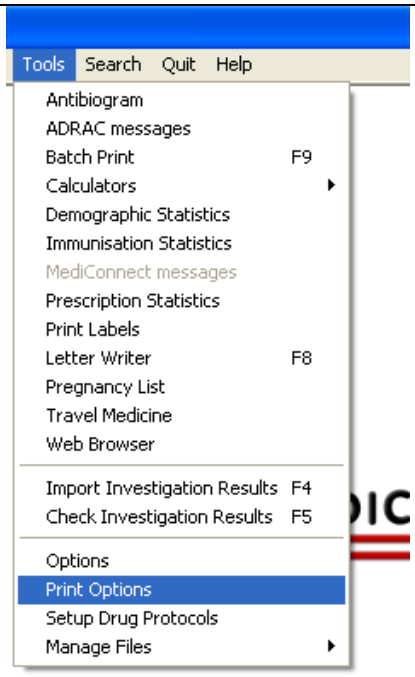


IT IS IMPERATIVE THAT AN "UPLOAD" IS CARRIED OUT AT THE SURGERY AFTER CHANGING PATIENT DATA THAT OCCURRED AT THE ACH. IF YOU CARRY OUT ANOTHER "DOWNLOAD" FIRST, THEN ALL THE DATA FROM THE PREVIOUS ACH VISIT WILL BE LOST.

Connecting to printer at ACH

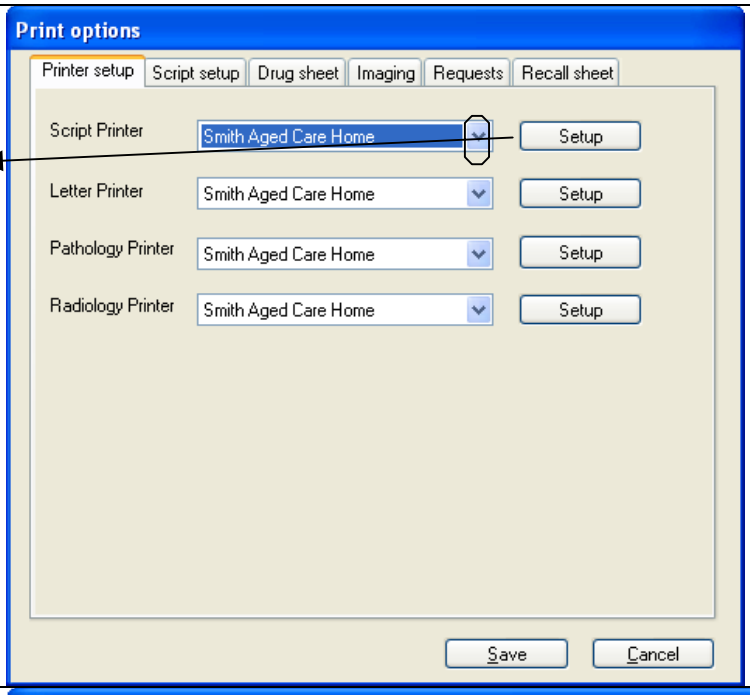
This involves two major steps. The first step is the installation of printer software onto your laptop, which typically will be completed by your IT support person, and is performed once only, per ACH.

The other step is described below, and involves the selection of the appropriate printer for use by Medical Director. Prior to altering Medical Director to utilise a different printer, physically connect the printer cable to the printer, as previously shown by your IT support person.

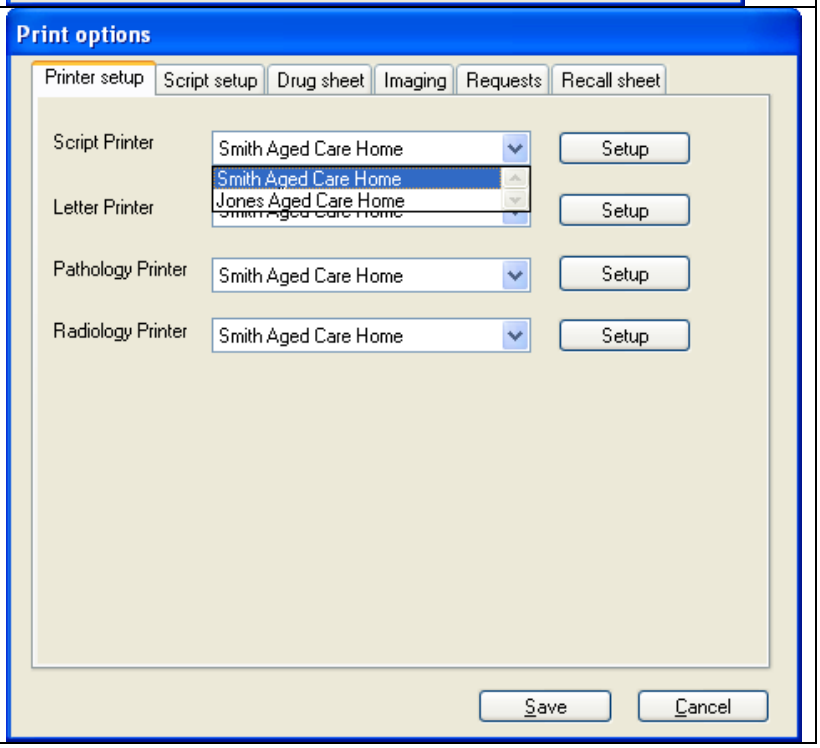
Select the main screen in Medical Director, select Tools	
,then select, Print Options	

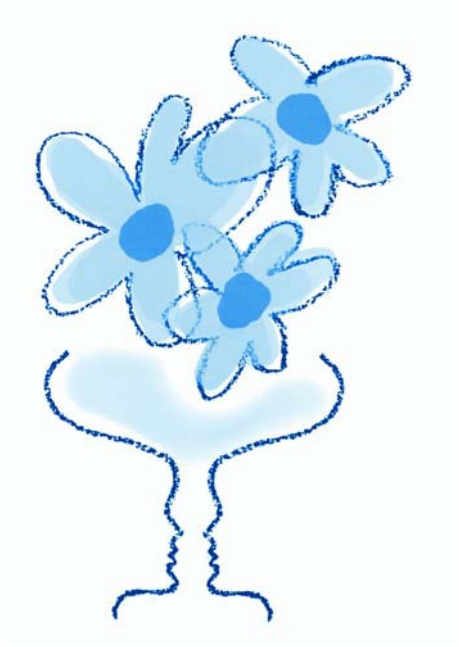
The Print Options screen is shown. This screen shows the printers that Medical Director is currently set up to use.

Click on the "downward triangle" (in the rest of the document I have used "drop down menu – it depends what degree of consistency you want in the document) to the right of the Printer name to see the range of installed printers, and select the appropriate printer. The next page shows an example of multiple printer selections.



The screen to the right shows multiple selections for the Script Printer. Select the appropriate printer, and change if appropriate, the Letter Printer, Pathology Printer and the Radiology Printer. Finally click on Save. The above processes need to be completed whenever a connection is made to a printer, different from the previously used printer.





Partnerships in Medical Care

GP Residential Aged Care Kit

Clinical Information Sheets

1. Immunisation – Influenza & Pneumonia
2. Medication Management
3. Advance Care Planning
4. Diabetes – Management of hypo/hyperglycaemia & sick days
5. Indwelling urinary Catheter Management
6. PEG Tube Management
7. Subcutaneous Hydration
8. Managing a Resident After a Fall
9. Cardiac Chest Pain
10. Asthma Management

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For more information

Resources and updates will be made available on www.nwmdgp.org.au

Telephone Rita Wong or Dr Denise Ruth on 03 8345 5600. Email admin@nwmdgp.org.au

Clinical Information Sheet 1:

Immunisation – Influenza and Pneumococcus

This clinical information sheet has been developed to assist GPs with immunisation of the residential aged care population for the prevention of influenza and pneumococcal infections.

The clinical information sheet covers:
- Use of vaccines in ACHs
- Influenza vaccination
- Pneumococcal vaccination
- References
- Immunization Order Form.

Due to their age, chronic illness and close living conditions, residents of aged care homes are at high risk of developing infections and dying due to influenza and pneumococcus. The Australian Immunization Handbook therefore recommends vaccination of residents of Aged Care Homes for influenza and pneumococcus, and staff of Aged Care Homes for influenza to reduce the prevalence of infection and associated morbidity [1].

Use of vaccines in ACHs

Vaccine supply, transport and storage

In Victoria, influenza and pneumococcal vaccines are available to GPs free for people over 65 years, and Aboriginal & Torres Strait Islander people over 50 years. The National Immunisation Program (NIP) provides ***free influenza vaccine*** [1]. The Victorian Department of Human Services provides ***free pneumococcal vaccine*** [2]. Pneumococcal for restricted use is available via PBS.

Attached is an Immunisation Vaccine Order Form that can be filled out and faxed to the Department of Human Services for ordering vaccines. This form is available at www.dhs.vic.gov.au/phd/immunisation

It is important to maintain a temperature between 2°C and 8°C when transporting and storing vaccines. Vaccines should be transported in a cold box with a thermometer to prevent breaking of the cold cycle, and stored in refrigerators dedicated to the storage of medications. Regular quality assurance testing of refrigerators (e.g. cleanliness, use, and temperature) is a requirement for accreditation in general practice and residential aged care facilities. Further advice is available from DHS cold chain enquiries on 9637 4144

Patient information and consent

When considering immunization for a resident, the GP needs to discuss the implications of vaccination with the resident and/or his or her family, and consider the resident's wishes, existing medical care plans, and advance care plan.

Patient information sheets are available from the Victorian Department of Human Services. These include 'Pre-immunization checklist: what to tell your doctor or nurse before immunization', and 'Comparison of effects of vaccines and diseases'.

Documentation and reminder system

Clearly document in the resident's progress notes and/or health record:
- Date and time of vaccination
- Type and batch number of vaccination
- Any adverse effects

It is recommended that residents be reviewed annually for influenza vaccination, and once after 5 years for a booster pneumococcal vaccination. The immunisation reminder function in the general practice clinical software package (e.g. Medical Director) provides a system to prompt vaccination status review and revaccination [2].

Use of MBS item numbers for immunisation

MedicarePlus introduced item 10993 in 2004. This can be claimed by a GP when the practice nurse, on behalf of the GP, vaccines a patient in a residential aged care facility. The GP need not be present, but is responsible for clinical outcomes of the patient and for ascertaining nurse competency. If the GP sees the patient prior to the nurse giving the vaccination, s/he will still be able to claim for professional services to the resident, including the Medicare Plus item for bulk-billing.

Immunisation of ACH staff

Annual Influenza vaccination of ACH staff is recommended by the NH&MRC [2], but not funded by federal or state governments. We suggest that each ACH have a policy on staff immunization.

Vaccines can be bought by the facility, or by individual staff members on prescription.

Vaccines can be administered to staff by their own GP, funded through Medicare. Alternatively, the ACH could employ a medical practitioner to provide mass immunisation for staff at the facility.

Influenza Immunisation [1]

Influenza virus causes a wide spectrum of disease, including asymptomatic infection, respiratory illness with systemic features, multi-system complications, and death from primary viral or secondary bacterial pneumonia.

Influenza vaccination of individuals at high risk of complications is the single most important measure to prevent or attenuate influenza infection and prevent mortality. In the nursing home population, the vaccine can be 50 to 60% effective in preventing hospitalization or pneumonia and 80% effective in preventing death, even though the effectiveness in preventing influenza illness may be lower.

Influenza vaccines normally contain 3 strains of virus, two current influenza A subtypes and influenza B, representing recently circulating viruses. The composition of vaccines for use in Australia is determined annually by the Australian Influenza Vaccine Committee. To provide continuing protection, annual vaccination with vaccine containing the most recent strains is necessary.

Recommendation

Annual vaccination, administered between March and May, is recommended for individuals who are at increased risk of influenza-related complications. At-risk individuals include those with chronic cardiac disorders, diabetes and metabolic/renal disorders, asthma and chronic respiratory disorders or suppressed immune system due to illness or treatment. The vaccine is recommended for consenting individuals who are:

- living in a nursing home or hostel, due to high rates of transmission during outbreaks
- aged 65 years or older
- a Koori and Torres Strait Islander aged 50 years or older
- contacts of high risk patients, eg staff of nursing homes and long-term facilities, as vaccinating staff has been shown to protect high risk patients.

Contraindications

- Individuals with anaphylactic hypersensitivity to eggs
- Individuals with an acute febrile illness (fever $\geq$ 38.5ºC)
- Individuals with a history of Guillian-Barré Syndrome, as there is an increased likelihood of developing the syndrome again.

Adverse Reactions

- Local reactions (swelling, redness and pain) (>10%)
- Fever, malaise and myalgia (1 – 10%) may commence within a few hours of vaccination and last for 1 to 2 days

- Immediate adverse reactions (such as hives, angio-oedema, or systemic anaphylaxis) are rare.

Pneumococcal Immunisation [1]

Infection with *Streptococcus pneumoniae* (pneumococcus) is a leading cause of illness and death in elderly people and people with immune deficiencies and chronic illness. In adults, pneumococcal pneumonia is the most common clinical presentation of Invasive Pneumococcal Disease. The risk is highest in individuals with diminished immunocompetence, smokers and those with chronic conditions including cardiovascular or pulmonary disease, and diabetes. In Sydney, Australia, between 1997-9, the overall annual incidence of IPD among adults aged over 85 years was about 100/100,000.

Evidence of the effectiveness of pneumococcal polysaccharide vaccines comes from several trials and systematic reviews. No reviews found a statistically significant effect of pneumococcal polysaccharide vaccines on mortality in industrialised countries or on pneumococcal pneumonia in high risk and immunocompromised patients [3]. Nevertheless, there is evidence for benefit from pneumococcal polysacharide vaccine among the elderly population (over 65 years) in Sweden) [4] and in Aboriginal and Torres strait Islander people in north Queensland.

The 23-valent pneumococcal polysaccharide vaccine (23vPPV) provides protection for most types of pneumococcus causing Infectious Pneumococcal Disease in Australian adults. Vaccination can be done at any time of the year, and can be administered concurrently with the Influenza vaccine.

Recommendation

Vaccination with 23vPPV is recommended for:

- Adults 65 years and older, with a single revaccination 5 years later
- Aboriginal and Torres Straight Islanders 50 years and older, with a single revaccination 5 years later.

Contraindications

- Individuals that have been vaccinated within the last 3 years, because of increased risk of local adverse reactions
- Individuals who have recently used immunosuppressants or undergone radiation of lymph nodes.

Adverse Reactions

- Low-grade fever occurs occasionally
- About 50% of recipients will experience some soreness after the first dose, but pain or swelling severe enough to limit arm movement occurs in less than 5% of recipients
- Revaccination is associated with an increase in local adverse reactions, with approximately 75% experiencing soreness at the injection site.

References

The information provided in this clinical information sheet is based on Level III and Level IV evidence, from national consensus clinical guidelines produced by the Australian Technical Advisory Group on Immunizations (ATAGI) and the National Health and Medical Research Council (NH&MRC) in the Australian Immunization Handbook. The level of evidence of references is provided in the table below.

Reference	Year	Level of Evidence
1. National Health and Medical Research Council, *The Australian Immunisation Handbook*. 8th ed. Department of Health and Aging, Australian Government. 2003.	2003	Level IV evidence
2. Department of Human Services, *Influenza and Pneumococcal Pneumonia Immunisation*, in www.dhs.vic.gov.au/phd/immunisation/pneumoflu.htm *(accessed Feb 2004)*, Victorian Government. 2003	2004	Level IV evidence
3. T Jefferson,V Demicheli, Editorial. Polysacharide pneumococcal vaccines. Existing guideline is at variance with the evidence. BMJ, 2002. 325: p. 292-3.	2002	Level IV evidence
4. B Christenson, P Lundbuergh, J Hedlund, A Ortqvist, *Effects of a large scale intervention with influenza and 23-valent pneumococcal vaccines in adults aged 65 years or older: a prospective study.*	2001	Level III evidence

Clinical Information Sheet

Medication Management

The attached clinical information sheet is provided to inform GPs of national guidelines for medication management in Residential Aged Care Facilities. It was developed to assist Aged Care Home staff to work in partnership with medical practitioners and pharmacists in managing medications for residents.

Key medication issues for GPs caring for residential aged care patients include:

- Understanding the policies and practices of the local aged care home
- Participation in medication advisory committees
- Prescribing medication, including routine, p.r.n. and emergency medication orders
- Writing medication charts
- Resident self-administration of medications
- Medication reviews.

We will revise this pilot Aged Care Home Clinical Information Sheet in September 2004.
A GP version will also be produced based on GP comments on this document.

Please give feedback to Dr Denise Ruth or Rita Wong on 03 8345 5600 or email admin@nwmdgp.org.au.

Updates and other resources will be made available on www.nwmdgp.org.au.

Aged Care Home After Hours Kit

Clinical Information Sheet

Medication Management

The following clinical information sheet has been developed to assist ACH staff to work in partnership with medical practitioners and pharmacists in managing medications for residents.

The information sheet will cover:

- Medication advisory committees;
- Medication charts;
- Preplanning non-regular medication;
- Administration of medications;
- Use of emergency and standing orders;
- Altering oral formulations of medications;
- Complementary medications;
- Resident self-administration of medications;
- Medication reviews;
- Medication information, storage and disposal;
- Sources of information.

- Example of a medication management and administration policy
- Example of ACH list of Nurse Initiated Medicines
- Medications that should not be crushed
- Example of an Assessment of a Resident's Ability to Self-administer Medication

This clinical information sheet should be used with consideration to

- the resident's preferences, existing medical care plans, and advance care plan;
- the health professional's knowledge, preferences and professional experience;
- policies and resources available within the ACH.

Pilot document developed: March 2004 To be reviewed: September 2004

1. Introduction

Background

This clinical information sheet is adapted from two primary sources. *Guidelines for medication management in residential aged care facilities* (2002) was produced by the Australian Pharmaceutical Advisory Council on behalf of the Commonwealth government following review by the multidisciplinary working party of guidelines and documents produced by various Australian professional and consumer groups. *Nursing Guidelines for the Management of Medicines in an Aged Care Setting* was developed under the auspices of the Australian Nursing Federation, Geriaction, and Royal College of Nursing Australia with a goal of establishing best practice in the nursing management of medications in ACHs.

This clinical information sheet has been developed with consideration to legislation and any requirements of or recommendations from professional registration groups or regulating bodies (eg. NBV, RCNA, ANF) overseeing the aged care industry in Victoria, Australia. It was developed using the process outlined in the *Aged Care Home After Hours Kit, Section 6: Clinical Information Sheets,* and a corresponding clinical information sheet has been produced for GPs who work with ACHs.

Polypharmacy is common among residents of aged care homes. A resident's medication needs are often complex, requiring consideration of alternative oral preparations, p.r.n. and nurse initiated medication to cover anticipated events, and regular reviews of routine medication with changes in co-morbidity and eventual requirements for end of life care.

In the needs assessment reported in Section 2 page 3 of this kit, medication chart rewrite was a major reason for after hours medical care for residents, accounting for 14% of medical locum doctor visits. This clinical information sheet addresses the need for a systematic approach to medication management between the GP, pharmacist and ACH staff to prevent and prepare for events requiring medication after hours.

Purpose

This clinical information sheet has been developed to assist in the management of medications in ACHs and to encourage an active partnership between the resident's GP and the ACH staff in managing the resident's medication needs and planning for unexpected events.

The purpose of this clinical information sheet is to:

- promote the responsible and safe administration of medications for residents within ACHs;
- prevent unnecessary after-hours medical practitioner attendance;
- to avoid unnecessary emergency department admissions; and to
- assist ACHs to meet their responsibilities for accreditation.

Responsibilities

This clinical information sheet applies to health professionals qualified to prescribe medications, dispensing pharmacists, and registered nurses qualified to administer medications. All health professionals working with medications within the ACH are responsible for working in partnership with each other, and it is highly recommended that this be achieved through the development of a Medication Advisory Committee (See Section 2).

Qualified prescribers are responsible for ensuring that medication orders are written with consideration to the best interests of the resident; the recommendations provided in this information sheet and the policies and procedures of the ACH in which the resident resides. A qualified prescriber includes:

- medical practitioners, eg GP, locum GP, hospital doctor, palliative care physician,
- registered nurse practitioners,
- registered dental practitioners who are qualified to prescribe medications.

The role of the registered nurse qualified to manage medications includes [1]:

- administration of medicines,
- supervision of residents who self-administer medication,
- accurate recording of any medicines administered,
- compliance with legislative requirements and policies of the ACH,
- participation in medicine quality assurance activities,

- maintenance of up-to-date knowledge and skills in relation to medication use,
- exercising professional judgement in relation to medicine use, including knowing why, how and when to administer medication, when not to administer medication, and when to report to a medical practitioner or pharmacist;
- monitoring and evaluating medicine use, including reporting and recording reactions to medicines and the initiation of required interventions in consultation with medical practitioners and pharmacists,
- monitoring and encouraging compliance with medicine use,
- provision of information and education to residents, relatives and ACH staff in relation to medicine use, and
- advocating on behalf of residents in relation to use of medicines.

2. Medication Advisory Committees

Recommendations[2]
1. ACHs should establish a Medication Advisory Committee to facilitate the quality use of medicines. This could be set up as a specific committee or as part of the role of a Health/Medical Advisory Committee with a standing agenda item on medication management.

What is a medication advisory committee? [1-3]
A Medication Advisory Committee (MAC) is a group of advisors within the ACH who are responsible for the development, promotion, monitoring and evaluation of policies and activities to assist in the achievement of best possible health outcomes for residents by ensuring quality use of medicines in the facility. Formation of a MAC provides a forum that promotes the active partnership between the GP, pharmacist and the ACH staff in managing medication within the facility.

The MAC should include, as a minimum, a representative from each of the following groups:

- management;
- general practitioners;
- nurses;
- pharmacists supplying medications in the ACH;
- pharmacists conducting medication reviews; and a
- resident advocate.

What should the medication advisory committee address? [1-4]
The MAC has an important role in the development and monitoring of quality systems to ensure the safe management of medication within the ACH. The MAC should develop systems for and written policies on:

- prescribing of medications, including guidelines for emergency medication orders;
- administration of medication including persons responsible for administering medications within the ACH;
- ordering, delivery, storage and disposal of medications;
- management and administration of Schedule 8 medications;
- list of nurse-initiated medications that may be used within the ACH;
- guidelines for altering the form (eg. crushing) of oral medications;
- documentation of medication incidents;
- dissemination of information relating to medication management to staff and residents;
- training and support for staff involved in the prescribing and administration of medications.

An 'Example of a medication management and administration policy' is included with this clinical information sheet.

As part of its ongoing role in ensuring quality of medication use and management within the ACH the MAC should monitor and analyse and make recommendations on:

- medication-related incidents;
- auditing of medication charts and medication use;
- pharmacist review of individual resident medication use;
- pharmacist review of general medication use within the facility;
- use of psychotropic agents for behaviour management;
- pain assessment and management;

- key performance indicators and trends analysis information.

3. Medication Charts

Recommendations [1, 2]

1. All residents in the ACH should have a documented record of their current medications.

2. For residents who require assistance with medication administration this should be in the form of a chart (electronic or written) that contains the following completed details:

a) complete name and date of birth of the resident;
b) any allergies or drug reactions;
c) medication orders including time, dose, any specific administration instructions and signature of a qualified prescriber;
d) record that medication was administered;
e) P.R.N. (when required) medications;
f) once only doses and emergency medications;
g) nurse-initiated medication;
h) resident-initiated medications if appropriate, including complementary medicines;
i) an indication of any special medication preparation eg. crushing instructions; and
J) date of the next administration of infrequently administered medicines.

3. Medication charts should be accompanied by:

a) a recent photo of the resident, with the name and date of birth of the resident clearly printed on the back and the date the photo was taken; and
b) an indication of any additional assistance the resident requires eg. crushing of medication
c) date of last medication review, name of person who reviewed medications and any tests associated with medication use (e.g. INR);
d) any resident allergies.

4. It is acceptable to continue use of a hospital medication chart following the discharge of a resident from an acute facility. The MAC should develop guidelines for a recommended time frame in which the resident's usual GP should conduct a medication review following a resident's discharge from hospital, eg within 7 days.

When a resident is discharged, the hospital is responsible for providing medication, plus written instructions on the details of the resident's admission; any medication changes (including additions/deletions) from the resident's medication regime on admission; and arrangements for a follow-up review by the resident's usual GP or health care team [5].

5. For residents who self-administer medications, a card or record in the resident's progress notes should be maintained with the details of the resident's current medication regime, date of last medication review, name of person who reviewed medications, any tests associated with medication use (e.g. INR), and any resident allergies.

Writing medication orders [1, 2]

No medicine should be administered without a legible, signed and dated instruction from a qualified prescriber recorded in the ACH's medication chart. A medication order should include:

- the generic name and strength of the medication;
- the dose, route and frequency of the medication; and
- the date of commencement and the duration where applicable.

Re-writing of medication charts

It is essential that the resident's GP and/or other prescribers work in partnership with the ACH staff to maintain a continuum of medication management for the resident. The qualified prescriber should rewrite medication charts at a time determined by the ACH and the MACIn general this will be within the period of time covered by the medication chart used by the ACH. . This time frame should be no longer than 12 months, however more frequent medication reviews are in line with best practice. The MAC should develop a system to ensure that medication charts are rewritten BEFORE the current medication chart expires.

4. Pre-planning Non-regular Medication

To avoid emergency department admissions and locum medical practitioner visits it is suggested that pre-planning protocols be developed to optimise resident care [6]. It is essential that the resident's GP and/or other prescribers work in partnership with the ACH staff in planning for non-regular medication requirements that may arise with changes to the resident's clinical condition. In addition to regular medication orders the following categories should cover the majority of predicted contingencies:

'When required' (P.R.N.) Medicines

P.R.N. medicines are those which are ordered by a medical practitioner for a specific person on that person's medicines record and which the person qualified to administer medications, using clinical judgement, initiates when necessary. The administration of p.r.n. medicines must be recorded on the person's medicine record.

Use of p.r.n. medication orders will differ depending on the facility i.e. whether a low-care or high care facility and the availability of Division one nurses to administer medication and /or injections. Examples of those medicines where pre-planning (p.r.n. medication orders and supplies of medicines) for specific residents can assist in optimum management include [6]:

- *Angina*: Ensure that residents have p.r.n. orders for long-acting nitrates and short-acting nitrates eg glyceryl trinitrate (Anginine, Nitrolingual) available for breakthrough angina. Regular checks on dating are essential as Anginine tablets have an expiry of 90 days after opening. Refer to the clinical information sheet on chest pain provided in this kit for further information.
- *Asthma, COPD etc*: Ensure that residents have p.r.n. orders for Salbutamol MDI and access to a spacer for emergency use. Refer to the clinical information sheet on asthma provided in this kit for first aid management.
- *Constipation*: Management plans should be put into place to avoid severe impaction. The resident should have p.r.n. orders for appropriate preparations (e.g. Microlax, Glycerin suppositories, Movicol) and a care plan outlining when such preparations should be administered.
- *Diabetes*: Diabetic residents require a care plan outlining action to take in the event of hypo- or hyperglycaemia. Emergency stocks of glucose solution, glucagon or insulin should be arranged for each resident. A suggested protocol is as follows (see clinical information sheet on managing hypo and hyperglycaemia for further information):
  When BGL falls below:…. mmol/L give … glucose tablets
  …… mmol/L give glucagon injection (GlucaGen 1mg)
  When BGL is above … ….give … units Actrapid insulin
  Specify when to notify prescriber.
- *Diarrhoea*: The use of oral hydration solutions may be included in NIMs. If the resident's requirement for such preparations is predictable they should be included on p.r.n. orders, and used prior to IV or subcutaneous hydration.
- *Behaviours of concern (e.g. verbal disruption, physical aggression)*: Residents exhibiting behaviours of concern require regular review by the GP and an individualised care plan that incorporates appropriate non-pharmacological management of concerning behaviour. Appropriate p.r.n. medication orders should be provided by the GP, together with instructions on when, why and for how long the medication should be administered.
- *End of life*: The GP and ACH staff should work in collaboration to ensure the resident remains pain free and comfortable. The use of protocols to assist in maintaining comfort may improve end of life care and quality of dying.
- *Epilepsy*: P.R.N. orders for seizure management should be developed for individual residents at risk of seizure. Note that the absorption of IM diazepam is erratic. Options may be intrarectal diazepam or midazolam IM.
- *Resident Falls*: Nurse or medical examination will be required in most cases. Protocols for prevention should be reviewed following a resident fall e.g. medication review, physical restraints, use of hip protectors etc. For further information see the clinical information sheet on managing a resident after a fall provided with this kit.
- *Nausea and vomiting*: When these are predicted, p.r.n. protocols should be clearly stated e.g. Maximum number of metoclopramide, prochlorperazine to be used before calling prescriber.
- *Pain management*: Anticipate additional pain needs particularly over weekends with p.r.n. orders with guidelines for staff as to mild, moderate or severe pain requirements. See the clinical information sheet on pain management provided with this kit for further information.
- *Urinary tract infections*: If frequent consider preventative strategies e.g. increase fluid, prophylactic antimicrobial use, oestrogen creams, frequent changing of pads, hygiene, catheter care etc. See the clinical information sheet on urinary catheter management provided with this kit for further information.

Nurse initiated medicines (NIM)

Nurse-initiated medication should be from a defined list of drugs developed by the MAC and disseminated to qualified prescribers and nursing staff in the ACH [1, 2].

Nurse-initiated medication is the administration of non-prescription (over-the-counter) medication by a person qualified to administer medications when the need arises and with the prior agreement of the resident's general practitioner. Registered nurses may use their clinical assessment and judgement to initiate administration of over-the-counter medications within their state or territory legislation and according to organisation guidelines. A record of any nurse-initiated medicines should be included on the resident's medication chart.

Nurse-initiated medication should be from a defined list of drugs developed by the MAC and disseminated to qualified prescribers and nursing staff in the ACH. Many facilities have nurse- initiated medication lists approved by the Medication Advisory Committee. In most cases the medication can only be administered once only without reference to the medical practitioner [1, 2].

Nurse-initiated medication protocols should include indication(s) for the drug, dosage and contraindications. Use of nurse-initiated medications should be documented on the medication chart. A regular review of nurse-initiated medication for each individual resident should be conducted, and if the nurse-initiated medication becomes routine the resident's general practitioner should review the resident [1, 2].

An 'Example of ACH list of Nurse Initiated Medicines' included with this clinical information sheet [8].

5. Administration of Medication

Recommendations [1, 2]

1. Medication administration should be undertaken by a registered nurse, who is suitably qualified and trained.
2. The ACH's MAC should develop standard procedures for the administration of medications.
3. Medication should not be administered unless it has been dispensed by a registered pharmacist into an individual container or pack labelled with the resident's name, the name and strength of the medicine and the dosage, frequency and route of administration.
4. Medicines must be administered to residents from their own dispensed medicine containers. The registered nurse who removes the medicine from the dispensed medicine container must also administer the medicine to the person and sign the medicine record at the time of administration.
5. A dose administration aid should only be used where it will overcome potential problems with resident compliance or confusion with medication. The ACH may provide medications in dose administration aids where there is not a registered nurse qualified to administer medications.
6. .If a registered nurse qualified to administer medications is to administer medicines from a medicine blister pack, the blister pack must be packaged and fully labelled by a pharmacist. Registered nurses qualified to administer medication should not administer medicine from blister packs containing more than one type of medicine in the blister.

Dose administration aids [1-3]

Dose administration aids (DAAs) refer to the use of 'blister' packaging systems or 'compartmentalised boxes'. DAAs should be packed and labeled by a pharmacist and the medications administered directly from the blister DAA to the resident. The DAA should be labeled with:

- details of the person supplying the medication(s) in the DAA;
- date the DAA was filled;
- the name, strength and form of all medicines supplied in the DAA;
- directions for the use of each medication;
- any specific instructions relating to the use of the medicine, including cautionary advisory labels;
- information relating to alteration of dosage form of any medication; and
- information that will enable identification of individual medications (eg reference to colour, shape and size, manufacturer's marks)

Any medication that cannot be readily distinguished from other medications in the DAA should not be placed in the DAA. All medications in the DAA should be recorded on the resident's medication chart. Schedule 8 medications should not be stored in a DAA as they require strict storage and monitoring.

If the qualified prescriber alters any medication order, the entire DAA must be returned to the supplying pharmacist for repackaging.

6. Emergency Medication Orders

Recommendations [1, 2]

1. The MAC should provide guidelines on the circumstances under which emergency medications may be used and any required documentation and stock control.
2. In an emergency, a medication order may be given by telephone or facsimile.
3. Telephone orders should be taken only by ACH staff members who are qualified to administer medications.

Telephone and facsimile orders [1, 2]

Emergency medication orders are for emergency use and are not an acceptable substitute for a comprehensive medicine policy for the regular and routine management of medications.

When taking a telephone order the following should be verified with the qualified prescriber:

- the name of the qualified prescriber,
- the details of the resident the medication order is for,
- the name, dose and route of the medication,
- timing and frequency of doses, and
- any guidelines for the administration of the medication.

Where possible, if a second person qualified to administer medications is present, they should also check the instruction with the qualified prescriber. The medication order should be recorded on the medication chart in permanent ink and signed and dated by the person taking the telephone order. When taking a facsimile order the medication order should be written onto the medication chart in permanent ink and the facsimile stored either with the medication chart or in the resident's progress notes.

It is the responsibility of the qualified prescriber issuing the emergency telephone/facsimile medicine instruction to notify the pharmacist. In some ACHs the nurse taking an emergency telephone order may also be required to contact the pharmacist and make arrangements for medication delivery.

Prescriber signing of emergency medication orders [1, 2]

The qualified prescriber must confirm emergency telephone or facsimile medication orders in writing within a period of time determined by the MAC. Currently the Australian Pharmaceutical Advisory Council recommends that in the aged care setting the qualified prescriber sign emergency medication orders within 48 hours. In determining an ACHs policy on signing of emergency medication orders, the MAC should consider that best practice requires a comprehensive medical review be performed when a resident's clinical condition changes.

7. Alteration of Oral Formulations

The alteration of solid dosage forms (e.g. crushing tablets or opening capsules) makes it easier to administer a medication to a resident with swallowing difficulties. In some cases the practice of altering the form of medication may result in reduced effectiveness, a greater risk of toxicity, or an unacceptable presentation to residents in terms of taste or texture.

Recommendations [2, 7]

1. The ACH should have procedures for the alteration of oral dosage forms necessary to facilitate administration to certain residents.
2. If a medication requires altering for administration, this should be recorded on the medication chart.
3. The MAC should develop and continuously update a list of medications, which must not be crushed or chewed.
4. The supplying pharmacy should provide relevant information on new products to the MAC.

Medication reviews [2, 7]

If a resident experiences difficulty in swallowing medications, a review of the resident's medication list should be conducted by the qualified prescriber and pharmacist in consultation with ACH and the resident. Medications may be changed to different formulations of the same medication, changed to another medication or ceased if no longer necessary.

Controlled-release medications [2, 7]

Many medications are formulated to release drug in a controlled manner over a defined dosing period, usually 12 or 24 hours. Crushing these medications may result in an unintended large bolus dose. Medications labeled with terms such as "controlled release" (CR), "sustained release" (SR), "modified release" (MR) "controlled delivery" (CD), "enteric coated" (EC) are slow-release formulations. These medications cannot be crushed although some can be halved. Opening capsules containing medication formulated into small pellets, where the release properties are built into the pellet and not the capsule, does not affect the properties of the medication, however the pellets should not be crushed. The ACH's pharmacist should be consulted on the alteration of any slow-release products.

Considerations in altering medication forms [7]

Equipment for crushing medications should conform to these principles:

- permits complete recovery of powdered material
- if shared among residents it should be washed and dried after use for each resident
- dedicated set of equipment must be used for each resident if cytotoxic medication is being prepared.

Equipment (e.g. mortar and pestle) should be cleaned with a damp cloth followed by a dry cloth after use for each resident.

When tablets and capsules are to be given together, crush the tablets first, then open the capsule and add the powder or pellets contained therein to the crushed tablets to prevent crushing sustained release or enteric-coated pellets.

Mixing with a small amount of food that the resident likes (e.g., jams, fruit purees) disguises unpleasant taste and promotes compliance. Ensure that crushed tablets or capsule contents are given to the resident as soon as possible after altering and mixing with any food or liquid to reduce medication degradation and minimise risk of medication incidents.

A list 'Medications that should not be crushed' is included with this clinical information sheet.

8. Complementary Medications

Recommendations [1, 2]

1. The ACH's MAC should develop policies for the management of complementary, alternative and over-the-counter medications.

It is the responsibility of the resident or his or her representative to inform the ACH staff of any complementary, alternate and/or self-selected medications being used by the resident. Where the resident is taking any over-the-counter or complementary medications this should be clearly indicated on the medication chart and the resident's GP should be informed. The GP and pharmacist should ensure compatibility of complementary medications with other medications the resident is taking and provide written approval for the administration of complementary medications on the medication chart.

9. Self-administration of Medication by Residents

Recommendations [1, 2]

1 A resident may choose to administer their own medication where it has been formally assessed that medication administration can safely be carried out by that individual.
2. Where the ACH has medication charts for residents who self-administer this should be clearly stated on the medication chart.
3. The ACH must provide safe and secure storage for medications of residents who self-administer.

Assessing a resident's ability to self-administer medications [1, 2]

Before a resident begins to self-administer medications, an assessment should be carried out to evaluate his or her competency to do so. The MAC should develop a policy regarding the procedures to be used by health professionals for assessing competency of a resident to undertake self-administration of medication. The policy should indicate who will perform the assessments.

Reassessment should be undertaken on an as-required basis (eg decrease in the resident's competency is noticed) or as part of an annual clinical review. Dose administration aids should also be considered for use by self-administering residents.

An 'Example of an Assessment of a Resident's Ability to Self-administer Medication' tool is included with this clinical information sheet.

Resident responsibilities when self-administering [1]

Where residents have been deemed to be competent to self-administer medication, they should then be informed in writing of their associated rights and responsibilities, including the requirement to:

- inform the ACH staff of any complementary or over-the-counter medications;
- keep the medication(s) secure and safe;
- inform facility staff of any difficulties that they may encounter while self-administering; and
- ensure that they have a sufficient supply of self-administered medications, by informing ACH staff when their supply level is low.

Residents who choose to self-administer may demonstrate consent by signing an appropriate form.

10. Medication Reviews

Recommendations [2]

1. Residents' medications should be reviewed by members of the health professional team. Confirmation that a review has occurred should be made on the medication chart and resident's record.

The regular review of medication is an essential component of good quality care and is required by accreditation standards. A medication review should involve consultation between the resident, general practitioner, any other qualified prescriber involved in the resident's care and pharmacist where possible. A comprehensive medication review should be conducted and documented when the resident is admitted to the ACH, even if the resident is well known to the general practitioner admitting the resident. The MAC should develop a policy that identifies the frequency of medication reviews. Any medication changes should be documented in the resident's progress notes as well as on the medication chart.

11. Medication Information, Storage and Disposal

Prescriber and Consumer Product Information

It is recommended that the ACH have current resources on medicine information available for staff, residents/carers and visiting health professionals [1-3].

Examples of such resources are:

- *Australian Medicines Handbook* and related publications
- MIMS Annual or PP Guide
- Therapeutic Guidelines
- Consumer Medicine Information for medicines used by the residents
- Schedule of Pharmaceutical Benefits
- AusDI — Australian Drug Information for the Health Care Professional.

The MAC should develop written policies to ensure this information is available. Consideration should be given to computer linked CPI to facilitate access and ensure accuracy.

Storage and Disposal of Medication

Recommendations [1-3]
1. All medications, including self-administered medication, must be stored securely with consideration to safety of staff, residents and others in the ACH.
2. Recommended storage conditions for particular medicines should be followed (e.g. refrigeration).
3. The ACH should have a system in place to dispose of expired or unwanted medications in a safe manner.

12. Sources of Information

Where to go for More Information

For further information the following services can be contacted:

MIMS online
Provides up to date information on medication management and use.
Website: http://www.mims.hcn.net.au/ (subscribers only)

Pharmaceutical Society of Australia
The society is an advocacy organisation for pharmacists and provides opinion and policy on medication management, consultation services and a range of publications and educational resources.
Contact: 1300 369 772.

Dept Health and Ageing Therapeutic Goods Administration
A national organisation responsible for assessment and monitoring to ensure therapeutic goods (including medications) available in Australia are of an acceptable standard. The organisation provides information on general categories of medication (e.g. OTC, prescription) as well as information on adverse drug reactions, specific medication preparations and other educational material.
Contact: 1800 020 653
Website: http://www.tga.gov.au/index.htm

References

1. Australian Nursing Federation, Royal College of Nursing, Geriaction, *Guidelines for the management of medicines in an aged care setting*. 3 ed. 2002, Melbourne: ANF.
2. Australian Pharmaceutical Advisory Council, *Guidelines for medication management in residential aged care facilities (3rd edition)*. 3 ed. 2002, Canberra: Commonwealth Department of Health and Ageing.
3. Pharmaceutical Society of Australia, *The provision of pharmacy services to residential aged care facilities — Guidelines for pharmacists.* 2001, Canberra: PSA.
4. Pharmaceutical Society of Australia, *Guidelines for pharmacists. Comprehensive medication review in residential aged care facilities*. 2000, Canberra: PSA.
5. Australian Pharmaceutical Advisory Council, *National guidelines to achieve the continuum of quality use of medicines between hospital and community*. 1998, Canberra: Commonwealth Department of Health and Ageing.
6. J Gowan, *Consultant Pharmacist Recommendations*. 2004
7. Alteration of Medication Dose Forms Project University of South Australia, *Guidelines and standard operating procedures for altering medication dose forms - A resource for staff in residential aged care facilities*. 2002, Canberra: APAC.
8. Bouchner F (Chairman Ed Advisory Board). Australian Medicines Handbook 2004 Australian Medicines Handbook Pty Ltd Hyde Park Press Richmond SA, 2004.

Levels of Evidence

This clinical information sheet is adapted from two primary resources produced by the Australian Pharmaceutical Advisory Council on behalf of the Commonwealth Government and the Australian Nursing Federation, Geriaction, and Royal College of Nursing Australia. Both references are national consensus guidelines based on review of the best available evidence (Level IV evidence). Additional consensus guidelines and consultant recommendations have supported these

references. The level of evidence of all references used to compile this clinical information sheet is provided in the table below:

Ref No.	Author	Year	Level of Evidence (refer to Section 6 of the Aged Care After Hours Kit for explanation)
1	Australian Nursing Federation (ANF), the Royal College of Nursing (RCNA) and Geriaction	2002	Level IV
2	Australian Pharmaceutical Advisory Committee	2002	Level IV
3	Pharmaceutical Society of Australia	2001	Level IV
4	Pharmaceutical Society of Australia	2000	Level IV
5	Australian Pharmaceutical Advisory Council	1998	Level IV
6	J Gowan	2004	Level V
7	Alteration of Medication Dose Forms Project University of South Australia	2002	Level IV

Example of a Medication Management and Administration Policy*

Preamble

1 The appropriate prescription of medication can treat disease and/or control symptoms and thereby improve health or comfort. The physiological effects of an ageing body limits kidney and liver function, hence the older person is more vulnerable to adverse events related to medication administration.

2 The inappropriate administration of medication can harm a resident. Staff are therefore to ensure the safe storage and accurate administration of any medications in accordance with State legislation/regulation requirements.

3 Polypharmacy may increase the risk of medication side effects for older person's and place an unnecessary financial burden upon them. Staff must ensure every effort is adopted to minimise polypharmacy.

Policy

Residents will be administered all medications correctly, as prescribed, through practices approved by the Medication Advisory Committee.

Procedures

Storage/Administration

1 Only medications ordered by the medical practitioner or qualified prescriber are to be given.

2 Medication orders should not be transcribed by nursing staff onto medication charts, unless recording an emergency telephone or facsimile order.
3 No medicine should be administered if a medication chart has expired or a medication is not prescribed or approved by a qualified prescriber. Registered Nurses must contact doctors to attend the ACH to write up medication charts *prior to the date on which the current medication chart expires*.

4 A registered nurse who is concerned that a resident may require a medication which has not been ordered is to contact the relevant doctor to examine the resident and determine the need for additional medication.

5 A registered nurse administering medications must use his or her professional judgement in determining the appropriateness or otherwise of any medication. The nurse should contact the doctor or the pharmacist who dispensed the medication if there is any query regarding the medication before it is administered.

6 If there is an emergency and a phone order is required, a registered nurse qualified to administer medication must listen to the order and record the details in the 'once only' administration section on the medication chart. If more than one dose is to be administered, each dose should be written separately. The medical practitioner is asked to visit within two days to review the medication and sign ALL phone orders.

7 In this organisation, phone orders are only valid for 48 hours. The medical practitioner is required to re-write the order if continuous administration is required beyond 48 hours.

8 Medication orders must be legible, signed and dated in the medical practitioner's handwriting in permanent ink. Doctors must rewrite an order if they are not clear, or be phoned to clarify the order if to be administered immediately. The phone order procedure as outlined above is then to be followed.

9 Medications must be stored in individual resident containers in a locked storage facility, ie, trolley, cupboard. Medication trolleys must never be left unattended when unlocked.

10 All medications must be clearly labeled with a resident's name. Any items which are not named must be disposed of. No medication is to be shared between residents.

11. The medication fridge must be locked at all times when not in use and is only to contain medication.

12 Only registered nurses who have appropriate qualifications to do so may administer medications.

13 Medications are not to be left beside bedsides; administering staff must remain with the resident until the medication is seen to be swallowed. The staff member administering the medication should observe the resident swallowing the medication.

14 If a resident is cognitively able to administer their own medications, and wishes to do so, they are to be supported by staff to do this. A medical practitioner and/or Registered Nurse must document their assessment that determines the resident is capable of undertaking this responsibility. Residents who wish to administer their own medications are to be informed of their responsibility to ensure all medications are locked securely when unattended; to maintain an accurate record of medications they are taking; to provide such record to the ACH staff; and to inform staff if they require any further assistance.

15 Administering staff are to either observe the resident self administering their medication, or if the resident prefers, to ask if the medication has been taken. Following appropriate verification that administration has occurred, SA (self administered) is to be recorded on the medication chart.

16 Medications may only be placed in food/beverage items such as yoghurt, fruit puree or jam, if the placement of the medication in the food or drink is not contra-indicated and administering staff witness the taking of all medications.

17 Medications must be signed by administering staff immediately after administration, not before.

18 If the resident is unable to swallow tablets, a liquid or other alternative must be obtained by contacting the qualified prescriber and the pharmacist to determine the most appropriate type. If a suitable liquid alternative is unavailable the qualified prescriber and pharmacist are to determine the suitability of the medication for crushing. Medical practitioners are to ensure details of altered dose forms are clearly documented on medication charts. Staff are to refer to the 'List of medications that should not be crushed' to determine special considerations regarding the crushing of medicines.

19 If a medication is not given, this must be documented on the medication chart with the relevant reason noted. The qualified prescriber is to be contacted for further orders.

20 Any medications that have an expiry date after opening (e.g. eye ointments and drops; insulin; Anginine) should have the date the bottle/tube was opened recorded on the bottle/tube.

21 Controlled drugs (Schedule 8 medicines) must be securely stored in a locked drug cupboard. Schedule 8 medicines must be checked out, administered and signed for by two registered nurses (wherever possible). Controlled drugs, which are securely stored but not in use, must be returned to the pharmacist as soon as possible for appropriate disposal.

22 All controlled drugs present within the home must be checked at the beginning and end of each shift by two registered nurses (or with a qualified prescriber or pharmacist) and relevant details recorded in the controlled drugs register.

Medication charts

1 Any discrepancies or incidents related to medication administration and orders are to be written on an incident report and forwarded to the Director of Nursing or person responsible for incident reviews.

2 Identification photographs must accompany medication charts with the name of the resident and the date the photograph was taken, printed clearly on the back.

3 Residents with similar or same names must have brightly coloured alert stickers present on their charts.

4 Medication orders are only to be recorded on medication charts.

5. The following details must be written legibly on all medication charts:

- complete name of resident
- date of birth of resident
- a record of allergies and their details
- medication names
- all routes of administration
- correct dosages for the medication ordered
- correct frequency identified from the doctor's orders
- a legible doctor's signature for every medication ordered
- every order dated by the medical practitioner
- administering nurse's signature following administration
- relevant months and years
- the date of the next administration of infrequent medicines (eg, medicines given 2-3 monthly), even if the administration does not occur within the time span covered by that chart
- if alternative methods of administering medications are necessary, eg, 'crush medications able to be crushed'
- p.r.n. medication orders
- medication phone orders
- date/s of reviews by the accredited pharmacist and medical practitioner
- details of resident self-administered medications.

Medication Advisory Committee

1 The Medication Advisory Committee (MAC) shall conduct meetings every 2 months.

2 The members, activities, role and terms of reference of the committee shall be documented and determined by the committee and senior management.

3 Activities of the MAC shall be included in the ACH's Quality Program and reporting systems.

* Adapted from "Example of a Medication Management Administration Policy", APAC, 2002 originally produced by Lee Consulting Australia Pty Ltd.

Example of ACH list of Nurse Initiated Medicines (NIM)

Suggested list of medications that may be considered by Medication Advisory Committees for inclusion as nurse initiated medications.
Recommended dose, duration and specific administration comments must be stated. Maximum duration applies to the maximum length of time the medication may be given or used without contacting a medical prescriber.

Clinical Indication	**Medication**	**Route**	**Recommended Adult dose**	**Maximum dose**	**Maximum Duration**	**Comments**
Angina	Glyceryl trinitrate tablets 600mcg (Anginine®)	Sublingual	½ -1 tablet under the tongue repeated every 3-4 minutes until pain is resolved	2 or 3 tablets over 15 minutes	3 doses	Sit or lie down before use as it may cause dizziness Call an ambulance if 2 or 3 tablets over 15 minutes do not relieve pain.
Asthma	Salbutamol MDI plus spacer	Inhalation	First Aid for asthma. Using spacer: 1 puff four breaths, repeat until 4 puffs have been given	4 puffs every 4 minutes until ambulance arrives	One treatment only	
Constipation	Docusate sodium (Coloxyl ®50mg)	Oral	100 – 150mg once or twice daily	3 tablets twice a day	72 hours	Faecal softener. Onset of action is 1-3 days
	Docusate sodium, sennosides a & b (Coloxyl & Senna®)	Oral	100 – 150mg once or twice daily	3 tablets twice a day	72 hours	Faecal softener with peristaltic stimulant. Onset of action is 1-3 days
	Lactulose	Oral	10 – 20mL twice a day	20mL twice a day	72 hours	Onset of action is 1-3 days
	Movicol® sachet	Oral	1 sachet until result	Take no more than 2 sachets/hour is there is cardiovascular disease		Useful for impaction Cardiovascular disease (eg heart failure) may be exacerbated; use with caution as fluid and electrolyte disturbances may occur
	Glycerine suppositories	Rectal	1 suppository	1 suppository	Single dose	

	Sodium/magnesium laxatives eg Microlax enema®	Rectal	1 enema	1 enema	Single dose	Avoid use of sodium salts in cardiovascular disease eg heart failure as fluid and electrolyte disturbances may occur
Ear wax	Olive oil, or proprietary products eg Cerumol®, EarClear®, Waxsol®	Otic	As per manufacturers directions		3-7 days	2-3 days (may require syringing after)
Indigestion	Combination antacids liquid product	Oral	10 – 20mL 3-4 times a day between meals and at night	20mL 4 times a day between meals & at night	24 hours	Antacids should not be taken at the same time as other orally administered drugs; most drug interactions can be avoided by having an interval of at least 2 hours between an antacid and another drug. Be aware of the differential diagnosis between heart conditions and indigestion
Oral hygiene	Chlorhexidine gluconate mouthwash	Oral - do not swallow	As needed			
Dry skin	Sorbolene and glycerine products	Skin	Twice daily	prn		May be used in conjunction with bath/shower oils provided by resident
Pain	Paracetamol 500mg tablets	Oral	1-2 every three to six hours if necessary	Maximum dose 4g/24 hours	48 hours	Caution to check total paracetamol dose form other products

Reference: Bouchner F (Chairman Ed Advisory Board). Australian Medicines Handbook 2004 Australian Medicines Handbook Pty Ltd. Hyde Park Press Richmond SA, 2004.

Medications that should not be crushed

NB List of medications and brands is not exhaustive – check with you pharmacist before crushing.

Medications that should not be crushed – Generic name (brand name)	Reason
Antihistamines	
Dexchlorpheniramine (Polaramine Repetabs),	1
Pheniramine (Avil Retard)	1
Dexchlorpheniramine/pseudoephedrine (Demazin Day/ Night relief)	1
Analgesics	
Morphine sulphate (MS Contin)	1
Oxycodone (OxyContin)	1
Tramadol (Tramal SR, Zydol SR)	1
Antibiotics	
Cefaclor (Ceclor CD, Keflor CD)	1
Amoxycillin & clavulanic acid (Augmentin Duo, Clamoxyl Duo)	1 & 2
Doxycycline (Doryx, Doxsig, Doxy-50, Doxy-100, Doxyhexal, Doxylin, Vibramycin, Vibra-Tabs 50)	3
Erythromycin (EES, E-Mycin, - all discontinued, Eryc)	1
Nitrofurantoin (- disc, Macrodantin)	3
Cardiovascular medications	
Isosorbide mononitrate (Imdur, Duride, Imtrate, Monodur)	1
Indapamide 1.5mg (Natrilix SR)	1
Felodipine (Agon SR, Felodur SR, Plendil ER)	1
Nifedipine (Adalat, Adalat Oros, Adefin, Adefin XR, Nifecard, Nifehexal, Nyefax, SBPA Nifedipine)	2
Nimodipine (Nimotop)	2
Verapamil (Cordilox SR, Isoptin SR, Anpec SR, Veracaps SR)	1
Quinidine (Kinidin Durules)	1
Aspirin enteric-coated (Cartia. Astrix 100)	3
Glyceryl trinitrate sub lingual (Anginine)	1
Dipyridamole SR (Asasantin SR, Persantin SR)	1
Haemantinics	
Iron containing products (Ferrogradumet, Fergon, FGF, Fefol)	3
Gastrointestinal	
Olsalazine (Dipentum), mesalazine (Mesasal), sulfasalazine (Salazopyrin)	4
Omeprazole (Losec, Acimax,), lansoprazole (Zoton) , pantoprazole (Somac)	2
Pancreatic supplements	
Pancrease, Cotazym, Creon	4
Immune modulators	
Cyclosporin (Neoral)	6
Oral cytotoxic agents	
Altretamine (Hexalen), cyclophosphamide (Cycloblastin) levamisole (Ergamisol), etoposide (Vepesid), hydroxyurea	5
(Hydrea), idarubicin (Zavedos), methotrexate (Ledertrexate, Methoblastin), chlorambucil (Leukeran), busulphan (Myleran),	5
mercaptopurine (Purinethol), melphalan (Alkeran), capecitabine (Xeloda), temozolomide (Temodal)	5
Anti Parkinson's Disease	
Levodopa controlled release (Sinemet CR, Madopar HBS))	1
Psychoactive medications	
Chlorpromazine (Largactil)	5
Respiratory	
Theophylline controlled release (Nuelin SR, Theodur)	1
Endocrinology	
Alendronate (Fosamax),	3
Rrisedronate (Actonel)	3
Anti-inflammatory agents	
Sustained release naproxen (Naprosyn SR, Proxen SR)	1
Diclofenac enteric coated ((diclofenac and misoprostol - Arthrotec, Diclohexal, Dinac, Fenac, Voltaren)	3
Electrolyte	
Sustained release potassium chloride (K-SR, Slow K)	3
Miscellaneous	
I Isotretinoin (Roaccutane)	3 & 5
Phenytoin (Dilantin)	1
Quinine sulphate (Quinate, Quinoctal, Quinsul)	6
Quinine bisulphate (Biquinate, Myoquin, Quinbisul)	6

Legend 1. Altered absorption characteristics 2. Medication instability 3. Local irritant effect
4. Failure to reach site of action 5. Occupational health and safety 6. Unacceptable/undisguisable taste

Source: Alteration of Medication Dose Forms Project University of South Australia, *Guidelines and standard operating procedures for altering medication dose forms - A resource for staff in residential aged care facilities*. 2002, Canberra: APAC, page 7.

Example of an Assessment of a Resident's Ability to Self-administer Medication*

Name of resident ……..……Date of Birth …….

1. Does the resident wish to self medicate?	Yes	No
2. Was the resident self medicating at home?	Yes	No
3. Was the resident using a dose administration aid at home?	Yes	No
4. Is the resident oriented in time and place?	Yes	No
5. Does the resident have a history of alcohol or drug abuse?	Yes	No
6. Does the resident have any cognitive disabilities?	Yes	No
7. Does the resident have gross/fine motor skills' deficit?	Yes	No
8. Is the resident able to communicate effectively?	Yes	No
9. Does the resident have a visual impairment?	Yes	No
10. Can the resident open the following:		
• Bottles with normal lids	Yes	No
• Bottles with child resistant closures	Yes	No
• Foil packets	Yes	No
• Boxes	Yes	No
• Dose administration aids	Yes	No
11. Can the resident access a locked medication drawer?	Yes	No
12. Can the resident read the labels on their medications?	Yes	No
13. Does the resident understand what the medication(s) is for?	Yes	No
14. Does the resident know what to do if they:		
• Miss a dose	Yes	No
• Take a wrong dose	Yes	No
15. Can the resident identify the medication?	Yes	No
16. Can the resident prepare the correct amount of medication?	Yes	No
17. Can the resident administer eye drops/ointments?	Yes	No
18. Can the resident administer ear drops?	Yes	No

Is the resident capable of self-administering medications? Yes No

Are there any strategies which may assist the resident to self-administer Yes No

Comments ……..……
……

Circle Appropriate:

1. Resident can administer medications alone including informing staff when medication required.
2. Can take all medications whole, but requires supervision.
3. Can take all medications whole, needs tablets placed in mouth.
4. Can take small tablets whole, crush larger crushable medications.
5. Requires all crushable medication crushed with jam or puree.

Initial assessment date: .../…/…. Date Review should be performed: .../…/….

Name of Person performing Assessment: …… ……

Adapted from "Example of assessment of a resident's ability to self-administer", APAC, 2002.

Clinical Information Sheet

Advance Care Planning to Improve End of Life Care

Advance care planning is a process enabling a patient to make decisions about his or her future health care in consultation with their health care providers, family members and other important people in their lives. Based on the ethical principle of patient autonomy and the legal doctrine of patient consent, advance care planning helps to ensure that patient choice is respected if the patient becomes incapable of participating in treatment decisions.

This clinical information sheet has been produced to assist GPs to discuss patient choices for end of life care, and to develop and use Advance Care Plans with their residential aged care patients.

The clinical information sheet covers:

- Advance care planning for end of life care in Victoria
- Steps to develop an Advance Care Plan
- Using an Advance Care Plan
- Sources of Information
- Advance Care Plan information sheet and documentation:
  - *Enduring Power of Attorney (Medical Treatment)* form
  - *Advance Care Plan* form
  - *Refusal of Treatment Certificate – Competent Person*
- Advance Care Plan information sheet and documentation for a person who does not have legal capacity to make medical decisions:
  - *Advance Care Plan – for person who does not have legal capacity to make medical decisions* form
  - *Refusal of Treatment Certificate – Agent or Guardian of Incompetent Person*
- Office of the Public Advocate Fact Sheets
  - *Enduring Power of Attorney (Medical Treatment)*
  - *The 'Person Responsible'*
  - *Refusal of Medical Treatment*
- GP tools
  - Advance care planning brief discussion guide
  - GP quick reference card: S*teps to advance care planning*

1. Advance care planning for end of life care in Victoria

Conflicts frequently arise in medical decision-making, and there may be a discrepancy between a patient's end of life care and their wishes for care [1]. To address this problem, attempts in several countries have been made to introduce an advance care plan also called an advance directive or living will.

In Victoria, advance care planning is based on powers enabled by the *Medical Treatment Act* (1988) and encourages patients to appoint a Medical Enduring Power of Attorney (MEPOA) called the 'agent'. Advance care planning involves conversations between the patient, their agent and their family/loved ones about their values, beliefs and goals in life, and, in light of their current health status, what medical treatments they would and would not want in the future. Several versions of advance care plan documentation have been developed by health care organisations in Victoria. The most widely known program currently is Respecting Patient Choices, developed by Austin Health. [2]

Respecting Patient Choices Program

The Respecting Patient Choices Program aims to: [2]

- Promote a patient's understanding about their health and the treatment options available to them
- Assist them to document their wishes and preferences about future medical treatment, particularly end of life treatment, in an Advance Care Plan.

The Respecting Patient Choices Program is based on a program titled *Respecting Choices* that was successfully implemented in all hospitals, clinics, nursing homes and hospices in the La Crosse community, Wisconsin, USA [3]. Results of a retrospective study of 540 eligible adult decedents showed 85% of patients had a written advance directive, and 95% of these were in the decedent's medical record. Almost all advance directives requested that treatment be foregone as death neared. All decedents in the study were mentally capable of determining preferences in the 10 years prior to death, but only 43% were capable at the time end of life decisions were made. Treatment was forgone in 98% of deaths in ways consistent with the advance directive – CPR 100%, hospitalisation 32%, feeding tube 18%, ventilation 17%, and antibiotics 7%. Nearly 50% died in long-term facilities, slightly more than one third died in hospital and 14% died at home [3]. Three key success factors were: [2]

- Using the completion of patient advance request forms to catalyse discussion between the patient, next of kin and hospital staff regarding the patient's end of life care
- Educating medical and other key staff about the program and its relevance to daily clinical practice
- Placing a plastic 'green sleeve' containing the patient's Advance Directive in the patient's medical records. This ensured the patient advance request form went with the patient and had maximal impact on end of life care when needed.

In 2002-3, the Austin Hospital adapted the Respecting Choices program to address similar issues in end of life care, and produced the Respecting Patient Choices Program. Evaluation showed similar success rates to the Wisconsin program [2]. Patients indicated they wanted to discuss their current health condition and future medical options, and expected health professionals to raise the subject with them [4]. Doctors, nurses and allied health staff reported greater satisfaction knowing they were delivering care that was consistent with patient wishes [4].

Currently the Respecting Patient Choices Program is being rolled out as a pilot program in several organisations in Victoria and interstate. Local pilot programs include:

- Aged Care Homes in the Austin Health catchment area
- Melbourne City Mission, Banksia, and Eastern Palliative Care Services
- Acute hospitals including Box Hill Hospital, Northern Hospital, and St. Vincent's Hospital.

Some local GPs and patients may have access to support for advance care planning facilitated through one of the pilot programs.

GP role in advance care planning

A GP may be the key person to facilitate the process with some patients, their relatives and Aged Care Home (ACH) staff. For other patients, the GP may be asked to support the process when facilitated by someone else, such as a Respecting Patient Choices Consultant, ACH staff, or health professional from an aged care service, palliative care service or hospital. The specific roles of the GP in supporting advance care planning include:

- Providing the patient with information regarding their current health status, prognosis and future treatment options
- Witnessing the Medical Enduring Power Of Attorney form
- Completing a Refusal of Treatment Certificate where appropriate
- Applying patient wishes to medical plans, including Not For Resuscitation documentation.

The principles and documents in this Clinical Information Sheet are adapted from the Respecting Patient Choices Program and the Office of the Public Advocate in Victoria, to inform and improve discussions that GPs may have with their patients approaching end of life care, particularly as part of medical care planning for residential aged care patients. The steps to develop an advance Care Plan, outlined below comply with Victorian legislation.

2. Steps to develop an Advance Care Plan

Patients have the right to make decisions about their health care, now and for the future. Medical treatment should only be given with full informed consent and patients have the right to consent to or refuse treatment. If, in the future, a patient becomes unable to express his or her choices for treatment, those providing medical and personal care and the patient's family/loved ones may not know the patient's wishes. Advance care planning provides the opportunity to discuss and record a patient's care and treatment choices in advance.

The Advance Care Plan only comes into use when the person is no longer able to communicate his/her wishes.

A person who has legal capacity can make their treatment wishes known in advance through using any or all of the following documents:

- *Enduring Power of Attorney (Medical treatment)* form to appoint an 'agent'
- *Advance Care Plan* form
- *Refusal of Treatment Certificate*.

A person who does not have legal capacity can make their treatment wishes known in advance through the following documents:

- *Advance Care Plan – for a person who does not have legal capacity to make medical decisions* form completed by an existing MEPOA/'agent' or the 'Person Responsible'
- *Refusal of Treatment Certificate – Agent or Guardian of Incompetent Person*.

The GP can facilitate or participate in advance care planning through the steps outlined in the box.

GP steps to advance care planning

Step 1. Incorporate advance care planning as part of routine care

If initiating:

- Offer/initiate advance care planning when doing a comprehensive medical assessment or medical care plan
- Reassure the patient that advance care planning is part of routine care
- Explain the rationale and steps for advance care planning
- Suggest that the family/agent be involved in future consultations about the patient's wishes

Step 2. Assess capacity of patient

- To appoint a Medical Enduring Power of Attorney (MEPOA)
- To complete an Advance Care Plan

Step 3a: Where patient has legal capacity - witness the MEPOA form

Check and witness that the:

- Patient has legal capacity
- Agent/s is/are appropriate and agree
- Form has been completed correctly

Or

Step 3b: Where patient does not have legal capacity to appoint a MEPOA - identify the 'Person Responsible'

- Refer to Fact Sheet: *The 'Person Responsible',* Office of the Public Advocate, Victoria

Step 4. Support discussion and Advance Care Plan

- Discuss patient wishes with patient, family/agent/'person responsible', and ACH staff
- Provide information on medical conditions, benefits and burdens of treatment
- Review *Advance Care Plan* or
- *Advance Care Plan – for person who does not have legal capacity to make medical decisions*

Step 5. Complete Refusal of Treatment Certificate (RTC) where appropriate

- *'RTC - Competent Person'* or
- *'RTC - Agent or Guardian of Incompetent Person'* with the MEPOA or guardian

Step 6. Review the Advance Care Plan

- Review 6 monthly or when health status changes significantly
- Can be change or revoked at any time

Step 1: Incorporate advance care planning as part of routine care

When advance care planning discussions are held with the patient, the agent/person responsible and health care providers, treatment choices are more likely to be understood and enacted when needed. If initiated early, while patients are still capable, these conversations can provide the necessary information and the time to assist patients to consider the information in the context of their values and goals. If these types of discussions occur late in a person's illness, s/he is more likely to not be capable of participating in decision-making, and decisions may be more difficult for ACH staff, families and doctors to make.

The advance care planning process usually involves several hours of discussions plus documentation of a patient's wishes.

The elements of advance care planning are considered to be necessary medical treatment. GPs can claim MBS remuneration for their contribution as part of patient consultations (eg Items 43, 51), case conferences (Items 734, 736, 738, 775, 778, 779), a comprehensive medical assessment (Item available from 1 July 2004) and contribution to a resident's care plan (Item 730). (Refer to *Using MBS Items* under *3.Tools for residential care* in this *GP Residential Aged Care Kit*).

Opportunities to initiate advance care planning may occur:

- When doing a Comprehensive Medical Assessment on admission to the Aged Care Home
- During a routine patient consultation
- Through discussion with ACH staff or service that provides advance care planning
- When preparing a Patient Summary and Care Plan.

When initiating advance care planning:

- Explain the rationale for advance care planning
- Reassure the patient that advance care planning is part of routine care
- Suggest that the family/agent be involved in future consultations about patient's wishes and care
- Offer written patient information, fact sheets and documentation.

Step 2: Assess capacity of patient

In order to complete his/her own Advance Care Plan, a patient must have decision-making capacity. There are many tools to assess a patient's capacity, however, there is no validated tool currently in use in Australia.

To assist in this assessment the GP may ask the patient questions to ensure they understand that:

- Advance care planning includes future choices
- The Advance Care Plan is only used when a person is incapable of making decisions for him/herself
- Advance care planning includes selection of a MEPOA &/or specific medical preferences
- Choices can be changed at any time.

It is advisable that the GP review the patient's capacity throughout the advance care planning process, taking the opportunity provided by the patient reflecting on decisions over a number of visits. Sometimes the GP may also need to judge whether a formal assessment of capacity is required, eg by a neuropsychologist.

Capacity to appoint an agent

If a patient understands the nature and effect of a MEPOA, the individual has the capacity to appoint another person to be their MEPOA (called an agent). The agent can then make future medical decisions on behalf of the person if they become incapable of making decisions for themselves.

The nature and effect of a MEPOA can be explained to the patient using the *Enduring Power of Attorney (Medical Treatment)* Fact Sheet from the Office of the Public Advocate.

Understanding the nature and effect of a MEPOA includes understanding (and stating):

- The powers of the agent
- That the power will operate if the patient loses the ability to make medical treatment decisions

- That once the power is exercisable, the MEPOA has the ability to consent to treatments and also refuse treatments being offered on the patient's behalf
- That the patient may revoke the MEPOA at any time while the patient is still capable of making an MEPOA
- Once the patient loses capacity s/he will not be able to supervise the use of the powers.

Capacity to complete an Advance Care Plan

When assessing a patient's capacity to complete an Advance Care Plan, the GP should consider if the individual understands the following:

- The general nature, consequences, broad benefits and burdens of what is being discussed
- They are able to take responsibility for making a choice
- They are able to make decisions in the context of their current medical condition.

For a patient who does not have legal capacity

If a patient does not have the legal capacity to sign a MEPOA, the 'person responsible', eg, their next of kin, or an appointed guardian can make medical decisions for them (Guardianship and Administration Act, Vic 1986).

The nature and effect of the 'person responsible' can be explained to the patient using *The 'Person Responsible'* Fact Sheet from the Office of the Public Advocate.

If the GP does not believe the patient has capacity to complete the *Advance Care Plan* independently, it is recommended that the family assist the patient to complete the *Advance Care Plan – for a person who does not have legal capacity to make medical decisions* and all should be encouraged to sign the document.

Step 3a: Witness the Medical Enduring Power Of Attorney form

The Enduring Power of Attorney (Medical Treatment) is a legal document that enables a patient to nominate another person to make medical treatment decisions on his or her behalf. The person, referred to as the MEPOA or agent, can make health care decisions on a patient's behalf only if the patient becomes medically assessed as incapable of deciding on or unable to communicate their treatment choices.

The patient must sign the MEPOA form in the presence of two witnesses. One witness must be authorised to sign statutory declarations. By law the nominated agent or alternate agent cannot also be a witness to the MEPOA form. In witnessing the signing of the form the witnesses must declare that they believe the patient signing the MEPOA form is of sound mind and has the capacity to make the decision.

In Victoria, those who can sign statutory declarations include a justice of the peace or a bail justice, a barrister or solicitor of the Supreme Court, a registered medical practitioner, a dentist, a pharmacist, or a minister of religion authorised to celebrate marriages.

It is recommended that the patient's GP witness the Medical Enduring Power of Attorney (MEPOA) form, as this will involve the GP in the advance care planning process, and facilitate use of the advance care plan in future medical care.

If requested to witness the Medical Enduring Power of Attorney Document, the GP should check that the:

- Patient has legal capacity
- Agent/s is/are appropriate
- Form has been completed correctly and is therefore legally valid, with
  - One agent, or an agent and an alternate agent
  - Two witnesses, including a person qualified to sign a Statutory Declaration (preferably the patient's GP).

Selecting an Agent

To appoint a MEPOA or agent the patient must be over 18 years of age, able to understand the nature and effect of the power of attorney, and capable of choosing an agent.

A patient may only select an agent who is over 18 years of age and has the capacity to make decisions on the patient's behalf.

A patient may also choose to nominate an alternate agent who will only make decisions if the agent is unavailable, or becomes incapable of making decisions. The alternate agent can only make decisions for the patient if they sign a statutory declaration stating that the agent is either dead, incompetent or cannot be contacted.

Once nominated, the agent and/or alternate agent have the power to:

- Agree to medical treatment on the patient's behalf
- Refuse medical treatment on the patient's behalf if the treatment would cause the patient unreasonable distress or if the agent believes on reasonable grounds that the patient would not wish the treatment to continue.

The agent does not have the power to make non-medical decisions, nor does he or she have the power to refuse palliative care.

When selecting someone to be an agent, it is important to choose someone who is:

- Trustworthy and knows the patient well
- Willing to respect the patient's views and values
- Able to make decisions under circumstances that may be difficult or stressful.

Often a family member is a good choice as an agent, but not always. The agent should be someone who will closely follow the patient's choices and advocate on the patient's behalf.

It is important that the patient discusses his or her wishes with the agent, family and friends. This information is designed to assist the agent to make decisions on the patient's behalf, if he or she is unable to do so alone.

Step 3b: Identify who is the 'person responsible'

If a patient does not have the legal capacity to appoint a MEPOA, or has not already appointed a MEPOA, responsibility for their medical decision-making defaults to the 'person responsible' (often their next of kin, or an appointed guardian; see Fact Sheet *'The Person Responsible'* for the 'person responsible' list under Victorian law). In this case, it is recommended that the GP identify the 'person responsible' from this list so that they can then be contacted to discuss the patient's wishes with the family and ACH staff, participate in advance care planning and treatment decisions.

The 'person responsible' can consent to treatment but cannot refuse treatment or consent to the withdrawal of treatment on behalf of the patient.

Step 4: Support discussion and Advance Care Plan

To assist the patient's agent and/or next-of-kin in making choices regarding future medical treatments the patient can also complete an *Advance Care Plan*. This is designed to inform the agent, medical practitioners and facility/service staff of the patient's choices. It holds evidentiary weight under Common Law and is not as legally binding as a Refusal of Treatment Certificate (RTC).

If the patient did not wish to provide any written instructions, the agent makes decisions based on the patient's prior oral instructions or what the agent considers to be in the patient's best interest.

For a patient who does not have legal capacity

If the patient does not have legal capacity, the agent or the patient's relatives may choose to complete an *Advance Care Plan –for a person who does not have legal capacity to make medical decisions* form on behalf of a patient who can no longer express his or her wishes. Discussions can still occur including the patient to their full potential and with the patient's family or loved ones. This should be done in the same way as with an adult with capacity, reflecting on the individual's values, beliefs and goals. The Advance Care Plan can be completed by the patient's family or loved ones in collaboration with the patient's GP and staff caring for the individual. It is preferable to commence this process when the patient is well and in a non-crisis situation. This could be done using case conferences.

Discussion of patient's wishes

An essential step in advance care planning is for the patient to discuss and communicate their beliefs, values and goals for treatment. This discussion helps to direct decisions about specific treatments and provides a framework for the patient, the agent and the doctor to make treatment decisions in the future.

Patients need to understand their options for life-sustaining treatment and the value to them of this treatment. The discussion with their GP could encompass:

- Current health status
- Personal goals and goals of treatment
- Benefits and burdens of relevant medical care, eg investigations, hospital transfer, antibiotics, fluids, tube feeding, surgery, resuscitation
- Whether or not the benefits and burdens of treatment are compatible with the individual's goals, eg how active should treatment be, are there any limitations.

A patient's preferences and goals may change as an illness progresses. Certain goals may assume higher priorities over time or short-term goals may be balanced against long-term goals. At times, individuals may have the goal of deferring as much decision-making as possible to others, eg the GP, palliative care team or family.

In considering an analysis of benefits and burdens, life-sustaining treatments may be viewed as *beneficial* if they:

- Are effective in prolonging life, restoring function and relieving suffering
- Promote a person's goals and values
- Are consistent with religious or cultural beliefs.

Life-sustaining treatments may be viewed as *burdensome* if they

- Result in more or intolerable pain or suffering
- Are damaging to body image or functioning, psychologically harmful, physically or emotionally restrictive
- Do not promote a person's goals and values
- Are not consistent with religious or cultural beliefs

See examples of discussion questions in the *Advance care planning brief discussion guide*.

Step 5: Complete a Refusal of Treatment Certificate (RTC)

If a patient is refusing a treatment that relates to a current illness, they or their agent/guardian may complete a Refusal of Treatment Certificate (RTC), according to the Medical Treatment Act (Vic) 1988.

See the *Refusal of Treatment Certificate – Competent Person* from the Office of the Public Advocate. A medical practitioner and one other person must witness the Refusal of Treatment Certificate. They must be satisfied that the patient is:

- Over 18 years of age and has legal capacity
- Clearly refusing general medical treatment or specific medical treatment for a current medical condition
- Voluntarily making the decision to sign the RTC without coercion
- Given reasonable and sufficient information about their condition
- Appears to understand the information.

See the *Refusal of Treatment Certificate – Agent or Guardian of Incompetent Person* from the Office of the Public Advocate. A medical practitioner and one other person must witness the Refusal of Treatment Certificate. An agent or guardian can refuse treatment for the patient they represent if they:

- Have been given sufficient information about the patient's condition
- Understand this information
- Believe that the medical treatment would cause unreasonable distress to the patient or there are reasonable grounds for believing the patient would have considered the treatment unnecessary.

Palliative care

Under the *Medical Treatment Act* (Vic) 1988, a RTC does not allow the patient or the patient's agent to refuse palliative care (e.g. reasonable pain relief, reasonable provision of food and water). Under common law, however, a patient with capacity has the right to refuse any treatment.

Medical trespass

While the Medical Treatment Act protects medical practitioners who, in accordance with a RTC, do not perform or continue to perform medical treatment, the Act also creates the offence of medical trespass. This occurs when a registered medical practitioner is aware that a RTC applies to a particular individual, and nevertheless undertakes or continues to undertake the medical treatment refused in the RTC. A doctor who provides treatment contrary to the express wishes of the patient who has executed a valid RTC could be putting him/herself at risk of legal action.

Step 6. Review the Advance Care Plan

Wishes expressed in the Advance Care Plan should be reviewed following a major change in the patient's condition or after each hospital admission. In residential aged care facilities the Advance Care Plan should also be reviewed at the patient's 6 monthly review meeting, with the Patient Summary and Care Plan.

There are a number of reasons why a patient might want to change or revoke a MEPOA, Advance Care Plan, or RTC. For instance, the relationship with the agent may change, or the person appointed may no longer be appropriate for the role, or the patient's medical and other circumstances or wishes may change.

Advance care plan documents can be changed verbally or in writing. The patient may destroy the documents or request that they be destroyed. Completing a new document (eg, appointing a new agent or recording new choices) can also revoke documents as the most recent dated document overrides the older document. To revoke the Refusal of Treatment Certificate, it is advisable that the patient completes the cancellation section of the existing certificate. It is also important to inform the agent(s) and family members of the changes and provide them with copies of new ones

3. Using an Advance Care Plan

The Advance Care Plan only comes into use when the person is no longer able to communicate his/her wishes.

Using an Advance Care Plan
Step 1. Document and communicate Advance Care Plan
Step 2. Incorporate Advance Care Plan into medical care plans eg NFR document
Step 3. Consult Advance Care Plan and patient/agent/person responsible when major clinical decisions need to be made
Step 4. Review plan after a significant change in patient's condition

Step 1: Document and communicate Advance Care Plan

The Advance Care Plan is designed to communicate patient treatment choices to family, ACH staff, after hours service providers, and on transfer to staff of hospital or other facility.

After the Advance Care Plan has been completed, the original remains with the patient and copies are provided for:

- The agent and, if applicable, the alternate agent
- Resident record at the Aged Care Home
- Patient medical record at the GP clinic
- Other hospitals/clinics the patient normally attends (with a covering explanatory letter)
- Extra copies to share with others (eg. next of kin, minister or solicitor).

We recommend placing the patient's Advance Care Plan prominently in a coloured plastic sleeve at the front of the resident's record along with the Patient Summary and Care Plan. This ensures the plan will be consulted and have maximal impact on end of life care when needed, particularly after hours, or on transfer to hospital.

When the patient is transferred to hospital or another facility, a copy of the Advance Care Plan is sent with them.

If the plan is changed, the old plan should be destroyed and the new plan placed in the records.

Step 2: Incorporate Advance Care Plan into medical care plans

The Residential Aged Care Patient Summary and Care Plan and other treatment plans should reflect the patient's wishes expressed on the Advance Care Plan or through the advance care planning process.

The Advance Care Plan is considered a patient initiated document. Some facilities may require a medically initiated document such as a Not For Resuscitation form. This should be completed according to the facility protocol and reflect the patient's choices. Medically initiated Not For Resuscitation forms will be filed according to the protocol of the facility/service.

A copy of the Not For Resuscitation form should be kept with the advance care planning documents.

Step 3: Consult Advance Care Plan when major clinical decisions need to be made

The GP and ACH staff involved in medical care should know where the Advance Care Plan is, when to use it and the implications it may have for future medical treatment and end of life care.

In the event of deterioration in the health status of the patient, then the ACH staff, GP, visiting locum doctor and/or ambulance officer should consult the patient and Advance Care Plan. Also the agent, person responsible or next of kin should be notified as specified in the plan. Medical decisions can then take into consideration the resident's health status and documented wishes.

Providing patient advocacy

In accordance with the Privacy Act, if a patient has not restricted their medical information, the Advance Care Plan or results of advance care planning discussions can be shared with all health care professionals providing care to the individual. The GP should also advocate for the patient if a situation arises where another health service seeks to override the patient's choices.

Step 4. Review plan after a significant change in patient's condition

If there is a major change in the patient's condition or the patient has returned from a hospital admission, the Advance Care Plan should be reviewed with the patient, along with other treatment plans. The patient may or may not wish to change some of their treatment and other Advance Care Plan choices.

4. Sources of Information

Where to go for more information

Office of the Public Advocate, Victoria

Address 5th Floor, 436 Lonsdale Street
Melbourne Victoria 3000

Phone Tel (03) 9603 9500, 24 hours
Toll Free 1800 136 829

Fax (03) 9603 9501

Email publicadvocate@justice.vic.gov.au

Website *www.publicadvocate.vic.gov.au*

Publications available from the website include:

DIY kit (7th Ed 2003) *Take Control, a guide to powers of attorney and guardianship*

Fact Sheet – *Medical enduring power of attorney*

Fact Sheet - *The 'Person Responsible'*

Fact Sheet - *Refusal of Medical Treatment*

Victorian Legislation

To access the *Medical Treatment Act 1988* go to *www.dms.dpc.vic.gov.au*

From Home Page of "Victorian Legislation and Parliamentary Documents" click on "Victorian Law Today" > Click "Acts" then alphabetical search "M" > click on Medical Treatment Act 1988 (option of Adobe or Word versions).

Victorian Association of Health and Extended Care (VAHEC)

VAHEC, Russell Kennedy Solicitors and Palliative Care Victoria have produced *A Guide to Decision-Making in Health Care* for people in the residential care, health and aged care sectors. A copy has been distributed to all Aged Care Homes in Victoria. For further information contact VAHEC on (03) 9820 0888 or email info@vahec.com.au.

Respecting Patient Choices Program

For further information contact Ms Liz Stickland at Austin Health on (03) 9496 5660.

References

The information provided in this clinical information sheet is based primarily on Level 111 evidence from program evaluations done by Hammes and Rooney (ref 3) and Austin Health (ref 2). The level of evidence of references used to compile this clinical information sheet is provided in the table below. Refer to 5 Clinical Information Sheet in the GP Residential Aged Care Kit for explanation.

Reference	Year	Level of Evidence
1. Larson DG, Tobin DR. EOL conversations: evolving practice and theory. JAMA 2000;284(12):1573-8.	2000	Level IV evidence
2. Austin Health. Respecting Patient Choices Project. Final Report to the National Institute for Clinical Studies. Sept 2003.	2003	Level 111 evidence
3. Hammes BJ, Rooney BL. Death and End-of-Life Planning in One Midwestern Community. Arch Intern Med. 1998;158:383-90.	1998	Level 111 evidence
4. Health Issues Centre. Respecting Patient Choices. Evaluation Report of Consumer and Staff Involvement in Pilot Phase. June 2003.	2003	Level IV evidence

ADVANCE CARE PLANNING

Information Sheet and Documentation

You have the right to make decisions about your health care, now and for the future. Medical treatment should only be given with your fully informed consent and you have the right to refuse treatment. If, in the future, you became unable to express your choices for treatment, your doctors and family/friends may not know what you would want. Advance care planning gives you the opportunity to consider and record your choices, ahead of time.

The three ways to record your choices in advance care planning are:

1. Appointing a Medical Enduring Power of Attorney (MEPOA)
2. Discussing and making an Advance Care Plan
3. Completing a Refusal of Treatment Certificate

Before completing the Advance Care Plan, take time to read the following information carefully. It is important that you discuss your values and beliefs and the content of this Advance Care Plan with the person whom you wish to appoint as your MEPOA. It is important that you involve your MEPOA, and you discuss your Advance Care Plan together so that he or she understands and respects your choices.

Appointing an Enduring Power of Attorney (Medical Treatment)

Also referred to as a medical enduring power of attorney (MEPOA), this is a legal document that enables you to nominate another person to make medical treatment decisions on your behalf. This person, referred to as your MEPOA or your *agent*, can make health care decisions on your behalf only if you have become incapacitated from an illness or accident. See the Office of the Public Advocate Fact Sheet: *Enduring Power of Attorney (Medical Treatment).*

Your *agent* must be at least 18 years of age and mentally competent to make decisions. You may choose to nominate an *agent* and an *alternate agent*. Your *alternate agent* will only make decisions for you if your *agent* is unavailable, or incapable of making decisions. Your *agent* is not authorised to make non-medical, e.g. financial decisions, for you.

When selecting someone to be your *agent*, it is important to choose someone who:

- You trust and who knows you well
- Is willing to respect your views and values
- Is able to make decisions under circumstances that may be difficult or stressful.

Often a family member is a good choice as an *agent*, but not always. Make sure that you choose someone who will closely follow what you want and will be a good advocate for you.

A copy of the form: Enduring Power of Attorney (Medical treatment) is attached.

Please note:

- Two witnesses, one of whom is authorised to sign statutory declarations*, must sign the medical enduring power of attorney form.
- By law your nominated *agent* cannot also be a witness to your MEPOA form.
- A fax or photocopy of your MEPOA is as acceptable as the original

* *Those who can sign statutory declarations include: a justice of the peace or a bail justice, a barrister and solicitor of the Supreme Court, a registered medical practitioner, a dentist, a pharmacist, a minister of religion authorised to celebrate marriages*.

Discussing and making an Advance Care Plan

You may wish to record your choices regarding future medical treatments on the attached *Advance Care Plan* form. It is still most important to discuss your wishes with your family and friends. This information is designed to assist your *agent* to make decisions on your behalf, if you are unable to do so. If you do not wish to provide any written instructions, your *agent* will make decisions based on your oral instructions or what is considered to be in your best interest. If you do not want to write anything in this section draw a line and write *"no requests"* across the pages of this section. You should note that the Advance Care Plan is designed to inform your agent and the doctors of your choices. It is not as legally binding as a Refusal of Treatment Certificate (RTC).

Completing a Refusal of Treatment Certificate

In Victoria you may also give a legally binding advance directive about treatment for a current medical condition. See the Office of the Public Advocate Fact Sheet: *Refusal of Medical Treatment.*

This document records your wishes about the treatment of your current illness and doctors must comply with it in treating this illness. This document is valid even if you later cannot make decisions yourself. However, it does not apply to new medical conditions, which may arise. If you have specific wishes regarding future treatment for your current illness you may decide to complete a Refusal of Treatment Certificate. A RTC allows you to refuse some, or all, future treatment for your current condition, except palliative care.

Refusal of Treatment certificates may be available from hospitals, nursing homes or your GP, or can be downloaded from the Office of the Public Advocate website www.publicadvocate.vic.gov.au.

How to change or revoke advance care planning documents

There are a number of reasons why you might want to change or revoke your MEPOA, your Advance Care Plan, or your RTC. Maybe your relationship with your *agent* has changed, or the person you appointed is no longer appropriate for the role, or your medical and other circumstances or wishes have changed. You can change or revoke these documents verbally or in writing or by destroying them or requesting that they be destroyed. You can also revoke these documents by completing a new document (e.g. appointing a new agent or recording new choices). To revoke the Refusal of Treatment Certificate, it is advisable to also fill in the cancellation section of the existing certificate. The most recent dated document overrides the older document. It is also important to inform your *agent(s)* of the changes and provide them with new ones.

After completing the advance care planning documents

The original remains with you and the copies can be given or sent to:

- Your *agent* and, if applicable, your *alternate agent*
- Your local doctor (GP)
- Your medical records at the organisation where you have completed the documents
- Other hospitals/clinics you normally attend (with a covering explanatory letter)
- Extra copies to share with others if you wish (eg. next of kin, your minister or your solicitor).

Place this page at front of patient record

ENDURING POWER OF ATTORNEY (MEDICAL TREATMENT)

Medical Treatment Act 1988 Schedule 2

THIS ENDURING POWER OF ATTORNEY is given on the _____ day of_____ 20____

by _____
(your name)

of _____
(your address)

Under Section 5A of the *Medical Treatment Act* 1988.

(Choose either **1(a)** or **1(b)** and then cross out the one you do not choose)

1(a)

I APPOINT _____
(your agent's name)

of_____to be my agent
(your agent's address)

OR

1(b)

I APPOINT _____ *(your agent's name)* of_____to be my agent.
(your agent's address)

and _____
(your alternative agent's name)

of_____ to be my alternate agent.
(your alternative agent's address)

2. I AUTHORISE my agent or, if applicable, my alternate agent, to make decisions about medical treatment on my behalf.

3. I REVOKE all other enduring powers of attorney (medical treatment) previously given by me.

SIGNED, SEALED & DELIVERED BY:_____
(your signature)

We _____
(your witnesses' names)

each believe that _____
(your name)

in making this Enduring Power of Attorney (Medical Treatment) is of sound mind and understands the importance of this document.

WITNESSED BY:

(1) _____ (2) _____
(signature of witness) *(signature of witness authorised to take statutory declarations)*

(1) _____ (2) _____
(name of witness) *(name and authority of witness)*

(1) _____ (2) _____
(address of witness) *(address of witness)*

Source: Office of the Public Advocate, www.publicadvocate.vic.gov.au, June 2004

Place this page at front of patient record
To be used in conjunction with MEPOA

Advance Care Plan

Affix identification label
if available

This Advance Care Plan is made on the _____ day of _____ 200__

I _____ am of sound mind and I understand the statements
(name of patient)

made in this document.

In the event of deterioration in my health I request that my requests, recorded below, are taken into account by my doctors and my appointed a*gent/s (Medical Enduring Power of Attorney).*

1. Please contact

My *Agent* (MEPOA) Business hours ☐ All hours ☐

Name _____ Ph _____

Other contact person Business hours ☐ All hours ☐

Name _____ Ph _____ Relationship _____

I ask that my *Agent* or next of kin (NOK) include the following persons in my health care decisions if there is time.

_____
_____
_____
_____

In addition I request that my *agent* or NOK pay heed to my beliefs and values in life as we have previously discussed.

2. Request regarding life-prolonging treatments
(eg tube feedings, antibiotics, transfer to hospital, intravenous fluid, CPR ie heart lung resuscitation, respirator/ventilator)

(Initial the box that applies)

☐ Please provide any treatments required to sustain my life.

☐ I only want those treatments that can give me a chance of recovery to my previous or a reasonable state of health.

☐ If I reach a point where it is reasonably certain that I will not recover my ability to interact meaningfully with my self, family, friends and environment, then I want only those treatments that provide me with comfort and dignity as part of a palliative care plan.

3. Specific requests with regard to my medical care

_____
_____
_____
_____
_____

4. Other requests (personal, spiritual, special customs) as expressed by me

_____
_____
_____
_____
_____

5. Other requests (personal, spiritual, special customs) as expressed by my family

_____
_____
_____
_____
_____

I _____ hereby declare that the information completed above is a true record.

Signature _____ **Date**_____
(name)

Witness signature _____ **Date**_____
(can be Agent's signature)

Witness name _____ **Relationship** _____

THIS ADVANCE CARE PLAN IS VALID UNLESS STATED OTHERWISE BY THE SIGNATORY.
A NEW ADVANCE CARE PLAN CAN BE DRAWN UP AT ANY TIME TO CATER FOR A CHANGE IN REQUESTS.

Refusal Of Treatment Certificate - Competent Person

Section 3, 5(2), **SCHEDULE 1,** Medical Treatment Act 1988

We certify that we are satisfied –

1. that _____
(name of patient)

has clearly expressed or indicated a decision, in relation to a current condition, to refuse –

* medical treatment generally;
or
* medical treatment, being

_____

_____
[specify particular kind of treatment]

2. that the patient's decision is made voluntarily and without inducement or compulsion;

3. that the patient has been informed about the nature of his/her current condition to an extent which is reasonably sufficient to enable him/her to make a decision about whether or not to refuse medical treatment generally or of a particular kind (as the case requires) and that he/she has appeared to understand that information; and

4. that the patient is of sound mind and has attained the age of 18 years –

Dated: _____/_____/_____ Signed: _____
(Registered Medical Practitioner)

Signed: _____
(Another Person)

*Delete whichever is not applicable

Patient's current condition

The patient's current condition is

_____

_____
(describe condition)

Dated: _____/_____/_____ Signed: _____
(To be signed by the same Registered Medical Practitioner)

Verification to be completed by patient, if physically able to do so

In relation to my current condition, I refuse:

*medical treatment generally;
or

*medical treatment, _____

_____
(specify particular kind of medical treatment)

I give the following instructions as to palliative care:

_____

_____

Dated: _____/_____/_____ Signed: _____
(Patient)

NOTICE OF CANCELLATION

(for completion where patient cancels the certificate under section 7 of the Medical Treatment Act 1988)

*I cancel this certificate

Dated: _____/_____/_____ Signed: _____
(Patient)

or

*The patient clearly expressed or indicated a decision to cancel this certificate on

Dated: _____/_____/_____ Signed: _____
(Person witnessing patient's decision)

* Delete whichever is not applicable

NOTE

"Medical treatment" means the carrying out of

1. an operation; or
2. the administration of a drug or other like substance; or
3. any other medical procedure –
   but does not include palliative care

"Palliative Care" includes

1. the provision of reasonable medical procedures for the relief of pain, suffering and discomfort; or
2. the reasonable provision of food and water

The refusal of palliative care is not covered by the *Medical Treatment Act 1988*

Additional information

Section 5E of the *Medical Treatment Act 1988* provides that a copy of this document and any cancellation of it must be:

- placed with the patient's record kept by the hospital or nursing home
- given to the chief executive officer of the hospital or nursing home
- given to the principal registrar of the Victorian Civil & Administrative Tribunal at 55 King Street, Melbourne 3000, within 7 days of completion or notification of cancellation

Source: Office of the Public Advocate, www.publicadvocate.vic.gov.au, June 2004

ADVANCE CARE PLANNING

For a person who does not have legal capacity to make medical decisions

Information Sheet and Documentation

People have the right to make decisions about their health care, now and for the future. Medical treatment should only be given with a person's fully informed consent and he or she has the right to refuse treatment. Advance care planning gives a person or his/her representative the opportunity to record, ahead of time, choices for treatment.

If a person has been assessed as not having the capacity to make decisions about his/her own medical care, then there is provision for an existing Medical Enduring Power of Attorney (MEPOA) or a 'person responsible' to make decisions on his or her behalf.

Advance care planning for a person who does not have legal capacity involves:

1. Identifying an existing Medical Enduring Power of Attorney (MEPOA), or a 'Person Responsible'
2. Discussing and making an Advance Care Plan
3. An existing MEPOA can complete a Refusal of Treatment Certificate

As a family, friend and/or carer you can be involved in this process by considering the person's wishes with the MEPOA or 'person responsible' and completing an Advance Care Plan on the person's behalf.

Before completing an Advance Care Plan for your family member, take time to read the following information carefully. It is important that you reflect on your family member's values and beliefs to ensure that the content of the Advance Care Plan reflects these.

Identifying an existing Medical Enduring Power of Attorney (MEPOA), or a 'Person Responsible'

An existing MEPOA

If your family member has previously appointed a MEPOA, this person will be the primary decision maker for medical treatments. See the Office of the Public Advocate Fact Sheet: *Enduring Power of Attorney (Medical Treatment).*

A copy of the Medical Enduring Power of Attorney form will become part of the Advance Care Plan. The role of the MEPOA (*'the agent'*) is to make medical treatment decisions on the nominee's behalf. If a time comes where the MEPOA wishes to refuse treatment on behalf of their family member they can do so by completing a Refusal of Treatment Certificate. The MEPOA may not refuse palliative care.

The 'Person Responsible'

If your family member has been assessed as not having the capacity to make their own decisions about their future medical care, by law they are unable to appoint a Medical Enduring Power of Attorney (MEPOA). For this reason the 'Person Responsible', (as outlined in the Office of the Public Advocate Fact Sheet: *The 'Person Responsible')*, will be consulted to make medical decisions for your family member. However, we encourage the advance care planning process to be done by the whole family with their family member's best interest in mind.

The 'Person Responsible' will be able to consent to treatment or withhold consent to treatment, but cannot refuse treatment on behalf of the family member, nor consent to withdrawal of treatment. If the Person Responsible feels that the proposed treatment would not be what the individual would want if they could make this decision themselves, the Person Responsible can present the case to Victorian Civil Administrative Tribunal (VCAT) to have a Guardian appointed. VCAT will generally respond to these requests within 24 hours. The 'Person Responsible' may not refuse palliative care.

Discussing and making an Advance Care Plan

The process of advance care planning requires you to:

- Understand your family member's current health condition and what medical decisions may need to be made in the future. If you are unclear of this you should arrange to meet with your family member's GP or other doctors.

- Reflect on your family member's values, beliefs and goals in life. It is important to plan your family member's future care in a way that you feel they would have wanted if they were able to make decisions for themselves.
- Discuss your family member's medical condition and their values, beliefs and goals with each other and finally…
- Formulate a plan. This plan can be documented on the 'Advance Care Plan for people who do not have legal capacity to make medical decisions'.

Advance Care Plan - for a person who does not have legal capacity to make medical decisions

This form enables you to record on behalf of your family member, choices about their future medical treatments. This is not a legal document, however if it is a record of what you believe your family member would want if they could express their wishes and it is in their best interest then it has evidentiary weight under common law. It is important to discuss this with family, friends and carers. The information in the attached *'Advance Care Plan – For a person who does not have legal capacity to make medical decisions'* is designed to assist family members, carers and medical care providers to make the most appropriate decisions for your relative.

Completing a Refusal of Treatment Certificate

The Medical Enduring Power of Attorney can refuse treatment on behalf of the family member by completing a Refusal of Treatment Certificate. See the Office of the Public Advocate Fact Sheet: *Refusal of Medical Treatment*.

In Victoria, a *Refusal of Treatment Certificate – Agent or Guardian of Incompetent Person* gives a legally binding advance directive about treatment for a current medical condition. This document records a person's wishes about the treatment he or she wishes to refuse for a current illness and doctors must comply with this. Refusal of Treatment certificates may be available from hospitals, nursing homes or your GP, or can be downloaded from the Office of the Public Advocate website www.publicadvocate.vic.gov.au.

How to change or revoke advance care planning documents

No one can change the Medical Enduring Power of Attorney document for your family member while your family member does not have legal capacity. You can change the Advance Care Plan for a person who does not have legal capacity to make medical decisions by destroying it or requesting that the Statement be destroyed. You can also change it by completing a new document. You can only revoke a Refusal of Treatment Certificate if you are the MEPOA. To revoke the Refusal of Treatment Certificate, it is advisable to also fill in the cancellation section of the existing certificate. The most recent dated document overrides the older document.

After completing the advance care planning documents

The original remains with the individual and copies can be given or sent to the:

- MEPOA (agent) and the alternate agent, if applicable
- Person's local doctor (GP)
- Person's family, friends or carers
- Organisation where the documents have been completed for inclusion in the medical records
- Hospitals/clinics normally attended by the person (with a covering explanatory letter)
- Other people you wish to be informed (eg. next of kin, minister, solicitor).

Place this page at front of patient record

Advance Care Plan

For a person who does not have legal capacity to make medical decisions

Affix identification label
if available

This Advance Care Plan is made on the _____ day of _____ 200__

for _____
(name of patient)

As his/her Agent (MEPOA), person responsible, and/or next-of-kin (NOK):

(name) _____ (relationship) _____
(name) _____ (relationship) _____
(name) _____ (relationship) _____
(name) _____ (relationship) _____

I/we understand that he/she has been assessed as not having legal capacity to make medical decisions independently.

In the event of deterioration in his/her health, I/we request that his/her health professionals take into account the requests recorded below.

1. Please contact

Name _____ Business hours ☐ All hours ☐

Ph _____ Relationship _____

Name _____ Business hours ☐ All hours ☐

Ph _____ Relationship _____

I/we ask that his/her *Agent, person responsible* or NOK include the following persons in health care decisions if there is time.

_____
_____
_____
_____

2. Request regarding life-prolonging treatments
(eg tube feedings, antibiotics, transfer to hospital, intravenous fluid, CPR ie heart lung resuscitation, respirator/ventilator)

(Initial the box that applies)

☐ Please provide any treatments required to sustain his/her life.

☐ I/we only want those treatments that can give him/her a chance of recovery to his/her previous or a reasonable state of health.

☐ If he/she reaches a point where it is reasonably certain that he/she will not recover the ability to interact meaningfully with hi/herself or other people, then I/we want only those treatments that provide him/her with comfort and dignity as part of a palliative care plan.

3. Specific requests with regard to medical care

_____
_____
_____
_____
_____

4. Other requests (personal, spiritual, special customs) as expressed by the patient

_____
_____
_____
_____
_____

5. Other requests (personal, spiritual, special customs) as expressed by his/her family

_____
_____
_____
_____
_____

I/we hereby declare that the information completed above is a true record.

Name _____ **Signature** _____ **Date** _____

Name _____ **Signature** _____ **Date** _____

Name _____ **Signature** _____ **Date** _____

Name _____ **Signature** _____ **Date** _____

Doctor's review of the plan

Doctor's name: _____

Doctor's signature: _____

Date: _____

THIS ADVANCE CARE PLAN IS VALID UNLESS STATED OTHERWISE BY THE SIGNATORIES.
A NEW ADVANCE CARE PLAN CAN BE DRAWN UP AT ANY TIME TO CATER FOR CHANGE IN REQUESTS.

Refusal Of Treatment Certificate - Agent Or Guardian Of Incompetent Person

Sections S3, 5B, **SCHEDULE 3,** *Medical Treatment Act 1988*

I _____
[name]

__ _____
[address]

certify that I am empowered to act in relation to decisions about medical treatment of _____("the patient")
[name of patient]

I have been appointed to act by

*an enduring power of attorney (medical treatment) issued under the Medical Treatment Act 1988, or
*an order of the Victorian Civil and Administrative Tribunal under the Guardianship and Administration Act 1986.

I certify that

1. the patient has attained the age of 18 years;
2. I have been informed about the nature of his/her current condition to an extent that would be reasonably sufficient to enable the patient, if he/she were competent, to make a decision about whether or not to refuse medical treatment generally or of a particular kind for that condition. I believe that the patient would request that no medical treatment, or no medical treatment of the particular kind mentioned below, be administered to him/her.

On behalf of the patient, in relation to his/her current condition, I refuse

* medical treatment generally;
or
*medical treatment, being _____

_____
[specify particular kind of treatment]

Dated: _____/_____/_____ Signed: _____
(Agent/Guardian for)

_____ *[Name of Patient]*

*Delete whichever is not applicable

Verification

We each certify as follows:

1. I am satisfied that _____
[name of agent or guardian]

has been informed about the nature of the patient's current condition to an extent that could be reasonably sufficient to enable the patient, if he/she were competent, to make a decision about whether or not to refuse medical treatment generally or of a particular kind for that condition, and that the agent/guardian understands that information;

2. I was not a witness to the enduring power of attorney (medical treatment) under which _____ was appointed
[name of agent]

Dated: _____/_____/_____ Signed: _____
[Medical Practitioner]

Signed: _____
[Another Person]

Patient's current condition

The patient's current condition is

_____

_____

[describe condition]

The patient is incompetent.

Dated: _____/_____/_____ Signed: _____

[To be signed by the same medical practitioner]

NOTICE OF CANCELLATION
(for completion where patient, agent or guardian cancels the certificate under section 7 of the Medical Treatment Act 1988)

*I cancel this certificate Dated: _____/_____/_____ Signed: _____

[Patient, agent or guardian]

or

*The patient, agent or guardian clearly expressed or indicated a decision to cancel this certificate

on: *[Date]* : _____/_____/_____ Signed: _____

[Person witnessing patient's, agent's or guardian's decision]

*Delete whichever is not applicable

NOTES

1. "Medical treatment" means the carrying out of –
   a. an operation; or
   b. the administration of a drug or other like substance; or
   c. any other medical procedure –
   but does not include palliative care.

   "Palliative care" includes –
   a. the provision of reasonable medical procedures for the relief of pain, suffering and discomfort; or
   b. the reasonable provision of food or water.

   The refusal of palliative care is not covered by the *Medical Treatment Act 1988.*

2. An alternate agent can only make a decision about a patient's medical treatment if the alternate agent first produces to each medical practitioner who is to verify this certificate a statutory declaration that meets the requirements of section 5AA(1) of the *Medical Treatment Act 1988.*

3. If this certificate is to be completed by an alternate agent, a medical practitioner must refuse to verify this certificate if the alternate agent does not produce to him or her a statutory declaration that meets the requirements of section 5AA(1) of the *Medical Treatment Act 1988* or if the medical practitioner reasonably believes that the original agent can be contacted and is not incompetent.

4. A medical practitioner who has doubts about the circumstances of the issue of this certificate, whether the medical practitioner must refuse to verify it, the competency of the patient or the competency, good faith or motives of the agent or guardian in giving a direction about medical treatment under this certificate is advised to request the Victorian Civil and Administrative Tribunal to review the case.

Source: Office of the Public Advocate, www.publicadvocate.vic.gov.au, June 2004

GP Quick Reference Card: Steps to Advance Care Planning

GP steps to advance care planning

Step 1. Incorporate advance care planning as part of routine care

If initiating:

- Offer/initiate advance care planning when doing a comprehensive medical assessment or medical care plan
- Reassure the patient that advance care planning is part of routine care
- Explain the rationale and steps for advance care planning
- Suggest that the family/agent be involved in future consultations about the patient's wishes

Step 2. Assess capacity of patient

- To appoint a Medical Enduring Power of Attorney (MEPOA)
- To complete an Advance Care Plan

Step 3a: Where patient has legal capacity - witness the MEPOA form

Check and witness that the:

- Patient has legal capacity
- Agent/s is/are appropriate and agree
- Form has been completed correctly

Or

Step 3b: Where patient does not have legal capacity to appoint a MEPOA - identify the 'Person Responsible'

- Refer to Fact Sheet: *The 'Person Responsible',* Office of the Public Advocate, Victoria

Step 4. Support discussion and Advance Care Plan

- Discuss patient wishes with patient, family/agent/'person responsible', and ACH staff
- Provide information on medical conditions, benefits and burdens of treatment
- Review *Advance Care Plan* or
- *Advance Care Plan – for person who does not have legal capacity to make medical decisions*

Step 5. Complete Refusal of Treatment Certificate (RTC) where appropriate

- *'RTC - Competent Person'* or
- *'RTC - Agent or Guardian of Incompetent Person'* with the MEPOA or guardian

Step 6. Review the Advance Care Plan

- Review 6 monthly or when health status changes significantly
- Can be change or revoked at any time

The Advance Care Plan only comes into use when the person is no longer able to communicate his/her wishes.

Using an Advance Care Plan

Step 1. Document and communicate Advance Care Plan

Step 2. Incorporate Advance Care Plan into medical care plans eg NFR document

Step 3. Consult Advance Care Plan and patient/agent/person responsible when major clinical decisions need to be made

Step 4. Review plan after a significant change in patient's condition

Assessing a patient's legal capacity

Capacity to appoint a Medical Enduring Power of Attorney

Generally:

- If a patient understands the nature and effect of a MEPOA, the individual has the capacity to give a MEPOA to another person (called an *agent*).
- This power will enable the agent to make future medical decisions on behalf of the patient if he/she becomes incapable of making decisions for him/herself.
- The patient needs to have the ability to understand and communicate the main consequences of a decision, to take responsibility for making choices and to make choices based on the significant risks and benefits.

Understanding the nature and effect of a MEPOA includes understanding (and stating):

(a) The powers of the agent

(b) That the power will operate if the patient loses the ability to make medical treatment decisions

(c) That once the power is exercisable, the MEPOA has the ability to consent to treatments but also refuse treatments being offered on the patient's behalf

(d) That the patient may revoke the MEPOA at any time while the patient is still capable of making an MEPOA

(e) Once the patient loses capacity he/she will not be able to supervise the use of the powers.

Note: The nature and effect of a MEPOA can be explained to the patient using the *Medical Enduring Power of Attorney Fact Sheet* from the Office of the Public Advocate.

Capacity to make an Advance Care Plan

When assessing an individual's capacity to make an Advance Care Plan the GP should also consider if the individual understands the following:

- The general nature, consequences, broad benefits and burdens of what is being discussed
- That he/she is able to take responsibility for making a choice
- That he/she is able to make decisions in the context of his/her current medical condition.

To assist in this assessment the GP may ask the patient questions to ensure he/she understands that:

- Advance care planning includes future choices
- The Advance Care Plan is only used when he/she is incapable of making decisions for him/herself
- Advance care planning includes selection of a MEPOA &/or specific health care preferences
- His/her requests can be changed at any time

Advance Care Planning
Brief Discussion Guide

Discussion leading to an Advance Care Plan may need to occur over a number of visits. Some people may prefer to give their wishes verbally rather than complete a document.

Discuss with all patients	Adult with incurable progressive illness
• Introducing advance care planning • Current health • Assessing decision-making capacity • Experience of end-of-life decision-making • Selecting an agent • Goals & Values • Religious, spiritual or cultural issues	As with all adults plus **Current health** Assess patient's desire for further information. Clarify patient's understanding of their health, illness, symptoms and treatment/care. **Goals** These are in relation to benefits and burdens of particular life-sustaining treatments Eg, *I know that many patients have concerns about some medical treatments if things got worse. Are there any issues or concerns you want to talk about with me?* Give scenarios of treatment decisions likely to be made as their illness progresses Eg, *You know your lungs are getting worse. We're going to try to help you, but it would be helpful to know what you would want if things suddenly got worse, say for example your breathing and heart stopped. I ask because I know that often patients think about these things, but I can never predict what any patient is thinking unless I ask. I know this may be difficult for you to think about and discuss, but if an emergency arises, I want to make sure we do what you would want us to do.* *If you could describe how health professionals could best help you, what would you hope for?* **Comfort care** *What does 'comfort' mean to you?*

Adults with capacity in aged care facilities and adult expected to die within the next 12 months

As with all patients and adult with incurable progressive illness plus advance conversation to:

Living well
These questions enable the patient to focus on living rather than dying.
What would help you live well at this point in your life?
What makes you happy?
Are there any special events/activities you are looking forward to?
How might medical treatment help or hinder you in accomplishing these goals?

Make decisions about CPR, nutritional support etc if relevant and not already made.
Review options for comfort care and life closure

Assessing decision-making capacity
In order to appoint a Medical Enduring Power of Attorney (MEPOA), the patient will need to have legal capacity. Patients may be capable of making some decisions and not others, eg able to indicate their wishes, but experiencing early dementia and have lost capacity to appoint a MEPOA.

Introducing advance care planning
Ask if the patient has thought about their choices of medical treatment in the future.
Reassure that the discussion is part of routine care and not an indication of a health problem that has not yet been discussed with them.
Eg, *I try to have this conversation with all my patients when they have time to get more information, talk with family and friends, ask questions and make better decisions. Too often we ask these questions when people are very sick or have come into hospital for some emergency care, and we find these are simply not the right times for these kinds of important issues.*

Experience of end-of-life decision-making
Have you had any experiences with a family member or friend who was faced with a decision about medical care near the end of life?
What was positive about that experience? What do you wish had happened differently?

Selecting an agent - Medical Enduring Power of Attorney (MEPOA)
Who would make decisions for you if you could not make them?
Have you heard of a Medical Enduring Power of Attorney? Do you already have one?
Clarify difference between Financial Power of Attorney and MEPOA.
If the patient already has one, ask for a copy for your records – check that it has been completed correctly and is valid.
Important things to consider for appointing a MEPOA:
- *Do they want to have this responsibility?*
- *Would they be available?*
- *Can you trust them to follow your instructions and values if you have explained it to them, even if they don't agree?*
- *Would they be able to make difficult decisions in stressful situations?*

Explain that they can have one agent and an alternate agent, if that person is unavailable. *You can also instruct your agents and your family to discuss decisions together if time permits.*
Recommend that they discuss their wishes with the agent so that the agent understands what they want.
Invite the patient to bring the agent and others they wish to involve to the next consultation..

Making decisions
How would you like decisions to be made if you could not make them?
Some people prefer to tell their agents and family/loved ones what is important to them generally, then have their doctor and agent discuss this and make the specific decisions at the time it is needed. Others prefer to decide now what should happen and ask their agents to communicate this for them if the time comes.
What do you think you would prefer?

Goals and values
What kinds of things are so important to you that, if a health problem prevented you from doing them any more, life would have little meaning?
Give a scenario relevant to the person's current health situation that could elicit the following:
What would their goals for medical care be if they permanently lost the ability to know who they are, where they are and whom they are with?
If it is clear they will have little or no recovery? And the injury or loss of function is significant?
Eg, healthy person – an accident leaving them in a permanently vegetative state.

Religious, spiritual or cultural issues
Who or what sustains you when you face serious challenges in life?
Is there someone you would like to speak with to help you think about these issues? Eg minister, priest, rabbi, spiritual advisor

Other points to cover
Patients can change the Advance Care Plan whenever they want.
The Advance Care Plan is theirs: they should make sure copies go to relevant people, including their GP and agent and have their plan in an accessible place at home, just in case they need it suddenly. They should tell others where the plan is.

Enduring Power of Attorney (Medical Treatment)

Planning ahead for future medical treatment decisions

An enduring power of attorney (medical treatment) is a legal document where you (the donor) appoint someone (the agent) to make medical treatment decisions for you – like agreeing to medication or surgery. *Enduring* means it continues (endures) when you are unable to make these types of decisions for yourself.

How does it work?

- You complete, sign and have witnessed an enduring power of attorney (medical treatment) form – giving power of attorney to someone you choose.
- Their power begins when you are unable to make decisions.
- Your agent's decisions have the same legal force as if you had made them yourself.

Why would I give someone this power?

We recommend everyone have an enduring power of attorney (medical treatment). It is the only way you can have control over who will make decisions on your behalf if you are ever unable to do so yourself. You could lose the capacity to make decisions permanently, such as through dementia or an acquired brain injury from a car accident, or temporarily, by becoming unconscious as a result of an illness.

What type of decisions can an agent make?

An agent can agree to or refuse medical treatment. They can only refuse medical treatment if

- the treatment would cause you unreasonable distress, or
- the agent reasonably believes that you would consider the treatment unwarranted.

An agent's decision takes precedence over those of an enduring guardian you may have appointed who has healthcare powers.

An enduring power of attorney (medical treatment) cannot be used to make financial, legal or guardianship decisions. For further information about these powers see our fact sheets, *enduring power of attorney (financial)* and *enduring power of guardianship*, or *Take Control (see below)*.

Are there medical decisions that my agent cannot agree to?

An agent cannot agree (consent) to the following medical procedures:

- those likely to lead to infertility
- your involvement in medical research
- termination of a pregnancy
- removal of tissue for transplant.

Before any of these procedures can be carried out, the agent **must** apply to the Guardianship List of the Victorian Civil and Administrative Tribunal (the Tribunal) for a decision.

Note: The agent cannot refuse medical treatment to alleviate pain or suffering when a person is dying (palliative care). See Refusal of medical treatment fact sheet.

Who can appoint an agent?

You can appoint an agent if you are over 18 years of age and have the capacity to make the appointment.

What is capacity?

To have capacity is to know what you are doing, to understand the consequences of your actions and to make choices based on your knowledge and understanding. The test for capacity to make an enduring power of attorney (medical treatment) is that you understand:

- The powers of the agent
- That the power will operate if you lose the ability to make medical treatment decisions
- That you can revoke these powers whilst you have capacity
- Once you lose capacity you will not be able to supervise the use of the powers.

If you do not have sufficient capacity, the 'person responsible' (usually a close family member or unpaid carer) or a guardian appointed by the Guardianship List of the Victorian Civil and Administrative Tribunal (the Tribunal) can consent to medical treatment decisions for you. See medical/dental treatment for patients who cannot consent and guardianship fact sheets.

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TTY 9603 9501 DX 210293
Email: publicadvocate@justice.vic.gov.au
www.publicadvocate.vic.gov.au

The Victorian Civil and Administrative Tribunal, Guardianship List
55 King Street Melbourne Victoria 3000
Tel: (03) 9628 9911 Fax: (03) 9628 9932
Toll Free: 1800 133 055
www.vcat.vic.gov.au

Choosing your agent

An agent must be over 18 years of age and have the capacity to be your agent. You can appoint any person you choose, as long as they agree to take on the role. They should be someone that you trust to respect and carry out your wishes. You can also choose to appoint a second person (an alternate agent). They can only make decisions on your behalf when the agent is unable to.

Responsibilities of the agent

The agent must:

- act in your best interests
- wherever possible, make the same decision that you would have made

  avoid situations where there is a conflict of interest.

To help the agent understand your views about possible medical procedures (e.g. the use of a life support system), we suggest you discuss this with them and write down your wishes.

When the donor dies, the enduring power of attorney (medical treatment) ends.

How do I make an enduring power of attorney (medical treatment)?

An enduring power of attorney (medical treatment) is easy to make. It does not have to be prepared by a lawyer. Forms are available from most newsagents and legal stationers, and can be downloaded from our website.

Witnesses to the signing of the form have to be assured that you, as donor, know what you are doing (have capacity) in making the power of attorney. There are restrictions upon who can be a witness.

If there is any question about your capacity, an independent medical assessment should be obtained. It would be wise to seek legal advice.

To help you, the Office of the Public Advocate has produced a do-it-yourself kit called *Take Control – A Guide to Powers of Attorney and Guardianship*.

What if I change my mind?

You can cancel (revoke) the appointment at any time as long as you understand the nature and effect of revoking the power. You can revoke the power by telling the agent that their power is withdrawn or by destroying the enduring power of attorney document and any copies. We recommend that you also complete a *Revocation of Enduring Power of Attorney* form and give a copy to your agent. *See Take Control*. If you appoint a new agent, any earlier appointment is automatically revoked, but you should still notify the first agent that their power has been revoked.

Safeguards

You do not have to register or send the form anywhere. You should keep the original form in a safe place and keep a certified copy for everyday use.

If an agent is not acting in your best interests the Tribunal can revoke or suspend the enduring power of attorney. Anyone who has a genuine interest in the your welfare can ask the Tribunal to consider the actions of the agent. The Tribunal operates a 24-hour emergency service and can appoint a guardian to make medical

treatment decisions if the power of attorney is revoked. Contact the Office of the Public Advocate for advice and further information.

Advice for agents

If the agent is unsure what to do in a particular situation, they can contact the Office of the Public Advocate's advice service or the Tribunal for assistance.

OPA FSEPM1 March 2004

The Office of the Public Advocate is an independent statutory office, working to promote the interests, rights and dignity of Victorians with a disability. It provides assistance with advocacy, guardianship, powers of attorney (including enduring guardianship) and consent to medical and dental treatment.

The Office of the Public Advocate manages two voluntary programs, the Community Visitors Program and the Independent Third Persons Program. The Community Visitors monitor the quality of disability services in order to safeguard the rights of vulnerable people.
The Independent Third Person program provides support for people with a cognitive impairment who have contact with the police.

For more information visit
www.publicadvocate.vic.gov.au
or call our advice service 9603 9500
or toll free 1800 136 829

FACT SHEET

The 'Person Responsible'

OFFICE OF THE
PUBLIC ADVOCATE

The *Guardianship and Administration Act 1986* allows for a 'person responsible' to make 'medical or dental treatment' decisions for a 'patient'. A 'patient' is a person with a disability who is over 18 years of age and is incapable of giving consent to the proposed treatment.

Who is the person responsible?

The person responsible is the first person, in descending order, on the following list who is reasonably available, and is willing and able to make a medical or dental treatment decision on behalf of the patient:

- A person who is the patient's medical enduring power of attorney appointed under the *Medical Treatment Act 1988*;
- A person appointed by the *Victorian Civil and Administrative Tribunal* (VCAT) to make decisions about the proposed treatment;
- A person appointed by the VCAT to act as a guardian who has the power to make decisions about the proposed treatment;
- A person appointed by the patient (before the patient became incapable of giving consent) as an enduring guardian with power to make decisions about the proposed treatment;
- A person appointed in writing by the patient to make decisions about medical or dental treatment which includes the proposed treatment;
- The patient's spouse or domestic partner;
- The patient's primary carer, including carers in receipt of a Centrelink Carer Payment but excluding paid carers or service providers;
- The patient's nearest relative over the age of 18, which means (in order of preference):
  – son or daughter
  – father or mother
  – brother or sister (including adopted persons and 'step' relationships)
  – grandfather or grandmother
  – grandson or granddaughter
  – uncle or aunt
  – nephew or niece.

Where a person is likely, within a reasonable time, to have capacity to consent to the treatment, they can object to a particular relative being the person responsible for providing consent. The next person on the list will then be responsible.

When can a person responsible make decisions?

A person responsible can give consent when the patient is unable to give consent because they cannot understand the nature or effect of the proposed treatment, or cannot indicate their consent.

Medical treatment includes a medical or surgical procedure, operation or examination and any prophylactic, palliative or rehabilitative care normally carried out by, or under the supervision of, a registered practitioner. Dental treatment includes any dental procedure, operation or examination normally carried out by, or under the supervision of, a registered dental practitioner.

A person responsible cannot make some decisions. These include special procedures (e.g. a procedure which is likely to lead to infertility), some minor treatments (e.g. first aid), or the giving of prescribed drugs. The person responsible cannot consent to the withdrawal of treatment. Emergency treatment does not require the consent of a person responsible.

Where the patient is likely to be able to consent to the proposed treatment within a reasonable time (for example, they are temporarily unconscious as a result of an accident) some special rules apply. The most important of these is to respect the known wishes of the patient (see over).

Please turn over

FURTHER INFORMATION

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www.vcat.vic.gov.au

OFFP 21651 *December 2002*

What process should be used by the person responsible to reach a decision?

The person responsible must act in the best interests of the patient. This requires substitute decision-making which is both sensitive and informed and which takes account of a range of materials and views from different sources.

The wishes of the patient must be considered. While these may not be known, efforts must be made to ascertain these wishes as far as possible. Does the patient see, or would the patient see, benefits in the proposed treatment? What are these benefits? Where a person is likely within a reasonable time to be able to consent to treatment, the person responsible cannot act against their known wishes. If the person responsible believes that it would be wrong to follow the known wishes, they must go to VCAT to get permission for the treatment to proceed.

The wishes of the patient's family should also be taken into account. These wishes will not determine the decision that is to be made but will contribute to the decision-making process. Note that a 'domestic partner' is now included in the definition of a person's nearest relative. A patient who is likely, within a reasonable time, to consent to treatment, may object to a particular relative's wishes being taken into account.

The person responsible must turn their mind to the consequences for the patient if the treatment does not proceed. Will the patient experience increased pain or become more limited in terms of personal ability or the tasks they can undertake? Will there be any impact on the patient's lifespan?

Significant risks should also be identified and considered. What is the nature and extent of these risks? These risks would include those to which any person is exposed in a procedure, e.g. the risks associated with having an anaesthetic. There may also be particular risks that arise for a person as a consequence of their disability or because of their other medical conditions.

Consideration should be given to any alternative treatment which may be available and the risks of such treatment as far as they are known.

Finally, the person responsible should ask why the treatment is proposed. Is it solely to promote the health and well-being of the person with a disability or are there other influences, e.g. those related to cultural or spiritual beliefs and practices?

What is required of the registered practitioner?

The ability of the person responsible to make a decision in the best interests of the patient relies heavily on the quality of the information provided by the registered practitioner.

This information should be comprehensive and accessible, using plain language that the person responsible indicates they understand. Risks and alternatives involved in the procedure should be discussed in detail. It is important that sufficient time is made available by the practitioner for this process, to ensure informed decision-making.

Where a practitioner knows of the wishes of a patient who is likely, within a reasonable time, to be able to consent to treatment, they should inform the person responsible. The person responsible cannot consent to treatment against the known wishes of this type of patient. If the treatment is to proceed, an application must be made to VCAT.

If you have any questions please contact the Office of the Public Advocate.

Office of the Public Advocate

Refusal of Medical Treatment

You, or someone appointed to represent you, can refuse medical treatment for a current medical condition by signing a ***Refusal of Treatment Certificate*** (the "Certificate").

However, neither you, nor someone appointed to represent you, can use the Certificate to refuse palliative care: that is, reasonable pain relief, or food and water whilst you are still able to eat and drink.

1. Signing as a competent person

You can sign a Certificate if you are over 18 years of age and have the capacity to understand the decision you are making.

How does it work?

- You sign and have witnessed a Refusal of Treatment Certificate: Competent Person form.
- You specify the type of treatment you wish to refuse.
- Your treating doctor can only provide treatment according to the terms of the Certificate.

Requirements to sign

To sign you must:

- Have been given sufficient information about your condition
- Understand this information
- Understand what you are doing by signing the Certificate
- Make the decision voluntarily (advice can be given, but you must not be coerced).

A doctor and one other person must witness the signing and be satisfied that these requirements have been met.

2. Signing the Certificate as your agent or guardian

Someone appointed to represent you can refuse medical treatment on your behalf. This can be your:

- Agent, appointed by you under an enduring power of attorney (medical treatment), or
- Guardian, appointed by the Guardianship List of the Victorian Civil and Administrative Tribunal (the Tribunal).

How does it work?

- The agent or guardian signs and has witnessed a Refusal of Treatment Certificate: agent or guardian of incompetent person form.
- They specify the type of treatment they wish to refuse.
- The treating doctor can only provide treatment according to the terms of the Certificate.

Requirements to sign

To sign, an agent or guardian must:

- Have been given sufficient information about your condition
- Understand this information
- Understand what they are doing in signing the Certificate
- Make the decision voluntarily (advice can be given, but they must not be coerced),
- be convinced that either –
- The medical treatment would cause you unreasonable distress, or
- There are reasonable grounds for believing you would, after serious consideration, have considered the treatment unwarranted.

Where to get Refusal of Treatment Certificates

Certificates are usually available from Medical Directors or Chief Executives of hospitals and nursing homes.

They can also be downloaded from the Office of the Public Advocate website (see below) or from the Victorian Hospitals Association (03) 9696 2799.

Registration of Refusal of Treatment Certificates

Most Certificates will be signed in hospitals or other institutions, but you can sign them at home.

The doctor who witnesses the Certificate, or the manager of the hospital or institution, must give a copy of the Certificate to the Tribunal within seven days.

OFFICE OF THE PUBLIC ADVOCATE
AN INDEPENDENT STATUTORY OFFICE
ACCOUNTABLE TO THE VICTORIAN PARLIAMENT

Office of the Public Advocate
5 Floor, 436 Lonsdale Street
Melbourne Victoria 3000
Tel: (03) 9603 9500 Fax: (03) 9603 9501
TTY 9603 9501 DX 210293
Email: publicadvocate@justice.vic.gov.au
www.publicadvocate.vic.gov.au

The Victorian Civil and Administrative Tribunal, Guardianship List
55 King Street Melbourne Victoria 3000
Tel: (03) 9628 9911 Fax: (03) 9628 9932
Toll Free: 1800 133 055
www.vcat.vic.gov.au

Can I change my mind?

If you are competent, the Certificate can easily be cancelled at any time by signing a *Notice of Cancellation* form.

Safeguards

Anyone who has a genuine interest in your welfare can ask the Tribunal to consider the actions of the agent or guardian. The Tribunal can suspend or cancel an enduring power of attorney (medical treatment) or a guardianship order if an agent or guardian is not acting in your best interests.

If this happens, then any Certificate signed by the agent or guardian is also cancelled. The Tribunal will send a written notice confirming this to the hospital or your home. If you are not at home, the Tribunal will also notify your treating doctor.

Any beneficiary of your will or estate, who uses undue influence or acts deceptively to obtain a Certificate, will lose their entitlements under your will.

A Certificate cannot be used to aid and abet you to commit suicide. This would be an offence under the Crimes Act 1958 and could result in imprisonment.

Contact the Office of the Public Advocate for advice and further information.

Medical Practitioners

It is illegal for medical practitioners to continue to treat you if they know that there is a valid Certificate in force.

A medical practitioner who, in good faith, refuses to provide treatment in accordance with a Certificate is protected from legal action.

OPA FSRMT1 March 2004

For more information visit
www.publicadvocate.vic.gov.au
or call our advice service **9603 9500**
or toll free **1800 136 829**

Clinical Information Sheet

Diabetes

Management of hypoglycaemia, hyperglycaemia, and sick days

The attached clinical information sheet has been developed to assist ACH staff to work in partnership with GPs for the management of hypoglycaemia, hyperglycaemia and sick days for residents with diabetes.

Key issues for GPs include:

- Using comprehensive medical assessment and care planning for diabetes management and review
- Planning blood glucose monitoring
- Prescribing p.r.n. medication and instructions for hypoglycaemia and hyperglycaemia
- Planning sick day care for residents with IDDM and NIDDM.

We will revise this pilot Aged Care Home Clinical Information Sheet in September 2004.
A GP version will also be produced based on GP comments on this document.

Please give feedback to Dr Denise Ruth or Rita Wong on 03 8345 5600 or email admin@nwmdgp.org.au.

Updates and other resources will be made available on www.nwmdgp.org.au.

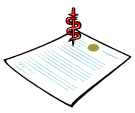
Aged Care Home After Hours Kit

Clinical Information Sheet

Diabetes
Management of hypoglycaemia, hyperglycaemia, and sick days

This clinical information sheet has been developed to assist ACH staff with the management of hypoglycaemia, hyperglycemia and sick days for residents with diabetes.

The clinical information sheet will cover:
- Monitoring blood glucose levels (BGLs)
- Managing hypoglycaemia
- Managing hyperglycaemia
- Sick day care for residents with IDDM and NIDDM
- Food choices for sick days
- Other considerations for management of diabetes



✦ Flow chart for management of hypoglycemia

This clinical information sheet should be used with consideration to
- the resident's preferences, existing medical care plans, and advance care plan;
- the health professional's knowledge, preferences and professional experience;
- policies and resources available within the ACH.

Pilot document developed: June 2004 To be reviewed: September 2004

1. Introduction

Background

This clinical information sheet is adapted from three primary sources published by the Australian Diabetes Educators Association, the Canadian Diabetes Association and the UK National Health Service. The information sheet has been developed with consideration to legislation and any requirements of or recommendations from professional registration groups or regulating bodies (eg. NBV, RCNA, ANF) overseeing the aged care industry in Victoria, Australia. It was developed using the process outlined in the *Aged Care Home After Hours Kit, Section 6: Clinical Information Sheets,* and a corresponding clinical information sheet has been produced for GPs who work with ACHs.

Diabetes is the most common chronic health problem in elderly Australians, with 23% of adults aged over 75 diagnosed (80-90% of these cases are diabetes mellitus type 2).

Purpose

This clinical information sheet has been developed to assist in the management of diabetes, and to encourage an active partnership between the resident's GP and the ACH staff in managing the resident's care needs and planning for unexpected diabetic events.

The purpose of this clinical information sheet is to:

- Promote a positive health outcome for the resident
- Provide guidance to ACH staff members for working with GPs in preventing and managing diabetic emergencies, especially after hours
- Provide guidance to ACH staff in managing a sick diabetic resident
- Prevent unnecessary hospital admission
- Promote hospital admission when this is in the best interests of the resident

Responsibilities

The clinical information sheet applies to all ACH staff and medical practitioners. The resident's GP and ACH staff are responsible for working together with the resident and his or her representative to develop and use a plan for regular and emergency care for residents who have been diagnosed with diabetes.

The resident's GP is responsible for prescribing treatment for hypo and hyperglycemia as when-necessary orders (p.r.n) for residents with known diabetes. The Patient Summary & Care Plan and/or p.r.n medication order should include a statement of the frequency and timing of BGL monitoring; BGL readings that require treatment; the treatment that should be administered and who to contact for review. The resident's GP should provide a written plan of care to be implemented should the diabetic resident become unwell due to another cause, including change in frequency of BGL readings and any alterations to regular medication orders.

Registered Nurses Div II and PCWs are responsible for monitoring blood glucose levels, initiating treatment and providing care within their scope of practice under the direction of and reporting to a Registered Nurse Div I or medical practitioner, or in accordance to the ACH's policies. In-service training sessions can be arranged to familiarise health professionals with the procedure.

Residents who choose to monitor their own BGLs and manage their medications should be assessed as safe to do so. The resident has a responsibility to report his or her signs and symptoms, any emergency medication that has been self-administered and BGL results to ACH staff members and to request assistance when appropriate.

2. Monitoring Blood Glucose Levels

Purpose of Blood Glucose Monitoring

Blood glucose measures are done routinely to assess diabetes control, hypoglycemia and hyperglycemia.

The incidence rate of hypoglycaemic signs and symptoms has been reported as 52% in elderly diabetics using insulin and approximately 1% in adults aged over 75 on oral hypoglycemic medication for non-insulin dependent diabetic (NIDDM; type 2) [1].

Elderly adults who experience severe hyperglycaemic complications are more likely to be living in a nursing home and have a concurrent diagnosis of dementia [1]. At times diabetic residents can become sick from causes other than their diabetes (e.g. gastroenteritis, influenza, urinary tract infection). Acute illness or infection may lead to diabetic complications, most specifically an increase in blood glucose levels, requiring increased diabetic medication. Developing a care plan for monitoring BGL and the management of diabetes when the resident is unwell decreases the risk of development of symptomatic hyperglycaemia [7].

In elderly residents with multiple medical diagnoses, high level of functional dependency and a limited life expectancy, the diabetes management goal should be to avoid symptomatic hyperglycemia and prevent hypoglycemia [2, 3]. Special considerations when monitoring blood glucose levels for elderly people are: [1, 3]

- Older adults with diabetes are at an increased risk of developing hypoglycaemia, and are also more susceptible to hypoglycemic unawareness concealing early signs and symptoms of hypoglycaemia development.
- Hyperglycaemia symptoms in older adults with diabetes may present without excessive thirst and/or urination, be masked by other conditions such as urinary incontinence, or be mistakenly attributed to normal ageing [1].

The resident's GP should indicate in the resident's diabetes care plan the frequency and timing of BGL testing. If a diabetic resident displays any of the signs and symptoms for either hyperglycaemia or hypoglycaemia a BGL test should be performed. Symptoms are discussed in the following sections. It is also appropriate to check the BGL of a resident who has not been diagnosed with diabetes but who displays these signs and symptoms with no other obvious cause.

Equipment for BGL monitoring

The following equipment is required:

- blood glucose monitoring system (including test strips, lancet device)
- cotton Wool ball/tissue
- non-sterile gloves
- sharps container
- blood glucose monitoring chart

There is a wide range of blood glucose monitoring systems on the market and each model has its own specific method of operation. Before using a particular blood glucose monitoring system for the first time read the instruction manual and become familiar with its operation. Mistakes can occur in blood glucose readings due to instrument or user error [4, 5]. For most blood glucose monitoring system models follow these recommendations:

- check the expiry date on the test strip packet;
- ensure that the blood glucose monitoring system is calibrated to the test strip batch by following the instruction manual;
- avoid touching the reactive part of the test strip or blood glucose monitoring system sensor;
- clean the blood glucose monitoring system regularly according to manufacturer's instructions; and
- repeat BGL testing if an error is suspected [5].

Procedure for taking a BGL[5, 6]

1. Explain the procedure, answer questions and prepare the resident.

2. Wash the resident's hands with warm water and soap. Presence of sugar, lotions and creams on fingers can alter the results. Warm water stimulates blood flow to the fingers.
3. Wash your hands. Set-up and check the equipment. Put on non-sterile disposable gloves.

4. Assess the resident's fingers to select a finger-prick site. Avoid the thumb and forefinger if possible, and select a site without many previous prick wounds.

5 Massage the finger from palm to fingertip in a gentle 'milking' action to promote blood flow to

fingertip.

6. Prick the finger lateral to the nail and repeat milking action only if there is insufficient blood.

7. Place drop of blood on the reagent strip.

8. Follow operation guidelines on the blood glucose monitoring system used in the facility. There is a large variety of blood glucose monitoring system, each with specific instructions.

9. Place cotton ball or tissue on puncture site and ensure resident is comfortable.

10. Dispose of needle in appropriate sharps disposal container. Dispose of test strip in appropriate infectious waste bin.
11. Read and record the blood glucose level from the blood glucose monitoring system.

12. Report results and/or initiate treatment as required.

Sources of Blood Glucose Monitoring Errors

Errors can occur in blood glucose monitoring. The most common sources of error include:

- technique (e.g. not washing the resident's hands);
- incorrect storage or handling of the test strips; or
- equipment problems (e.g. machine not calibrated to test strip batch).

BGL monitoring should only be performed by qualified health professionals who have been trained in the use of blood glucose monitoring equipment. The instructions for the specific blood glucose monitoring system in use in the ACH should be followed carefully. A daily quality control test should be performed according to the instructions for the specific blood glucose monitoring system in use [7].

3. Managing Hypoglycaemia

What is hypoglycaemia? [1, 3, 7]

Hypoglycaemia is an acute complication of diabetes that occurs when an individual's plasma glucose concentration falls to a level where the body does not function normally. Hypoglycaemia is diagnosed when an individual:

- develops signs and symptoms of lowered plasma glucose levels;
- has a low blood glucose level; or
- has symptoms that respond to administration of carbohydrates.

Hypoglycaemia can occur due to:

- excessive medication and/or poor medication management and administration;
- insufficient intake of carbohydrates (e.g. missing or postponing meals);
- increased physical activity without appropriate carbohydrate intake; and
- alcohol use.

Hypoglycemia can range from mild (symptoms are present but respond promptly to treatment) to severe (unconsciousness). Long term complications from hypoglycaemia include cognitive impairment, fitting and coma.

Signs and symptoms of hypoglycaemia [3, 7]

Consider hypoglycaemia if an individual is displaying these signs and/or symptoms:

- sweating
- dizziness
- trembling
- pallor
- hunger
- blurred vision or vision changes
- difficulty concentrating
- confusion
- tiredness/drowsiness
- slurred speech or difficulty speaking

- anxiety
- tingling (especially hands, feet or tongue)
- unconsciousness
- blood glucose level ≤ 4mmol/L #

The recommended clinical cutoff for diagnosis of hypoglycemia is a blood glucose level of 4mmol/L or less, however blood glucose level at which signs and symptoms of hypoglycaemia develop is different between individuals [3, 7].

Special considerations for elderly individuals [1, 3]
Older adults with diabetes are at an increased risk of developing hypoglycaemia. Older adults can experience an age-related reduction in glucose regulation in the body that can increase the risk of developing hypoglycaemia. Older adults are also more susceptible to hypoglycemic unawareness, which is said to occur when the diabetic individual has no early signs and symptoms of hypoglycaemia development.

Guideline for Treatment of Hypoglycemia [3, 7]

For quick reference, these steps have been summarised in Appendix I.

1. Check the resident's care plan and medication chart to determine if there is a standing order for action to be taken in the event of a low BGL. If the GP has outlined a clinically appropriate plan for the management of the resident's hypoglycaemia then implement this course of action.

2. Implement these guidelines when the resident's blood glucose level is ≤ 4mmol/L and there is no documented appropriate management strategy in the resident's care plan.

3. Mild and Moderate Hypoglycaemia (symptoms present but able to administer treatment):

   a) Administer 15g of carbohydrate, preferably in the form of glucose or sucrose tablets.

   b) Re-test blood glucose level after 15mins

   c) If blood glucose level remains ≤ 4mmol/L administer a further 15g of glucose.

4. Severe Hypoglycaemia (resident is unconscious and unable to tolerate oral glucose):

   a) If there is no PRN order for glucagon or no medication supplies, ***call an ambulance***

   b) Administer PRN order of glucagon if ordered and available, following the manufacturer's instructions. The usual dosage of glucagon is 1mg administered subcutaneously or intramuscularly.

   c) Re-test blood glucose level after 15mins

   d) If blood glucose level remains ≤ 4mmol/L administer 15g of glucose orally. If the resident is still unable to tolerate oral glucose, ***call an ambulance.*** If ordered and available a further PRN order of glucagon may be administered while waiting for emergency services.

5. Ensure the resident eats the next scheduled meal or snack. If a meal is > 1 hour away, provide a snack consisting of 15g of complex carbohydrate and a protein source (e.g. dairy drink and sandwich; cheese and biscuits).

6. Increase frequency of BGL monitoring until stable. Contact the resident's GP if BGL does not become stable.

7. Determine the cause of the hypoglycaemic event. If the cause is unknown; related to medication administration or related to another diagnosis, contact the resident's GP for a comprehensive resident review.

8. Ensure the resident's condition is documented in the progress notes and the event is communicated to other care staff according to facility policy.

Examples of Carbohydrates

The following are equivalent to a 15g serve of carbohydrate [3, 7]:

- 15g glucose in the form of glucose tablets (follow product guide for dosage)
- 15ml (3 teaspoons) of table sugar dissolved in water
- 175ml (3/4 cup) of fruit juice or regular soft drink
- 6 Lifesaver lollies
- 15ml (1 tablespoon) of honey
- 15g glucose paste/gel

Carbohydrate Dosages and Effectiveness of Various Carbohydrates

Glucose powders and tablets are the preferred form of oral carbohydrate for the management of hypoglycaemia [3, 7]. In adults, 15g of glucose is required to produce an increase in BGL of approximately 2.1mmol/L within 20 minutes. 20g of glucose taken orally will increase BGL by approximately 3.6mmol/L within 45minutes. Fruit juices and milks take longer to increase blood glucose levels than oral glucose. For maximum effect, glucose gels and pastes must be swallowed. These products are slow acting, increasing BGL by <1mmol/L in 20minutes [3].

4. Managing Hyperglycaemia

What is hyperglycaemia? [1, 7]

Hyperglycaemia is a complication of diabetes that occurs when an individual's blood glucose level rises to an unacceptable level. Excessive hyperglycaemia can lead to the short-term acute conditions diabetic ketoacidosis (DKA – more common in Type 1 diabetes) or hyperosmolar nonketotic coma (more common in type 2 diabetes), both of which are life threatening conditions. In the long term, untreated persistent hyperglycaemia can lead to diabetic retinopathy, renal disease, cardiovascular disease and cerebrovascular disease.

Hyperglycaemia occurs due to:

- insufficient medication and/or poor medication management and administration;
- emotional or physical stress or illness;
- insufficient physical activity;
- excessive carbohydrate intake; and
- commencement of other medications (eg cortisone).

Signs and symptoms of hyperglycaemia [1, 7, 8]

Consider the diagnosis of hyperglycaemia if an individual is displaying these signs and/or symptoms:

- excessive urination
- excessive thirst
- dry mouth
- tiredness/ fatigue
- blurred vision
- preprandial blood glucose level > 10mmol/L #
- in severe hyperglycemia, nausea and vomiting

The recommended clinical cutoff for diagnosis of hyperglycemia is a preprandial (before eating) BGL > 10mmol/L or a postprandial (after eating) BGL >20mmol/L. BGL at which signs and symptoms of hyperglycaemia develop is different between individuals[1, 7, 8].

Special considerations for elderly individuals

Hyperglycaemia is of particular concern for older adults with diabetes as symptoms may present differently to those in a younger person. The reasons for this are:

- in normal ageing there may be reduction in thirst and increase in renal glucose tolerance, therefore excessive thirst and/or urination may not occur;
- signs and symptoms may be masked by other conditions such as urinary incontinence; and
- signs and symptoms may be considered by the resident or carers to be due to normal ageing [1].

In elderly residents with multiple medical diagnoses, high level of functional dependency and a limited life expectancy, the goal should be more conservative, with an attempt to avoid symptomatic hyperglycemia and prevent hypoglycemia [2, 3].

Guideline for Treatment of Hyperglycemia

1. Check the resident's care plan and medication chart to determine if there is a standing order for action to be taken in the event of a high BGL. If the resident's GP has outlined a clinically appropriate plan # for the management of a resident's hyperglycaemia then implement this course of action.

2. Implement these guidelines when the resident is symptomatic, has a BGL > 10mmol/L and there is no documented appropriate management strategy in the resident's care plan, progress notes or medication chart.

3. If the resident has a high BGL, is symptomatic and is vomiting or unconscious, ***call an ambulance.***

4. If the resident is symptomatic, has a BGL>10mmol/L and there is no documented strategy of care in the resident's care plan or medication chart, contact the resident's GP or locum GP.

5. Document any emergency phone orders according to the policy of the ACH facility. Document the event and the medical practitioner's instructions in the residents care plan and progress notes.

In elderly residents with multiple medical diagnoses and a limited life expectancy, the goal should be more conservative. The resident's GP may chose not to initiate treatment for hyperglycemia unless the resident is symptomatic or has a BGL of 12-15mmol/L or greater. The goal in palliative care is to promote the resident's comfort and prevent hypoglycemia [2, 3]. The resident's GP should document such decisions in the resident's care plan and/or progress notes and medication chart (if appropriate) and provide a guideline for ACH staff on management of hyperglycaemia for the resident.

5. Sick day care for residents with Diabetes

During periods of acute illness or infection special attention needs to be paid to diabetes. Major illness (e.g. influenza) and minor illnesses (e.g. colds, nausea/vomiting, mild infections) put stress on the body, which can cause BGLs to rise, even if the resident is not eating. Infection in particular can cause high BGLs, and this might be the first sign that a resident is coming down with an illness [9-11].

It is important during periods of illness that a diabetic resident's medication regime is maintained, as the body is still producing sugars even when oral intake is minimal. During illness there may be an increased need for medication, especially if the resident is taking insulin. It is also important to carefully monitor the amount, type and timing of food and fluids to ensure they are appropriate to the resident's needs[9-11].

Sick day care for residents with Insulin Dependent Diabetes Mellitus (IDDM, type 1) [7, 9, 10]

1. Check the resident's care plan and medication chart to determine if there is a documented management plan for action to be taken in the event of the resident becoming ill. If the resident's GP has outlined a clinically appropriate plan for the management of the resident's diabetes during a period of illness follow the GP's instructions.

2. Implement these guidelines when a resident becomes unwell from a minor illness that affects the resident's oral intake or BGL readings.

3. Check and record the resident's BGL every 1-2 hours and before meals (see *Clinical Information Sheet on Blood Glucose Monitoring – Managing Hypoglycaemia & Hyperglycaemia* for procedure)

4. Observe the resident every 1-2 hours for signs of hyperglycaemia and dehydration.

5. Medication Requirements:
   - Continue to administer the resident's normal insulin regime.
   - The resident's GP should provide a guideline for extra insulin requirements (e.g. using a p.r.n. sliding scale of insulin). This should be recorded in the resident's medication chart and should be administered according to the GP's orders.
   - If there are no p.r.n. insulin orders and the resident has symptomatic hyperglycaemia, contact the resident's GP or locum GP for further orders.

6. Fluid/Food Requirements:
   - If the resident's BGL is < 12-14 mmol/L the resident should have 15g carbohydrate food/drink every 1-2 hours that he or she is awake.
   - If the resident's BGL is > 12-14 mmol/L the resident should avoid food/drinks containing carbohydrate.
   - Encourage the resident to drink plenty of sugar-free liquids to replace fluid loss. (see section 5 – Food Choices for Sick Days)

7. If the resident has nausea and/or vomiting:
   - Check the medication chart for a p.r.n. order for an anti-nausea agent and administer as ordered by the GP.
   - Commence fluids 1-2 hours after vomiting (see fluid/food requirements above)
   - If the resident has persistent vomiting contact the resident's GP or locum GP for further orders.

8. When to contact the GP:
   - If the resident has a persistently high BGL (> 15mmol/L) and there are no orders for p.r.n. insulin
   - If the resident has symptomatic hypoglycaemia
   - If the resident has persistent vomiting or diarrhoea for over 12 hours and is at risk of dehydration
   - If the resident is unable to consume any oral fluids and is at risk of dehydration
   - If the resident becomes unconscious (see also, *Clinical Information Sheet on Blood Glucose Monitoring – Managing Hypoglycaemia & Hyperglycaemia)*

9. Ensure the resident's BGLs are recorded in the resident's progress notes, along with clear notes on what the resident has had to eat and drink. Communicate the resident's condition to other ACH staff as per facility policy.

Sick day care for residents with Non-Insulin Dependent Diabetes Mellitus (NIDDM; type 2) [7, 11]

1. Check the resident's care plan and medication chart to determine if there is a documented management plan for action to be taken in the event of the resident becoming ill. If the resident's GP has outlined a clinically appropriate plan for the management of the resident's diabetes during a period of illness follow the GP's instructions.

2. Implement these guidelines when a resident becomes unwell from a minor illness that affects the resident's oral intake or BGL readings.

3. Check and record the resident's BGL every 2-4 hours.

4. Observe the resident every 2-4 hours for signs of hyperglycaemia and dehydration.

5. Medication Requirements:
   - Check the resident's regular medication orders. If the resident takes medication of the

Sulphonylurea class, continue to administer medication as normal.
- If the resident takes Metformin, consult the resident's regular GP or locum GP for advice on medication administration.
  (see below for more information on medications)

6. Fluid/Food Requirements:
   - If the resident's BGL is < 12 mmol/L the resident should have 15g carbohydrate food/drink every 2 hours that he or she is awake.
   - If the resident's BGL is > 12 mmol/L the resident should avoid food/drinks containing carbohydrate. Encourage the resident to drink plenty of sugar-free liquids to replace fluid loss.
   - If able to eat, the resident should have a small meal or snack and a carbohydrate drink every 2 hours.
     (see section 5 – Food Choices for Sick Days)

7. If the resident has nausea and/or vomiting:
   - Check the medication chart for a p.r.n. order for an anti-nausea agent and administer as ordered by the GP.
   - Commence fluids 1-2 hours after vomiting (see fluid/food requirements above)
   - If the resident has persistent vomiting contact the resident's GP or locum GP for further orders.

8. When to contact the GP:
   - If the resident has a persistently high BGL (> 15mmol/L) and has symptoms of hyperglycaemia
   - If the resident has symptomatic hypoglycaemia
   - If the resident has persistent vomiting or diarrhoea for over 12 hours and is at risk of dehydration
   - If the resident is unable to consume any oral fluids and is at risk of dehydration
   - If the resident becomes unconscious
     (see also, *Clinical Information Sheet on Blood Glucose Monitoring – Managing Hypoglycaemia & Hyperglycaemia)*

9. Ensure the resident's BGLs are recorded in the resident's progress notes, along with clear notes on what the resident has had to eat and drink. Communicate the resident's condition to other ACH staff as per facility policy.

Medications for NIDDM

Residents who take oral medication to control their diabetes may take Sulphonylureas or Metformin.

Sulphonylureas are a class of oral hypoglycaemic that work by stimulating the pancreas to release more insulin [12]. The following medications are sulphonylureas [11]:

Chemical Name	Brand Name
Glimepiride	Amaryl, Dimirel
Gliclazide	Diamicron MR, Diamicron, Glyade
Glibenclamide	Daonil, Euglucon, Glimel
Glipizide	Melizide, Minidiab

Metformin works by reducing blood glucose levels in the body through reducing the amount of glucose that the liver releases into the bloodstream. Metformin does not increase insulin production and therefore does not itself cause hypoglycaemia [12]. Metformin is marketed as Diabex, Glucohexal and Glcophage and Diaformin [11].
Other oral medications used for diabetes include acarbose (Glucobay) which delays intestinal absorption of carbohydrates in the small intestine, and repaglinide (NovoNorm) which increases pancreatic insulin secretion. The thiazolidinediones

increase the sensitivity of peripheral tissues to insulin and decrease hepatic glucose output. Examples are pioglitazone marketed as Actos and rosiglitazone marketed as Avandia.

6. Food Choices for Sick Days

Carbohydrate Choices for Sick Days

The following food and drink choices provide 15 grams of carbohydrate and should be used when the residents BGL is less than 12-14mmol/L [3, 5]:

Food Choices
- ✓ 1 slice dry toast
- ✓ 2 plain sweet biscuits (e.g. teddybear, arrowroot)
- ✓ ½ cup sweetened jelly or custard
- ✓ 2-3 scoops icecream
- ✓ ½ cup porridge or 2 weetbix 2/3 cup special K or with milk
- ✓ 1 large Premium or Salada 97% fat free cracker or 2 Ryvita crispbreads
- ✓ 1/3 cup cooked rice
- ✓ 1 average icy-pole on a stick

Drink Choices
- ✓ 1 cup of plain milk
- ✓ ¾ cup plain milk with 1 tablespoon flavouring (e.g. milo)
- ✓ ½ cup fruit juice
- ✓ Tea or coffee with 1 tablespoon of sugar
- ✓ Hot lemon juice with 1 tablespoon of honey
- ✓ 4 satchets of gastrolyte
- ✓ ¾ cup non-diet soft drink or cordial
- ✓ 1 cup canned soup made with water
- ✓ 1 cup sports drink (e.g. gatorade)

Non-Carbohydrate Choices for Sick Days

If the sick resident has a high BGL (>12-14mmol/L) s/he needs fluid replacement with non-carbohydrate food and drink choices [3, 4]:

Food and Drink Choices
- ✓ water
- ✓ unsweetened coffee or tea without milk
- ✓ instant broth
- ✓ ice chips
- ✓ diet soft-drink or cordial
- ✓ un- sweetened jelly or custard
- ✓ diet icy-pole on a stick

7. Other Considerations for Diabetes Management

Access to Medication and Nutrition [3]

Residents of ACHs who are diagnosed with diabetes should have p.r.n. orders for care in the event of a diabetic emergency, and of illness not related to diabetes (e.g. colds, minor infections). These should include an indication of frequency of BGL monitoring; alterations to the resident's medication regime (e.g. p.r.n. insulin and glucagon orders); instructions as to when p.r.n. medication orders should be used; and indications for contacting the resident's GP. Access to emergency stock of medication is essential. ACH's should have policies in place to ensure appropriate storage of medications and replacement of expired emergency medications. Diabetic residents should have access to appropriate forms of glucose and carbohydrates at all times.

Education [3]

Provide residents with diabetes and their families with education about diabetes sick days, hypo- and hyperglycaemia, including signs and symptoms to report to staff. Incorporate ongoing education into care planning with any change to the resident's medications, living arrangements, cognitive status or functional status.

ACH staff caring for residents with diabetes require access to up-to-date education on the management of diabetes and complications associated with the disease.

Ongoing Management

Where the cause of a hypoglycaemic or hyperglycaemic event is not able to be identified, or where this is regularly occurring, the health care team including GP, ACH staff, resident or his/her family and appropriate health professionals (e.g. dietician, diabetes educator) should review the resident's ongoing diabetes management plan [3, 4, 7]. In elderly residents with multiple medical diagnoses, high level of functional dependency and a limited life expectancy, palliative care plans should include conservative management of diabetes, with a focus on preventing hypoglycaemia [2, 3].

8. Sources of Information

Where to go for More Information

For further information the following services can be contacted:

Diabetes Australia (Victoria)
Diabetes Australia is a not-for-profit organisation involved in the management, detection and prevention of diabetes and providing support for people with diabetes and their carers.
Contact: Customer Service 1300 136 588; Direct Business Calls 9667 1777

Australian Diabetes Educators Association (ACT)
Contact: (02) 6287 4822

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11. Diabetes Australia (Vic), *Sick Days for type 2 Diabetes*. 2002
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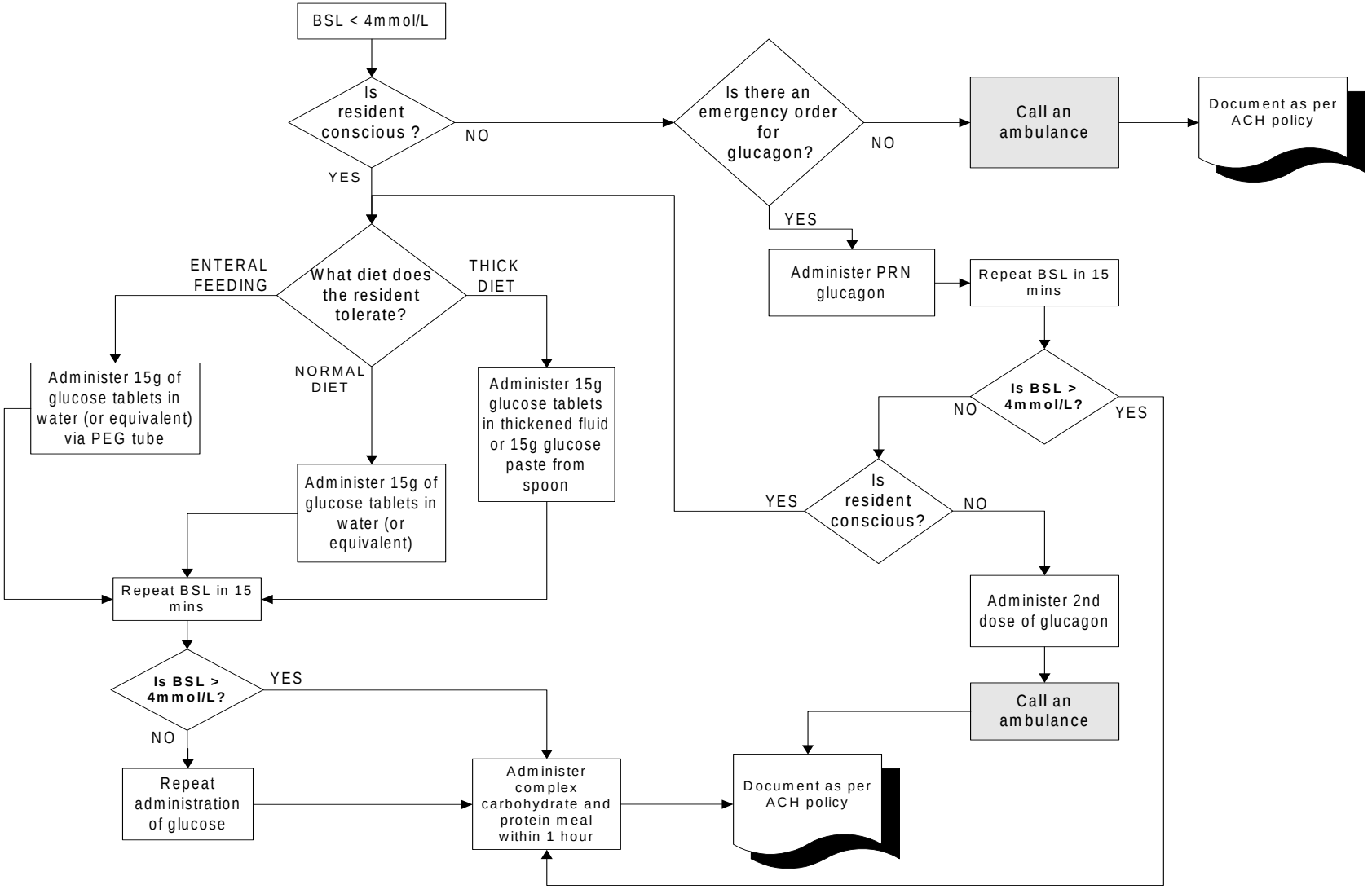
Levels of Evidence

This clinical information sheet is adapted from three primary sources published by the Australian Diabetes Educators Association, the Canadian Diabetes Association and the UK National Health Service. The information provided in this clinical information sheet is based on Level I evidence and Level IV evidence from national consensus clinical guidelines. The level of evidence of all references used to compile this clinical information sheet is provided in the table below.

Ref No	Author	Year	Level of Evidence (refer to Section 6 of the Aged Care After Hours Kit for explanation)
1	Australian Diabetes Educators Association	2003	Level I
2	eTG (editors)	2004	Level IV
3	Canadian Diabetes Association	2003	Level IV
4	American Diabetes Association	2004	Level IV
5	BDMedical	2004	Level IV
6	J French	2000	Level IV
7	Argyle and Clyde Health Board	2002	Level IV
8	C Holmwood	2002	Level IV
9	International Diabetes Center	2004	Level IV
10	B Bradley	2003	Level IV
11	Diabetes Australia (Vic)	2002	Level IV
12	drugs.com	2004	Level IV

Appendix I – Flow chart for management of hypoglycaemia



Clinical Information Sheet

Indwelling Urinary Catheter Management

The attached clinical information sheet has been developed to assist ACH staff members and medical practitioners attending residents of ACHs in managing indwelling catheters.

We will revise this pilot Aged Care Home Clinical Information Sheet in September 2004.

Please give feedback to Dr Denise Ruth or Rita Wong on 03 8345 5600 or email admin@nwmdgp.org.au.

Updates and other resources will be made available on www.nwmdgp.org.au.

Aged Care Home After Hours Kit

Clinical Information Sheet

Indwelling Urinary Catheter Management

The following clinical information sheet has been developed to assist ACH staff members and medical practitioners attending residents of ACHs in managing indwelling catheters.

The clinical information sheet will cover:

- About indwelling urinary catheters (IDCs);
- Procedure for female catheterisation;
- Procedure for male catheterisation;
- Ongoing catheter care;
- Management of catheter problems;
- Catheter irrigation (bladder washout);
- Removing a catheter;
- Sources of information.

This clinical information sheet should be used with consideration to

- the resident's preferences, existing medical care plans, and advance care plan;
- the health professional's knowledge, preferences and professional experience;
- policies and resources available within the ACH.

Pilot document developed: March 2004 To be reviewed: September 2004

1. Introduction

Background

This clinical information sheet is based on procedural information and literature reviews published by *Joanna Briggs Institute*, and guidelines on catheter management published by the *Centre for Disease Control*, *American Academy of Family Physicians*, and *Royal District Nursing Service*. The information sheet has been developed with consideration to legislation and any requirements of or recommendations from professional registration groups or regulating bodies (eg. NBV, RCNA, ANF) overseeing the aged care industry in Victoria, Australia. The guideline has been developed using the process outlined in the *Aged Care Home After Hours Kit –Section 6 Clinical Information Sheets,* and a corresponding information sheet has been developed for GPs who work in ACHs.

As many as 50% of catheterised residents develop catheter-related problems [3], and UTI accounts for more than 40% of infections reported in ACHs, of which the majority are related to urinary catheterisation [4]. Risk of infection following catheterisation depends on the technique used for catheter insertion, duration of catheterisation and the quality of catheter care [4].

Purpose

This clinical information sheet has been developed to assist in the management of catheters, and to encourage an active partnership between the resident's GP and the ACH staff. The purpose of this information sheet is to:

- Promote a positive health outcome for the resident ,
- Prevent UTIs and catheter problems in residents requiring catheters
- Provide guidance to ACH staff members in managing IDCs
- Provide guidance to ACH staff members in managing complications that may arise with an IDC, and to
- Prevent unnecessary use of locum GP, ambulance or hospital services.

Responsibilities

The guideline applies to all ACH staff and medical practitioners. ACH staff and medical practitioners are responsible for initiating treatment within their scope of practice and in line with the ACH's policies when caring for a resident who either requires an indwelling catheter or already has an IDC inserted.

Medical practitioners are responsible for providing an order for insertion of an IDC. Medical practitioners are usually responsible for the insertion of an IDC in a male resident, however this may be delegated to an appropriately trained registered nurse division 1 when necessary [4].

Registered Nurses Division 1 who are appropriately trained may perform catheter insertions and removals, catheter irrigation and replacement of supra pubic catheters. Only individuals (e.g. registered nurses, PCWs or residents themselves) who are educated in correct use of aseptic technique and maintenance of a catheter should handle catheters [5]. In-service training sessions can be arranged to familiarise health professionals with the aspects of catheter management.

2. About Indwelling Catheters

Indications for insertion of an Indwelling Catheter

Catheters should only be inserted when clinically necessary and after discussion between the medical practitioner, ACH staff and resident and/or relatives [1, 3-6]. The following are indication for long-term (longer than 14 days [6]) catheterisation:

- urinary tract obstruction that is not correctable medically or surgically or where medical or surgical interventions are considered inappropriate for the resident;
- extensive skin breakdown caused or exacerbated by incontinence;
- neurogenic bladder and retention;
- palliative care for terminally ill or severely incontinent residents for whom attendance of continence care and hygiene is uncomfortable; or
- preference of a resident who has not responded to other incontinence interventions [1, 3-5].

Short-term catheterisation may be considered for:

- residents who have undergone recent urologic surgery;
- residents for whom accurate measure of urinary output is required; or
- management of acute urinary retention [1, 3, 5].

When an indwelling catheter is used it should be removed as soon as possible to reduce the risk of catheter-related urinary tract infection (UTI) [1, 4-6].

Risks of Catheterisation

Risks of catheterisation include UTI, structural damage to the urinary tract, bleeding, false passage and resident discomfort [4]. The risk of developing catheter-associated UTI ranges from 1-5% in individuals who have one intermittent catheterisation to 20% of individuals with indwelling catheters with closed drainage systems [5, 6]. Long-term catheterisation poses a risk of chronic renal inflammation; chronic pyelonephritis; development of calculi (kidney stones), and symptomatic UTI that may lead to bacteraemia, sepsis and death [1]. The decision to catheterise a resident should be made with consideration to the resident's preference, the benefits the resident may gain from the procedure and the risks to the resident.

Supra Pubic Catheters

Supra pubic catheters are surgically inserted through the abdominal wall into the bladder thereby diverting urine from the urethra. There is a slightly reduced risk of infection than with an IDC, and some residents may be more comfortable with a supra pubic catheter. Disadvantages of supra pubic catheters include the risk of cellulitis, leakage, hematoma at the insertion site and prolapse through the urethra [7]. After they have been inserted, supra pubic catheters should be managed the same as IDCs. The skin area around the catheter insertion site should be washed with soap and water daily and the area kept dry. Avoid the use powder or creams around the catheter site.

After a supra pubic catheter has been surgically inserted, the catheter may be changed by a registered nurse division 1 if required. Indications for changing are the same as for an IDC. The technique is the same as that for inserting/changing an IDC (See Sections 3 and 4), however the catheter is inserted through the hole in the abdomen until urine returns, then gently inserted for another 2 centimetres [7].

Intermittent Catheterisation

Intermittent catheterisation on either a short or long term basis should be considered. The literature suggests there is no increase in rate of UTI development between long term intermittent catheterisation and either IDC or supra pubic catheter, and in the short term the rate of infection has been shown to be lower when using intermittent catheterisation [1, 3, 6]. Elderly residents have been shown to regain voiding more quickly following hip surgery when intermittent catheterisation was used [1].

Selection of Catheter Size

Because an incorrect catheter size contributes to the risk of developing a catheter-related UTI and structural damage to the urinary tract, consideration should be given to catheter size [3, 4]. It is recommended that the smallest gauge possible should be used as catheters of larger gauges (e.g. greater than size 16) may cause pressure necrosis of the urethra leading to catheter leakage and resident discomfort [1, 4]. In most cases a 12Fg or 14Fg should be used for a female resident, and 12Fg - 16Fg for a male resident [1, 3]. It is recommended that catheters with balloons that hold 5-10ml of fluid be used. Larger balloons increase bladder irritation, contributing to catheter leakage and increasing the risk of stricture formation [1, 3, 4].

Use of Surgical Sterile Technique

Evidence suggests that use of surgical sterile technique (sterile scrub, use of sterile gloves and gown, strict no-touch technique) to insert a catheter does not reduce the rate of UTI development. Aseptic technique using sterile equipment is recommended for the insertion of indwelling or intermittent catheters. Handwashing should be performed immediately before and after all catheter-related interventions [1-5].

3. Procedure for Female Catheterisation

Equipment [4]

The following equipment is required:

- Disposable catheter pack
- 1 sachet normal saline
- 2 sterile catheters
- 1 sterile urinary drainage bag
- 10ml syringe
- 10ml sterile water
- Incontinence sheet
- 10ml syringe lignocaine anaesthetic jelly
- Disposable glove
- Catheter support
- Sterile scissors
- Angle lamp
- Adhesive tape

Ensure that the expiration date and condition of all equipment is checked, and organise for replacement of stock according to ACH policy.

Procedure Inserting an Indwelling Catheter for a Female Resident [4]

1. Explain the procedure, answer questions and prepare the resident.

2. Resident or nurse should shower the resident or wash the resident's pubic area with soap and water.

3. Ensure the resident's bed or examination table is at the correct height to prevent strain on your back whilst performing the procedure. Place the resident in a recumbent position, knees flexed and wide apart with incontinence sheet under resident.

4. Position the lamp to maximise light on the pubic region.

5. Open disposable catheter pack.

6. Wash hands.

7. Open and add extra equipment to the catheter pack using aseptic technique. Place catheter in the receiver. Attach syringe to centre of nozzle and open lignocaine anaesthetic jelly.

8. Saturate cotton wool balls with normal saline.

9. Put on glove.

10. Using forceps and cotton wool balls cleanse the resident's labia majora using a downward stroke. Hold labia aprt with gloved hand and cleanse the resident's labia minora and urethral opening.

11. Place a small amount of lubricant into the receiver. Slowly insert anaesthetic jelly into urethral opening.

12. Discard glove and syringe.

13. Position the sterile towel to establish a sterile field between the resident's legs.

14. Using forceps, place receiver and drainage bag on the sterile field.

15. With fingers, remove the cap from the drainage bag and place the sterile end into the receiver.

16. With fingers, pick up catheter, remove distal sheath and connect catheter to the drainage bag.

17. Fill the syringe with the required amount of sterile water. Inflate the catheter balloon and check for leaks. Deflate the balloon and leave syringe attached.

18. With fingers near the serration, remove the proximal end of the catheter sheath, or use scissors if necessary.

19. Lubricate the catheter tip. Separate the resident's labia and gently insert the catheter directly into the resident's urethra without contaminating the catheter. Check for flow of urine to confirm correct positioning.

20. Inflate the catheter balloon and gently withdraw the catheter until resistance is felt.

21. Remove the remaining plastic sheath from the catheter.

22. Dry the resident. Secure the catheter on the resident's thigh in a position that will minimise dragging or kinking of the catheter. Hang the catheter bag below the level of the resident's bladder. Follow the ACH's policy in relation to covering catheter bags.

23. Ensure the resident is comfortable and clear the area.

24. Document the date of the catheter insertion in the resident's notes and care plan. Communicate the procedure to other staff as per ACH policy.

4. Procedure for Male Catheterisation

In most instances a medical practitioner performs male catheterisation, however the procedure may be delegated to a registered nurse division 1 if required [4].

Equipment [4]

The following equipment is required:

- Disposable catheter pack
- 1 sachet normal saline
- 2 sterile catheters
- 1 sterile urinary drainage bag
- 10ml syringe
- 10ml sterile water
- Incontinence sheet
- 10ml syringe lignocaine anaesthetic jelly and chlorhexidine
- Adhesive tape

Ensure that the expiration date and condition of all equipment is checked, and organise for replacement of stock according to ACH policy.

Procedure Inserting an Indwelling Catheter for a Male Resident [4]

1. Explain the procedure, answer questions and prepare the resident.

2. Ensure the resident's bed or examination table is at the correct height to prevent strain on your back whilst performing the procedure. Place the resident in a supine position with incontinence sheet under resident.

3. Open disposable catheter pack.

4. Wash hands.

5. Open and add extra equipment to the catheter pack using aseptic technique. Place catheter and 1 pair of forceps into the receiver. Attach syringe to centre of nozzle and open lignocaine anaesthetic jelly.

6. Saturate cotton wool balls with normal saline.

8. With a paper towel, pick up the resident's penis and retract the resident's foreskin if necessary.

9. Clean the resident's meatus and glans using the forceps and saturated cotton wool balls.

10. Position a second paper towel under the resident's penis and lower the penis onto the towel. Discard the first paper towel.

11. Position the sterile towel leaving only the cleaned part of the resident's penis exposed.

12. Using the drape, hold the resident's penis in a vertical position. Place a small amount of lubricant into the receiver and slowly insert the anaesthetic lignocaine jelly into the resident's urethra. Hold the jelly insitu for 3 minutes. Discard syringe.

13. Using forceps, place receiver and drainage bag on the sterile field.

14. With fingers, pick up catheter, removal distal sheath and connect the catheter to the drainage bag.

15. Fill the syringe with the required amount of sterile water. Inflate the catheter balloon and check for leaks. Deflate the balloon and leave syringe attached.

16. With fingers near the serration, remove the proximal end of the catheter sheath, or use scissors if necessary.

17. Lubricate the catheter tip. Using the drape, hold the resident's penis vertically and use the forceps to gently insert the catheter into the resident's urethra. Check for urine flow to ensure correct positioning.

18. Inflate the catheter balloon and gently withdraw the catheter until resistance is felt.

21. Dry the resident's penis to remove all anaesthetic lignocaine jelly. Replace foreskin if necessary. Secure the catheter on the resident's lower abdomen or thigh in a position that will minimise dragging or kinking of the catheter. Hang the catheter bag below the level of the resident's bladder. Follow the ACH's policy in relation to covering catheter bags.

22. Ensure the resident is comfortable and clear the area.

23. Document the date of the catheter insertion in the resident's notes and care plan. Communicate the procedure to other staff as per ACH policy.

5. Ongoing Catheter Care

Positioning of Catheter and Urinary Bag

Kinking of the catheter tube can cause back flow and increase the risk of infection. The drainage bag should be kept lower than the resident without resting on the floor [4]. The catheter should be properly secured after insertion to promote resident comfort and prevent movement, traction and potential kinking of the tube [1, 4, 5].

Emptying the Urinary Bag

The urinary drainage system should be kept closed at all times to reduce the risk of UTI. The urinary catheter bag should be emptied regularly (at least once/shift) and a separate collection jug should be used for each resident to minimise the risk of cross infection [5]. When emptying the catheter bag contamination should be prevented. Wear disposable gloves and wipe the drainage bag outlet with an alcohol swap after emptying the bag [4]. Urine output should be recorded according to the ACH's policy.

Catheter Toilet

Literature suggests that routine catheter toilets (meatal cleansing) do not reduce the incidence of UTI. The procedure may be effective in promoting the resident's comfort [1, 2, 4, 5]. In female residents the vulva, inner labia and catheter should be cleansed thoroughly with soap and water, then rinsed. In male residents the meatus, penis, scrotal area and first part of the catheter should be cleansed with soap and water then rinsed. In uncircumcised male residents the foreskin should be pulled back, washed and dried then replaced [4]. The literature suggests that clean tap water and soap is as effective as any antimicrobial solutions (e.g. povidone iodine) for cleaning of genitalia [1, 2, 4].

Catheter Changes

There is no evidence to suggest that fixed interval catheter changes reduce the risk of catheter blockage or development of catheter-associated UTI. Catheters should only be changed if an obstruction occurs [1, 3-5]. If a catheter frequently obstructs and requires irrigation, it is likely that the catheter is the cause of obstruction (e.g. excessive build up of biofilm material) and this is an indication for catheter change [5].

6. Management of Catheter Problems

Catheter-Associated Urinary Tract Infection

Inadequate aseptic technique during catheter insertion and interruptions to the closed drainage system are significant causes of UTI in residents with catheters. All ACH staff handling IDCs should receive regular education on the importance of hand-washing and use of aseptic technique [4, 6]. Avoidance of breaking the closed drainage system (e.g. minimising detachment of the urinary collection bag) is the most effective method of preventing catheter-associated UTI [4, 6]. Encouraging an increase in fluid intake (where this is not medically contraindicated) has also been shown to be effective in reducing the risk of UTI development [4].

To reduce the risk of cross-infection, catheterised residents with UTI should not share a room (or at a minimum, adjacent beds) with catheterised residents without UTI [4, 5]. ACH staff should be diligent about washing hands before and after handling each resident's IDC [1, 4, 5]. If possible, devices used for emptying collection bags should be clean and resident-specific [1].

Asymptomatic UTI occurs frequently in residents with an IDC and usually health professionals choose not to treat it. Only symptomatic infection should be treated in residents with long-term catheters [1, 5]. If a resident with an IDC displays symptoms of a UTI (e.g. fever for more than 1 day, unusually cloudy urine, more frequent blockage or bladder spasms [1]) then the resident's GP should be consulted.

The following strategies for preventing UTI should be considered with caution. They have been shown to be ineffective in reducing the incidence of catheter-associated UTIs, and may increase the risk of UTI development.

- Prophylactic bladder irrigations using antibiotics, hydrogen peroxide or povidone-iodine [1, 2];
- regular meatal cleansing using povidone-iodine or soap and water [1, 2, 4, 5];
- routine fixed interval IDC changes [1, 4, 5];
- routine monitoring for infection control purposes (e.g. periodic urine cultures) [1, 4, 5]; or
- prophylactic use of systemic antibiotics, methenamine (Hiprex) and acidifying agents [1].

Catheter Leakage

Catheter leakage can occur due to IDC blockage, UTI or bladder spasms, which may occur in residents with long term IDCs. Spasming of the bladder creates a force that overwhelms the drainage capacity of the catheter, resulting in leakage. Where the likely cause is a catheter blockage (e.g. no urine has flowed into the collection bag over 4 hours) a catheter irrigation may be performed (see procedure section 6). If the blockage is unresolved or regularly recurring the IDC should be changed [1]. Where leakage is regularly occurring and thought to be due to bladder spasm, the resident's GP should be informed and the need for an IDC reviewed [1].. The resident's GP may consider the use of antispasmodics in alleviating spasm due to detrusor instability. Catheter leakage should not be corrected by using a larger diameter catheter [1].

Obstruction of a Catheter

The development of biofilm material (encrustation) is caused by build up of microorganisms and cellular material and may lead to obstruction of the IDC [1, 4]. Encrustation is more likely to occur when the urine is more alkaline [4]. Methenamine (Hiprex) preparations and dietary intake that lowers the urine pH may be beneficial in reducing episodes of obstruction [1].

Where it is unavoidable, catheter irrigations can be performed to remove debris build up that may lead to obstruction of an IDC (see procedure Section 6) [1, 4, 5]. Catheters that remain obstructed (no urine flow for 4-8 hours) and catheters that remain patent only due to frequent irrigation should be replaced [1, 5]. There is no recommended frequency for performing catheter irrigation, however research suggests that residents who are likely to develop an IDC blockage should be identified [1, 4, 5]. Factors to consider in identifying residents at risk include:

- frequency of IDC blockage;
- fluid intake;
- mobility;
- presence of debris in the urine; and
- level of discomfort [4].

6.Catheter Irrigation

Indications

A catheter irrigation (bladder washout) may be indicated if a resident has a catheter leakage or blockage (See Section 5 Management of Catheter Problems).

Equipment [4, 5]

The following equipment is required:

- Disposable catheter pack
- 1 sterile area towel
- 50ml catheter tip syringe
- 2 2 litre sterile jugs
- 30ml normal saline
- Incontinence sheet
- 1 pair sterile gloves
- 1 alcohol wipe
- irrigation solution (sterile water or sterile saline) at room temperature

Ensure that the expiration date and condition of all equipment is checked, and organise for replacement of stock according to ACH policy.

Procedure for performing a Catheter Irrigation [4]

1. Explain the procedure, answer questions and prepare the resident.
2. Open the catheter pack using aseptic technique.
3. Ensure the resident's bed or examination table is at the correct height to prevent strain on your back whilst performing the procedure. Prepare the incontinence sheet under resident and release the adhesive tape anchoring the catheter.
4. Open the other equipment, setting up the sterile field using the sterile forceps. Discard the forceps, pour the normal saline into the catheter pack to soak cotton balls and prepare the irrigation fluid in a sterile jug.
5. Using the forceps and cotton balls, clean the resident's meatus and the whole catheter.
6. Use the alcohol wipe to disinfect the catheter end and disconnect the catheter then place on the sterile towel. Wrap the drainage bag in the second sterile towel and place it aside.
7. Put on gloves.
8. Place the receiver on the sterile towel and put the catheter in it.
9. Fill the 50ml syringe with irrigation fluid and connect the syringe nozzle to the catheter end.
10. Insert the irrigation fluid and aspirate fluid continuously using some force. Although some force is required to remove debris build-up, if excessive force is used to aspirate the injected fluid trauma may result. When performing this procedure the nurse should assess the amount of force required and the comfort of the resident to determine whether the catheter requires changing.
11. Continue aspiration until the returning fluid is clear and free of debris.
12. Empty the receiver into disposable jugs as necessary
13. Wipe the end of the urinary drainage bag with the alcohol swab and re-connect the catheter.
14. Dry the resident. Secure the catheter on the resident's thigh in a position that will minimise dragging or kinking of the catheter. Hang the catheter bag below the level of the resident's bladder. Follow the ACH's policy in relation to covering catheter bags.
15. Ensure the resident is comfortable and clear the area.
16. Document in the resident's notes and fluid balance chart, recording the amount of fluid inserted as input and the amount of fluid returned as output. Communicate the procedure to other staff as per ACH policy.

7. Removing a Catheter

Equipment [4]

The following equipment is required:

- 1 disposable receiver
- paper towel
- syringe
- non sterile gloves

Ensure that the expiration date and condition of all equipment is checked, and organise for replacement of stock according to ACH policy.

Procedure for removing a Catheter [4]

1. Explain the procedure, answer questions and prepare the resident.
2. Place the receiver between the resident's thighs.
3. Wash hands and put on the non-sterile gloves.
4. Attach the syringe to the balloon valve and withdraw the entire contents of the balloon.
5. Remove the catheter and place it in the receiver.
6. Ensure the resident is comfortable and clear the area.
7. Measure any remaining urine in the urine collection bag, disconnect the catheter from the drainage bag and dispose of catheter equipment in an appropriate infectious waste bin.
8. Document in the resident's notes, care plan and fluid balance chart and communicate the procedure to other staff as per ACH policy.

8. Sources of Information

Where to go for More Information

Continence Foundation of Australia
A group of health professionals, consumers and organisations that provide information and support for incontinent individuals and their carers.
Contact: (03) 9347 2522
Website: http://www.contfound.org.au/default.php

Joanna Briggs Institute
An organisation that provides evidence based practice educational resources including literature reviews, procedures and guidelines for health professionals and facilities. A collaborating centre, the Australian Centre for Evidence Based Aged Care is located in Melbourne. Some services are limited to members only.
Contact: 9495 3118
Website: http://www.joannabriggs.edu.au/about/about.php

MS Australia
An organisation that provides education and support to individuals with multiple sclerosis. MS Australia provide help and advice on a variety of issues (including catheter care) relevant to residents diagnosed with multiple sclerosis.
Contact: (02) 9646 0600
Website: http://www.msaustralia.org.au/msinformation/index.htm

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Levels of Evidence

The information presented is developed from reputable Level IV evidence, including the JBI Aged Care Manual that was developed from a comprehensive literature review; consensus guidelines produced by the American Academy of Family Physicians and Centre for Disease Control; and RDNS recommendations based on extensive literature review. Information presented on catheter-related UTI is based on Level I evidence. The following table outlines the level of evidence of each reference:

Ref No	Author	Year	Level of Evidence (refer to Section 6 of the Aged Care After Hours Kit for explanation)
1	D Cravens, S Zweig	2000	Level IV
2	Joanna Briggs Institute	2000	Level I
3	RDNS Research Unit	2001	Level IV
4	Joanna Briggs Institute	2003	Level IV
5	Wong E,Hooton T	1981	Level IV
6	B Niël-Weise, P van den Broek	2003	Level IV
7	B Brillhart	2003	Level IV

Clinical Information Sheet

PEG Tube Management

The attached clinical information sheet has been developed to assist ACH staff members and medical practitioners attending residents of ACHs in managing long-term enteral feeding and common complications that occur with percutaneous endoscopic gastrostomy (PEG) tubes.

We will revise this pilot Aged Care Home Clinical Information Sheet in September 2004.
A GP version may also be produced based on GP comments on this document.

Please give feedback to Dr Denise Ruth or Rita Wong on 03 8345 5600 or email admin@nwmdgp.org.au.

Updates and other resources will be made available on www.nwmdgp.org.au.

Aged Care Home After Hours Kit

Clinical Information Sheet

Percutaneous Endoscopic Gastrostomy (PEG) tube Management

The following clinical information sheet has been developed to assist ACH staff members and medical practitioners attending residents of ACHs in managing long-term enteral feeding and common complications that occur with percutaneous endoscopic gastrostomy (PEG) tubes.

The clinical information sheet will cover:

- About enteral feeding and PEG tubes;
- Feeding systems and regimes;
- Feeding formula products;
- Procedure for administering PEG feeding;
- Administration of medications via a PEG tube;
- Care of the PEG tube and site;
- Managing common complications;
- Other considerations with PEG feeding;
- Sources of information.

This clinical information sheet should be used with consideration to

- the resident's preferences, existing medical care plans, and advance care plan;
- the health professional's knowledge, preferences and professional experience;
- policies and resources available within the ACH.

Pilot document developed: May 2004 To be reviewed: September 2004

1. Introduction

Background

This clinical information sheet is based on recommendations developed from a systematic review of the evidence produced by the *American Gastroenterological Association*. This information is supported by procedural information and literature reviews published by *Joanna Briggs Institute* and *University of Texas Medical Branch*, and guidelines on enteral feeding produced by the *Hong Kong Geriatrics Society*. The information sheet has been developed with consideration to legislation and any requirements of or recommendations from professional registration groups or regulating bodies (eg. NBV, RCNA, ANF) overseeing the aged care industry in Victoria, Australia. The guideline has been developed using the process outlined in the *Aged Care Home After Hours Kit –Section 6 Clinical Information Sheets* and a corresponding information sheet has been developed for GPs who work in ACHs.

Studies indicate that over 70% of PEG recipients are aged over 70 years and 91% have a primary neurological disorder, suggesting that PEG recipients will frequently reside in ACHs [1]. Minor complications such as tube occlusion, skin maceration from leakage of gastric contents and peristomal pain are reported in 13-43% of individuals with PEG tubes. Major complications such as wound infection, aspiration, bleeding and injury to internal organs occur in 0.4% - 20% of individuals with PEG tubes [2]. The most common PEG problems that result in a resident attending an emergency department are blocked feeding tubes, deteriorated tubes and PEG tubes that have been inadvertently removed [1]. ACH staff need the skill to manage PEG problems as they can be uncomfortable for the resident, interrupt nutrition and hydration, require a distressing and costly attendance at an emergency department and lead to major complications [1].

Purpose

This clinical information sheet has been developed to assist in the management of long-term enteral feeding via a PEG tube, and to encourage an active partnership between the resident's GP and the ACH staff. The purpose of this information sheet is to:

- Promote a positive health outcome for the resident ,
- Provide guidance to ACH staff members in caring for PEG tubes,
- Provide guidance for staff in administering nutrition and medication via a PEG tube;
- Provide guidance to ACH staff members in managing complications that may arise with a PEG tube, and to
- Prevent unnecessary use of locum GP, ambulance or hospital services.

Responsibilities

The clinical information sheet applies to all ACH staff and medical practitioners. ACH staff, medical practitioners and other practitioners (e.g. dietician) are responsible for initiating treatment within their scope of practice and in line with the ACH's policies when caring for a resident who requires enteral feeding via a PEG tube. The resident, his or her relatives, the resident's GP and other health professionals should work as a team in the ongoing planning of the resident's care.

Medical practitioners are responsible for providing details regarding the insertion of a resident's enteral feeding tube (e.g. type and size of feeding tube) [3, 4] and for assisting in the development of a care plan for the resident including feeding regimes, residual gastric contents checking and management of medical complications [5]. Residents requiring long-term enteral feeding should be reviewed on a regular basis by a dietician to ensure that a feeding regime that meets the resident's requirements is ordered and maintained [6]. The pharmacist should review the resident's medications and provide advice on medication preparations and considerations in medication administration [4]. Only individuals who have received appropriate training in the correct procedure for caring for a PEG tube and administering enteral feeding should handle enteral feeding tubes [7, 8]. Registered Nurses Div 2 and PCWs attending to enteral feeding or tube care should do so under the direction and supervision of a Registered Nurse Div 1 [9, 10]. In-service training sessions can be arranged to familiarise ACH staff with care and management of enteral feeding tubes.

2. About Enteral Feeding and PEG tubes

Enteral feeding tubes

Enteral feeding is a method of maintaining hydration and nutrition for residents who are suffering from an illness that affects the ability to take in an adequate oral intake to maintain nutritional status. A feeding tube is passed directly into the resident's stomach or small bowel and liquid nutrition is provided [3, 4, 11].

Nasogastric tubes, which pass through the nasal cavity to the stomach, are used for short term (<30 days) enteral feeding [3, 4, 6]. They are not commonly used in ACHs and are not the focus of this clinical information sheet.

Gastrostomy tubes are placed through the abdominal wall into the stomach. Gastrostomy tubes can be inserted via open surgery, laparoscopy, endoscopy or radiology. The most commonly used technique is the percutaneous endoscopic gastrostomy (PEG). This method of tube insertion can be done under mild sedation, has a quick recovery period for the resident and there is a low level of mortality and morbidity from the procedure [1-3, 6]. PEG tubes are usually 12-30G and have a balloon, mushroom tip or disc securing internally. Externally the tube has a disc or bumper at skin level and at the distal end an adapter that connects to a feeding tube or syringe and has a side port for medication administration [4].

Jejunostomy tubes are placed through the abdominal wall into the small bowel either directly or via the stomach (gastrojejunostomy). They are used when the resident has a high risk of aspiration [6]. Jejunostomy tubes have the same appearance as a PEG tube but are usually 8-24G [4].

Care and management of all kinds of gastrostomy and jejunostomy tubes is essentially the same and the information in this clinical information sheet is relevant to all (unless specifically stated). The term PEG tube will be used interchangeably to refer to all kinds of gastrostomy tubes.

Indications and risks of enteral feeding

Indications for a PEG tube include [1-4]:

- Intact GI tract but unable to consume sufficient calories to meet nutritional needs
- Impaired swallowing related to neurological conditions (e.g stroke, Parkinsons Disease)
- Obstruction related to neoplasm or surgery.

Careful consideration should be given to the insertion of a feeding tube. Tube placement is an invasive procedure and common risks of tube feeding include:

- pain at the tube site [2, 11, 12];
- discomfort from tube repositioning [2, 11, 12];
- local infection [3, 6, 12];
- aspiration pneumonia [6, 12];
- tube occlusion [3, 6, 12];
- nausea, vomiting, constipation and diarrhoea [3, 6, 12]; and
- loss of pleasure from eating [12, 13].

The decision to insert a PEG tube should be made via consultation between the resident, next-of-kin or Power of Attorney, relatives, GP and ACH staff. Consideration should be given to any advance care planning. The health care team, resident and representatives should consider whether the possible benefits of treatment outweigh the burden to the resident [2]. (see Also Section 9 Other Considerations with PEG Feeding).

3. Formula Products and Feeding Systems

Types of formula

Feeding formulas are made up of carbohydrate; protein; fat; minerals and vitamins including sodium and potassium; and fibre [3]. Free water is also an important component and constitutes up to 85% of the formula [3, 6]. Selection of a formula type depends on the resident's nutritional requirements, gastrointestinal function, occurrence of diarrhoea or constipation and any special disease considerations (e.g. fluid restriction for a resident with cardiac disease) [3].

The most commonly used formula products are lactose-free (e.g. Osmolite, Ensure). Some formula products are milk-based (e.g. Sustagen) or elemental formulas that provide nutrients in simple protein forms for easier digestion (e.g. Vital HN) [3, 6]. Special formulas are generally more expensive than standard formulas and have not been conclusively shown to be of advantage [6] so their used should be considered carefully.

It is recommended that residents requiring enteral feeding are assessed by a nutrition support team or dietician to determine the most appropriate formula and feeding regime. The dietician should aim to meet the resident's specific nutritional requirements, minimise complications and maintain cost-efficiency [6].

Feeding systems

Enteral feeds can be administered using a ready-to-hang feeding system ('closed system'), or decanted ('open system') into a feeding bag or syringe. Pre-packaged, ready-to-use feeding formulas should be used in preference to those that require decanting, reconstituting or diluting [8, 14]. Use of pre-packaged, ready-to-use feeding formulas decreases bacterial contamination of the formula and has been demonstrated to be more cost-effective [14].

Feeding regimes are either continuously or intermittently. Continuous feeds are indicated for residents who are at a high risk of aspiration, have gastro-intestinal tolerance (e.g. diarrhoea) or for small bowel feeding [3, 6]. If feeding intermittently a volume of 300-400ml of formula is usually administered for each feed [6]. Feeds are either delivered by bolus, gravity flow or using pump-control. Bolus feeds are administered over 5-10 minutes, usually via a syringe. Bolus administration has the advantage of being a quick administration technique and frees the resident from tube lines [6].

Storage and care of formula

It is important that formula products are stored and used correctly to reduce the potential for bacterial contamination. Follow these guidelines:

- Always keep formula products refrigerated [3]
- Label products with the data and time of opening [3]
- Check labels on a daily basis and discard any unlabeled or expired products [3]
- Opened cans should be used within 24 hours [3, 8]
- Opened cans should be covered properly even in the refrigerator (e.g. using plastic lids) [3]
- Do not leave formula products at room temperature (including during administration) for longer than recommended. Check the product information. As a general guide reconstituted milk products should not be at room temperature for longer than 4 hours; sterilised can formula for longer than 8 hours; and closed system formulas for longer than 24 hours [3, 5, 8].

ACHs should develop auditing and stock rotations systems to ensure the safe use and storage of enteral feeding formulas and to comply with Accreditation requirements [15].

Procedure for preparing formula

The use of pre-packaged, ready-to-use formulas are recommended over those that require decanting, reconstituting or diluting [8, 14]. When formula products that require preparation are used, the following guidelines should be adhered to.

1. Prepare enteral feeds in a clean working area and wash hands thoroughly before commencing [3, 8]. Wash the top of the can before opening and use a no-touch technique in preparing formula to reduce the risk of bacterial contamination [8, 14].

2. Use equipment that is dedicated to enteral feeding and use an individual set of feeding equipment for each resident [3, 8].

3. In ACHs, residents should have their own supply of enteral feeding formula. Check the formula is the correct type ordered for the resident; the manufacturing and use-by dates; and the date and time the product was opened [3]. Discard any products open for longer than 24 hours [3, 5, 8].

4. If opening a new product, label with the time and date of opening [3].

5. Reconstituted powder
   Prepare in a feeding jug using freshly opened sterile water or cooled, boiled water [8]. Follow the dietician's instructions or the product information on quantity of water. Ensure the powder is fully dissolved to prevent tube clogging [3].

6. Sterilised canned milk formula
   Shake contents thoroughly. Pour the ordered amount into the feeding jug [3].

7. Cover the feeding jug immediately after preparation to avoid contamination by airborne organisms [3].

8. Do not administer cold formula. Feeds should be prepared to a temperature of 25-30°C. Either remove formula from refrigerator for 1 hour before administration [7], or immerse feeding jug in warm water for 10-15 minutes [3].

4. Procedure for Administering a PEG Feed

Equipment

Use equipment that is dedicated to enteral feeding and use an individual set of feeding equipment for each resident [3, 8]. Whilst some sources recommend that feeding tubes, bags and syringes should be for single use only [7, 8] no evidence suggests that there is a higher incidence of bacterial infection in residents who are fed using a routine, non-sterile protocol than those fed using an aseptic protocol [6, 14]. If equipment is reused it should be cleaned according to the manufacturer's instructions or washed in detergent and warm water and hung to dry [7] and replaced every 24 hours [5] and clearly labeled with the resident's identification.

The following equipment is required:

- 50-100ml syringe for aspiration
- enteral feeding bag with tubing if administering bag feed
- giving set with burette if administering a continuous feed
- enteral pump and compatible line if administering feed via a pump
- 50-100ml syringe if administering bolus feed via syringe
- water for flushing
- warm prepared formula (see above).

Procedure for administering a PEG feed

1. Explain the procedure, answer questions and prepare the resident by raising the head of bed 30°-45° [3, 5-7, 16].

2. Wash hands.

3. Confirm the length of the tube.

4. Aspiration [3, 5, 7]
   Using a 50ml syringe, aspirate the contents of the resident's stomach.

   1. Confirm the position of the PEG tube in the stomach by checking the pH of stomach contents. Stomach contents pH should be ≤ 4 and turns blue litmus paper to red.
      If the pH of gastric contents is not ≤ 4 the PEG tube may have migrated from the stomach. Cease feeding and contact the resident's GP, locum GP services or the emergency department to arrange for radiology confirmation of tube position [3, 5-7].

2. Check residual gastric contents volume. If the residual volume is consistently ≥150ml request the resident's GP or dietician conduct a review of the feeding regime. *Whilst a single high residual volume prompts concern about feeding intolerance and indicates a need to closely monitor further residual volumes, often the next residual volume is normal. Automatically postponing or ceasing tube feeding puts the resident at risk of inadequate nutrition* [6].

Return the aspirated gastric contents to the resident's stomach.

5. Flush the PEG tube with 30ml water [3-5, 7, 11].

6. Bag Feeding [3, 5, 7]
   a) detach the line from the feeding bag
   b) pour the prepared formula into the feeding bag
   c) ensure the line is closed, reattach and prime line with feed
   d) attach line to the resident's PEG tube
   e) hang the feeding bag higher than the resident
   f) for *intermittent feeding*, administer feed over 20-40 minutes. For *continuous feeding* use a burette on the feeding line. Run the prescribed amount per hour into the burette and adjust rate. For *pump feeding* position the feeding line in the enteral feeding pump and set volume and rate of infusion according to the manufacturer's instructions.

7. Bolus Syringe Feeding [3, 5, 7]
   a) remove the plunger from a 50-100ml syringe
   b) attach barrel of syringe to PEG tube
   c) pinch PEG tube
   d) pour prepared formula into feeding syringe and using gravity, allow the feed to flow
   e) do not allow the feeding syringe to completely empty before adding more formula
   f) adjust rate of flow by lowering or raising height of syringe

8. Detach feeding line or feeding syringe from PEG tube.

9. Flush PEG tube with 30ml water [3-5, 7, 11].

10. Ensure the resident is comfortable. Observe for signs of vomiting, respiratory distress or signs of feeding intolerance (e.g. diarrhoea, bloating, fullness) [3, 5, 7].

11. Maintain the resident in an upright position (head of bed elevated 30°-45°) for at least 30 minutes post-feeding to reduce the risk of aspiration [3, 6].

12. Remember to attend to the oral hygiene of residents receiving enteral feeding on a regular basis.

13. Dispose of single-use equipment and wash reusable equipment in warm water and detergent and hang to dry [5, 7].

14. Document in the resident's notes and communicate to other staff according to ACH policy.

5. Administering Medication via a PEG tube

The goal of medication administration via PEG tube is to maximise the therapeutic effect of medication without adversely affecting the delivery of enteral feeding. Administration of medications via the PEG tube can be problematic. Altering the form of the medication (e.g. by crushing) may interfere with the drug's efficiency or potency or the resident's tolerance of the medication. Changes may occur in the absorption, distribution, metabolism or excretion of altered medications.

Physical changes may occur if the medication is combined with enteral feeding formula (e.g. curdling or separation) and there is a risk of PEG tube occlusion [4].

To prevent unnecessary complications with administration of medication via the PEG tube, it is recommended that the pharmacist review the medication of any resident receiving medications via a PEG tube. The pharmacist should recommend dosage forms that are appropriate for administration and provide guidelines for the administration of specific medications [3, 4, 11].

Medication forms

The following medication forms can be administered via the PEG tube:

- Liquid medication: this is the best option as there is a decreased risk of tube occlusion and increased absorption of the medication [3, 4, 11]. However, certain preparations may cause GI distress, especially those with a high osmolality or high levels of sorbitol. Complications can be minimised by diluting liquid medications in 30ml of water [4].
- Immediate release oral tablets: tablets should be crushed finely and mixed with 10- 30ml water. Visually check the preparation to ensure the tablet particles are fully dissolved before administration [3, 4, 11].
- Soft gelatin capsules: prick the capsule with a pinhole and squeeze out the contents for administration [4].

The following medication forms cannot be administered via the PEG tube:

- Enteric-coated medications: enteric coating protects the integrity of the medication from destruction by the stomach acid, therefore crushing the medication reduces its effectiveness [3, 4].
- Sustained release medications: altering the form of sustained release medications changes the medication properties [3, 4].
- Sublingual medications [3, 4].
- Acidic liquid medications: many syrup medications are too acidic for administration via the PEG tube. Elixir and suspension liquids should be used rather than syrups [4, 11].

General rules for administering medication via the PEG tube

Before administering any medication via the PEG tube ensure the pharmacist has reviewed the resident's medications and provided the most appropriate form. Follow any specific instruction provided by the pharmacist [3, 4, 11]. To minimise complications adhere to the following principles:

- Use liquid medications as a first priority [4]
- Prepare medication forms as described above
- Consider the timing of medication administration in relation to enteral feeding (e.g. full or empty stomach) [4]
- Verify the position of the PEG tube before administering medication [4, 17]
- Use the medication port on the PEG tube to administer medications [4, 17]
- Use a syringe size greater than 30mls as smaller syringes create too much pressure on PEG tube [4, 17]
- Do not mix medications with enteral feed formula [3, 4, 11]
- Do not mix medications with other medications to avoid drug-drug incompatibilities [3, 4, 11]
- Flush the PEG tube with 30mls water before and after medication administration [3-5, 7, 17]
- Flush the PEG tube with 15mls water in between administration of different medications [4, 7, 11, 17]

6. Routine PEG Care

PEG site care

New PEG sites should be cleaned daily with gauze and sterile normal saline in an outward circular motion. Ensure the site is dried thoroughly and cover with a single gauze dressing. For the first 2 weeks the PEG tube should not be rotated [7, 17].

Mature PEG tube exit sites should be cleaned daily during normal hygiene with soap and warm water. Use a cotton tip to clean around the external bumper and ensure the area is dried thoroughly [3, 7, 8]. Observe the site for tenderness, irritation, redness or pressure and for the presence of any discharge or leakage. Unless there is a large amount of gastric leakage the site should be left uncovered [3, 17].

PEG tube care

Problems can occur if the tube tension is incorrect. Excessive tension between the internal and external bumpers can cause ulceration at the tube exit site or internally in the mucosal layer of the stomach ("buried bumper syndrome"). To prevent this occurring, after initial healing (2 weeks) the PEG tube should be rotated 180°-360° each day (or according to manfuacturer's instructions). Ensure the tension is right between the two bumpers and that a small amount of tube remains between the external bumper and the resident's skin [3, 5, 7, 17]. Check the tube on a daily basis for cracking, distortion or deterioration and request replacement of worn PEG tubes to prevent emergencies [17].

7. Managing Common Complications

Tube dislodgment

Tube dislodgment can occur when the PEG tube either slides in or out of the GI tract. If the tube slides too far in to the GI tract it can obstruct the gastric outlet leading to nausea and vomiting. If the internal balloon deflates or the external bumper or disc are inadvertently removed the PEG tube can slide out and the tract can quickly close [17]. Severe vomiting or coughing may also cause tube dislodgment [7]. The following strategies reduce the risk of tube dislodgement and detect any tube migration:

- Check the security of the external disc every shift [3, 17].
- Use a PEG anchoring device to secure the tube [3, 17].
- Provide education to the resident and staff members on avoiding any pulling on the tube [3, 17].
- Measure and document PEG tube markers to record the length of tube outside the resident's body. Verify the length of the tube each shift and report discrepancies [7, 17].
- Assess residual gastric fluid each shift to determine correct positioning of the PEG tube [3, 7, 17].

If incorrect internal placement of the tube is suspected, cease feeds immediately and contact the resident's GP, locum GP services or the emergency department to arrange for radiology assessment and replacement of PEG tube if required. If a PEG tube falls out [3]:

- Provide comfort and reassurance to the resident and assist the resident to bed.
- If the tract is immature (< 2 weeks) clean the exit wound with normal saline, apply a sterile dressing and contact the emergency department to organise for replacement of the PEG tube.
- If the tract is mature (> 2 weeks) insert a similar size sterile Foley's catheter as soon as possible to maintain patency of the tract and cover the site with gauze. Contact the emergency department to organise for replacement of the PEG tube.

Although replacement of a PEG tube may be performed as a bedside procedure [3], air auscultation, visualisation of aspirate, and pH testing of aspirate have been reported as unreliable indicators of placement [7] and clarification of the PEG tube position is best achieved using radiology services [6, 7].

Tube Blockage

Tube occlusion occurs frequently, especially with small-bore feeding tubes. Causes of tube occlusion include [4, 7, 11, 17]:

- thick formulas and/or formula residue adhering to the tube;
- reflux of gastric contents into the feeding tube;
- inadequately crushed medications;
- incompatibilities between medications and enteral feeds;
- inadequate tube flushing.

Prevention of blockage should be a priority. Administer medications according to the guidelines provided in this clinical information sheet, flush PEG tubes with 20-50ml warm water every 4-8 hours, before and after each medication, before and after administering feeds and before and after aspirating residuals [4, 7, 8, 11, 17].

If a tube becomes occluded:

- address the blockage within 24 hours [11]
- check the tube for kinking [4]

- cranberry juice, coca-cola and other fizzy drinks are acidic and may contribute to clogging rather than relieve it [4, 7, 17]
- place a flushing syringe in the tube end and gently pull back on the plunger to dislodge clogging [4]. Use a syringe >30ml as the pressure exerted by smaller syringes can damage the tubing [4, 7, 17]
- if the blockage remains, instill 20-50ml warm water [3, 4, 7]
- using the syringe apply gentle pressure alternating with suction [4]
- milk the tubing from the insertion site outwards with care not to pull on the tube [4]
- pancreatic enzymes can be used and are the most effective method of unclogging the tube [4, 7]
- if unsuccessful, arrange contact the resident's GP, locum GP services or the emergency department to arrange for replacement of the PEG tube [3].

Leakage from the tube site

A poorly secured PEG tube can pivot, resulting in skin granulation and widening of the tract. Gastric fluid leakage can result in skin excoriation and potential wound infection [5, 17]. Use the following prevention and management principles:

- To prevent leakage stabilise the PEG tube and position the bumper just above skin level, not taunt against the skin [5, 17];
- Maintain the resident in an upright position following a feed, then lie the resident on his or her right side [5];
- Frequently inspect the exit site for redness, tenderness, swelling and signs of leakage [5, 17];
- Only use a dressing if there is a large amount of leakage [17];
- Protect skin from breakdown using protective barrier creams [17]; and
- Consider tube replacement if there is a large amount of leakage or severe skin breakdown [17].

Vomiting

Vomiting may occur due to enteral feeding or from an unrelated cause. If the resident vomits, withhold enteral feeds and identify possible causes of the vomiting. Check the placement of the PEG tube to determine if the tube has dislodged and caused gastric outlet obstruction [17]. Reduce the feeding rate and gradually increase it until the regular feeding rate is resumed. If the resident continues vomiting contact the resident's GP or locum GP services [3].

Diarrhoea

Diarrhoea in residents receiving enteral feeds may be a sign of intolerance or infection, however the most common causes are drug related [6]. Antibiotics are the major cause of diarrhoea, as well as liquid medications with a high level of sorbitol [4, 6]. If the resident's medication regime or past medical history does not indicate a cause for diarrhoea, other possible reasons include osmolality of the formula, feeding rate or bacterial contamination of the feed [6]. The resident should be reviewed by the GP and dietician, and infection control processes should be audited.

Constipation

If constipation is a regular occurrence the resident should be reviewed by the dietician and GP. Feeding regime may require alteration to increase fibre or fluid intake. Laxatives may be ordered by the resident's GP. Constipation should be avoided through establishing regular bowel management regimes and preventative measures such as encouraging ambulation [3].

Aspiration

Aspiration occurs when materials such as gastric contents, food or saliva is inhaled into the airway. It may present silently, or the resident may have signs and symptoms including cough, choking or acute respiratory distress [16]. Aspiration may be inconsequential or may lead to pneumonia and death [6, 16]. There is an increased risk of aspiration in residents with impaired consciousness, altered airway defenses and depressed immune systems [7, 16]. Jejunostomy feeding has a lower risk of aspiration than gastrostomy [6, 16], and using intermittent or continuous gravity feeding regimes rather than bolus administration has also been shown to lower the risk of aspiration [5, 6].

The following precautions should be taken to reduce the risk of aspiration:

- Raise head of bed 30°-45° during feeding [5-7, 16]
- Maintain the resident in the upright position for at least 30minutes following feeding [3, 6]
- Routinely test residual gastric volumes [6, 7]
- Infuse formulas slowly [5, 6]

- Monitor the resident for abdominal distension, altered bowel function, complaints of bloating or fullness [6, 7, 16].

8. Other Considerations with PEG Feeding

PEG feeding in advanced dementia

The use of enteral feeding for residents in the end stages of dementia is a controversial and an emotional issue, and it is a decision that requires individual and careful consideration by the resident's representative and the health care team [12, 13]. Common reasons cited for the initiation of PEG feeding in advanced dementia include prolonging survival; improving function and quality of life; prevention of aspiration, pressure sores and infections; and for palliative care [12, 13]. However, systematic review of the evidence suggest:

- Residents with advanced dementia and PEG tubes are more likely to be restrained [3, 12, 13].
- Weight loss and malnutrition persists in advanced dementia even when PEG feeding of generous enteral feeding supplements is instigated [12, 13].
- No data indicates that tube feeding decreases the risk of aspirate pneumonia, and in some studies the rate of aspirate pneumonia has been reported as 58% higher in residents with PEG tubes [6, 12, 13, 16].
- Evidence linking malnutrition to the development of pressure sores is weak, and no evidence suggests that tube feeding decreases the risk of pressure sores [12, 13].
- Survival rate of residents with advanced dementia is not improved by placement of a PEG tube [12, 13]. Median survival rate after PEG insertion is less than 1 year, with < 40% of PEG recipients surviving more than 1 year. The mortality rate from PEG procedure is 2% [12]. Stuides have shown that a carefully hand-fed resident with advanced dementia has the same survival rate of a non-demented ACH resident [12].
- No evidence suggests that the rate of other infections (e.g. UTI) is reduced by insertion of a PEG tube, and having a PEG tube may increase the risk of infection (e.g. infectious diarrhoea, wound infection) [12].
- PEG feeding has no been shown to improve physical function, strength, bowel or bladder function, ambulation, mental status or performance of ADLs in ACH residents [12, 13].
- Studies suggest that terminally ill residents generally do not experience significant hunger and thirst, therefore tube feeding does not improve comfort in this respect [12, 13].
- Placing a PEG tube exposes the resident to risk of skin breakdown, diarrhoea, constipation, tube occlusions and a variety of other risk factors that are often uncomfortable and may decrease quality of life [1, 3, 12, 13].

Education

ACH staff and other health professionals should be provided regular education on hand decontamination, infection control principles, enteral feeding and management of the feeding administration system [8]. Residents and their relatives should be given ongoing education about the purposes of enteral feeding and taught strategies to reduce manipulation of the PEG tube.

Ongoing management

Weekly or twice weekly weighing is more effective than daily weighing (which is influenced by variations in fluid balance) [7]. The health care team, including ACH staff, GP, pharmacist, dietician and the resident and/or representatives should review the resident's progress on an ongoing basis [15].

9. Sources of Information

Where to go for More Information

Percutaneous Endoscopic Gastrostomy (PEG) Care Service

This is a service provided by Flinders Medical Centre, Sth Australia for individuals with PEG tubes. The service provides support and advice with managing PEG problems as well as education and support for carers, individuals and their families.

Contact: (08) 8204 5511 Pager 2386

Digestive Health Foundation (DHF)

Educational branch of the Gastroenterological Society of Australia (GESA) responsible for community awareness and education related to the digestive system.

Contact: (02) 9256 5454
Website: http://www.gesa.org.au/index.htm

Joanna Briggs Institute
An organisation that provides evidence based practice educational resources including literature reviews, procedures and guidelines for health professionals and facilities. A collaborating centre, the Australian Centre for Evidence Based Aged Care is located in Melbourne. Some services are limited to members only.
Contact: 9495 3118
Website: http://www.joannabriggs.edu.au/about/about.php

References

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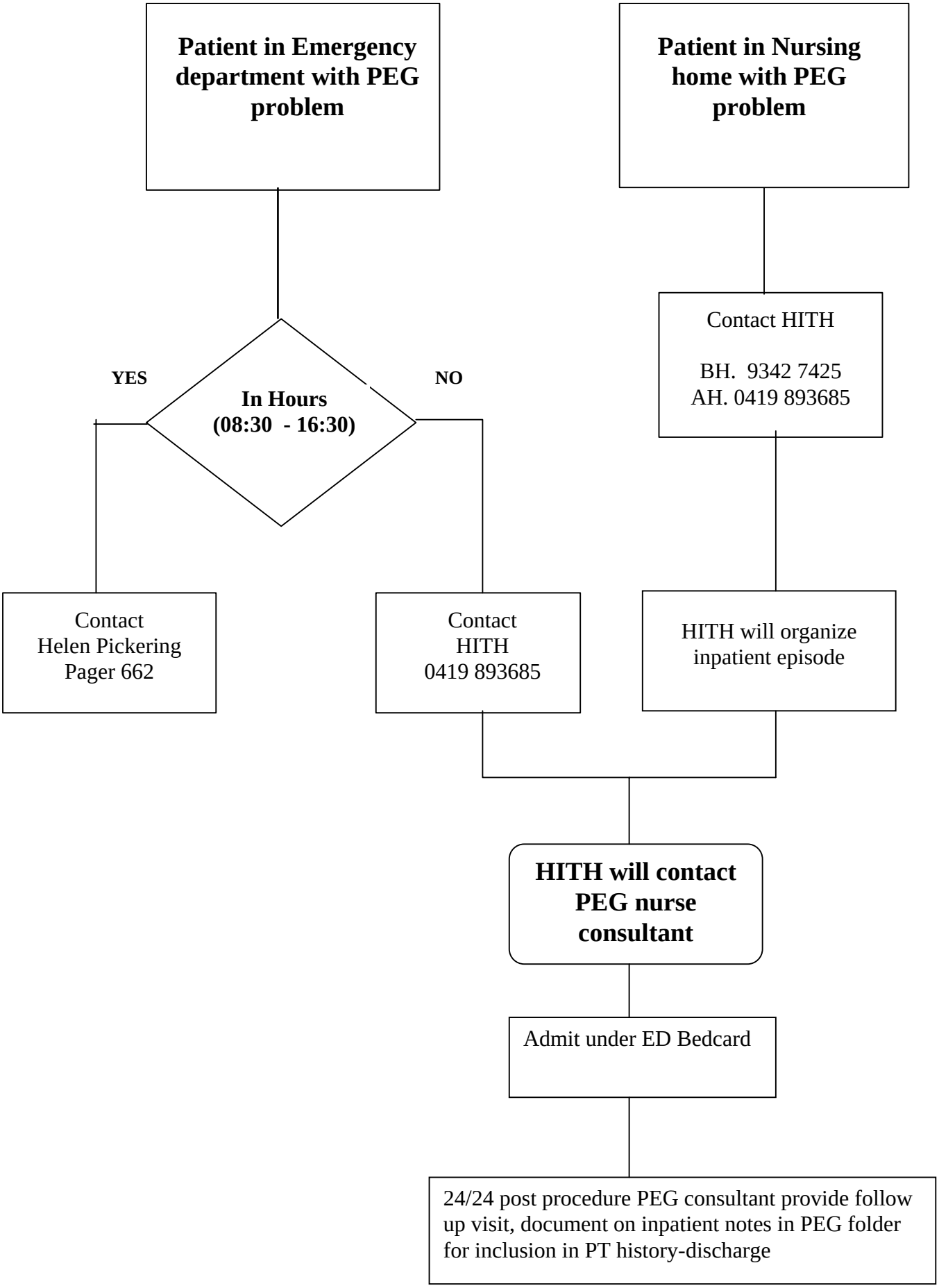
17. P Guenter, *Mechanical complications in long-term feeding tubes*, in http://nsweb.nursingspectrum.com/ce/ce201.htm *(accessed April 2004)*, University of Chicago Hospitals. 2004

Levels of Evidence

The information presented is developed from Level I evidence produced by the American Gastroenterological Association and reputable Level IV evidence, including the JBI Aged Care Manual that was developed from a comprehensive literature review; and consensus guidelines produced by the Hong Kong Geriatrics Society . Information presented on the role of enteral feeding in advanced dementia is based on Level I evidence. The following table outlines the level of evidence of each reference:

Ref No	Author	Year	Level of Evidence (refer to Section 6 of the Aged Care After Hours Kit for explanation)
1	K Dollard,G Young	1999	Level IV evidence
2	The Standards of Practice Committee of the American Society for Gastrointestinal Endoscopy	2002	Level I evidence
3	Hong Kong Geriatrics Society	2003	Level IV evidence
4	P Guenter	1999	Level IV evidence
5	University of Texas Medical Branch	2001	Level IV evidence
6	American Gastroenterological Association	1995	Level I evidence
7	Joanna Briggs Institute	2003	Level IV evidence
8	National Collaborating Centre for Nursing and Supportive Care	2003	Level IV evidence
9	Australian Nursing Council	2003	Level IV evidence
10	Australian Nursing Federation and the Royal College of Nursing Australia	2004	Level IV evidence
11	M Mateo	1994	Level IV evidence
12	T Finucane, C Christmas, K Travis	1999	Level I evidence
13	I Li	2002	Level IV evidence
14	N Jackson	2002	Level I evidence
15	Aged and Community Care Division Commonwealth Department of Health and Aged Care	2001	Level IV evidence
16	M Opilla	2003	Level IV evidence
17	P Guenter	2004	Level IV evidence

PERCUTANEOUS ENDOSCOPIC GASTROSTOMY MANAGEMENT



Clinical Information Sheet

Subcutaneous Hydration

The attached clinical information sheet has been developed to assist ACH staff and medical practitioners in managing subcutaneous hydration within a palliative care context and in the clinical treatment of dehydration of residents.

We will revise this pilot Aged Care Home Clinical Information Sheet in September 2004.
A version for GPs and locum doctors may also be produced based on medical practitioners' comments on this document.

Please give feedback to Dr Denise Ruth or Rita Wong on 03 8345 5600 or email admin@nwmdgp.org.au.

Updates and other resources will be made available on www.nwmdgp.org.au.

Aged Care Home After Hours Kit

Clinical Information Sheet

Subcutaneous Hydration

This clinical information sheet has been developed to assist ACH staff and medical practitioners in managing subcutaneous hydration within a palliative care context and in the clinical treatment of dehydration of residents.

The clinical information sheet will cover:
- Indications for using subcutaneous hydration
- Clinical procedure for commencing a continuous subcutaneous infusion
- Ongoing use of a continuous subcutaneous infusion.

This clinical information sheet should be used with consideration to:
- the resident's preferences, existing medical care plans, and advance care plan
- the health professional's knowledge, preferences and professional experience
- policies and resources available within the ACH

Pilot document developed: March 2004 To be reviewed: September 2004

1. Introduction

Background

This clinical information sheet is informed by a literature review of current evidence conducted by Joanna Briggs Institute, as well as recommendations from Melbourne Citymission Palliative Care Manual. The information sheet has been developed with consideration to legislation and any requirements of or recommendations from professional registration groups or regulating bodies (eg. NBV, RCNA, ANF) overseeing the aged care industry in Victoria, Australia. It was developed using the process outlined in the Aged Care Home After Hours Kit, Section 6: Clinical Information Sheets, and a corresponding information sheet has been developed for GPs working with ACHs.

The place of subcutaneous hydration in the care of residents is to assist in clinical care and symptom management in the aged care home rather than moving a resident to an inpatient setting. . It should be based on individual assessment , and can be a suitable option in some cases where a middle line between hospital transfer or no treatment is appropriate. Of the aged care residents referred to the Melbourne City Mission palliative care service approximately one third may have subcutaneous fluids used. This occurs usually when swallowing is no longer possible and in the transition time from deterioration to dying which could be several days or weeks. Benefits include avoidance of relative(s) distress at sudden loss of fluid intake, discussion and recognition of patient care being palliative, review of end of life aims and goals of care, and avoidance of unnecessary hospital transfers. As more residents develop advance care plans and services are better equipped to provide palliative and medical care within facilities, subcutaneous hydration may become more widely used.

Purpose

This clinical information sheet has been developed to assist staff members in ACHs to manage subcutaneous hydration of a resident, and to encourage an active partnership between the resident's GP and the ACH. The purpose of this clinical information sheet is to:

- provide guidance to ACH staff members on subcutaneous hydration;
- provide clinical guidance in the commencement of an infusion;
- promote a positive health outcome for the resident;
- support palliative care treatment in the ACH; and to
- prevent unnecessary hospital admission.

Responsibilities

The clinical information sheet applies to all ACH staff and medical practitioners. ACH staff and medical practitioners are responsible for initiating treatment within their scope of practice when an individual is exhibiting signs or symptoms of dehydration. In-service training sessions can be arranged to familiarise health professionals with the procedure.

Subcutaneous hydration can be administered by a registered nurse who has been instructed and assessed as competent in the procedure, on the orders of a medical practitioner [1]. All ACH staff members involved in the care of a resident with a subcutaneous hydration line should be trained in aseptic technique.

2. Indications for using Subcutaneous Hydration

Continuous subcutaneous infusion (CSCI) (also called hypodermoclysis) is the administration of fluids into the subcutaneous layer of the skin where there is an extensive lymphatic and blood vessel system through which fluids can be absorbed [1]. A CSCI of fluids offers a method of hydration in the ACH that can assist in care and symptom management in the aged care home rather than moving a resident to an inpatient setting. CSCI is a valid method by which to manage dehydration, where the dehydration does not require rapid correction [1]. Its use can provide symptom control in a palliative care context [2-4]. The CSCI is appropriate in care when:

- the resident cannot swallow & requires or requests assisted hydration [1-4];
- the resident has uncontrolled nausea and vomiting [1, 3, 4];
- the resident has bowel obstruction [3, 4];
- managing recurrent hypercalcaemia [3, 4];
- managing delirium whose aetiology is believed to be due to opioid metabolite accumulation [3];
- the resident has impaired venous access [2, 4]; or

- the resident and/or resident's representative feels a need to continue hydration and they remain firm in their belief [3, 4].

The CSCI is appropriate for short-term use when prescribed by a medical practitioner in other clinical contexts when:

- there is a likely reversible clinical cause of dehydration;
- the underlying cause can be treated on site;
- hydration by CSCI is likely to be effective; and
- care options are discussed between doctor, care staff and the resident/representative CSCI is preferred to ED transfer and/or therapeutic inaction [3].

CSCI does not prevent the resident from showering and bathing. The infusion can be discontinued at any time should the oral route become available again, the resident requires IV therapy, or decisions are made to limit or cease its use.

Risks and Contraindications

The agent/client needs to agree to their use as appropriate for what the person's wishes are. CSCI should not be used as a method of hydration in emergency situations (e.g. shock, severe dehydration) or in residents with fluid overload (e.g. cardiac failure, pulmonary oedema), hypotension or clotting disorders [1, 4]. Relative risks are severe hypoalbuminaemia, lymphoedema with subcutaneous limb or truncal oedema, or evidence of subcutaneous sepsis/infection.

Complications of use include local adverse reactions such as oedema, cellulitis, erythema and strong pain [4, 5], and local complications have been reported to occur at approximately the same rate as in residents who are hydrated intravenously [5]. There is a small risk of systemic adverse reaction such as acute cardiac failure, hyponatraemia and development of sepsis leading to death [4, 5] however the risk of serious complications from CSCI has been reported as significantly lower than IV therapy [5].

3. Clinical Procedure for Commencing a Continuous Subcutaneous Infusion (CSCI)

CSCI Orders

Ensure there is a current, legible medical practitioner's order in writing. CSCI is usually ordered in the volume of 0 to 1000ml per 24 hours as required [3], and should be administered at a rate not exceeding 1ml/min [1]. It is recommended that no more than 1.5L be administered per site per 24 hours. Where additional fluid is required, a second CSCI site should be established [1]. There is no consensus on the best fluid to use for CSCI, with recommendations varying from saline, dextrose solution or a combination of saline and glucose [1, 4]. A hypertonic solution should generally be avoided, as should using additives.

Equipment

The following equipment is required:

- Fluid as prescribed (usually1 LITRE Normal saline)
- 21G Saf-t-intima s/c needle set
- Alcohol swabs
- Semi-permeable transparent dressing
- Standard IV giving set
- IV pole
- Non-sterile gloves
- Fluid balance chart

Where a Saf-t-intima s/c needle set is unavailable, a 19 or 21 gauge butterfly needle can be used [1, 2, 4].

Ensure there is adequate stock to maintain the on-going infusion (eg additional fluid bags, IV giving sets) or arrange for supplies of same as per facility policy.

Site of Insertion [1-4]

- Select a site where the needle will not be jostled, and ask the resident his or her site preference. Appropriate locations would be:
    - ✓ The upper chest (intercostal plane but avoiding breast tissue)
    - ✓ Abdomen
    - ✓ Outer aspect of thighs
    - ✓ Scapula
    - ✓ Arm
- Areas of oedema are not suitable for absorption
- If there are absorption problems select abdomen or chest
- Remember it is difficult finding an area of adequate subcutaneous tissue in a cachectic or emaciated resident
- Rotate site regularly if skin reactions are identified
- A second butterfly needle can be inserted elsewhere for easy access for administration of subcutaneous medication.

Clinical Procedure [1-4]

1. Explain the procedure, answer questions and prepare resident.

2. Check fluid with written doctor's order. Check the fluid is the correct type and amount and that the fluid has not expired. A visual inspection should be made of the bag to ensure it is intact and in good condition.

3. Wash hands. Assemble and set-up equipment. Prime the giving set including the winged needle with the prescribed fluid.

4. Choose site.

5 Wash and dry hands thoroughly and put on non-sterile gloves.

6. Cleanse site with alcohol swab. Allow to dry.

7. Insert saf-t-intima needle. Gently pinch a well-defined amount of tissue between your index finger and thumb. Insert needle into the base of the pinch at a 45-degree angle with beveled edge facing up. Remove the metal needle insert, leaving the plastic initima insitu. The needle should be situated in the subcutaneous space, above the underlying fascia. It should move freely in that space.

   NB: When using the abdomen direct the needle laterally to prevent pinching when the patient sits or bends. If blood return is noted, withdraw the needle. Repeat the procedure using a new needle and an adjacent site.

8. Dress the insertion site with a clear occlusive dressing (e.g. opsite) to allow for regular observation of the site. Coil the butterfly line and apply transparent dressing, ensuring the needle and tubing are anchored well to avoid displacement. Ensure the resident is comfortable.

9. Attach giving set to winged butterfly needle.

10. Most infusions can be run by gravity. Attach the fluid bag to an IV pole positioned at least 1 metre above insertion site.

11. Document details in the resident's progress notes and commence a fluid balance chart.

4. Ongoing Use of a Continuous Subcutaneous Infusion

Administration and Cessation of Fluids

- There is no need to flush between fluid bags if the same fluid is going into the same site .
- Use a separate site for medications being given subcutaneously.
- At any time the GP nursing staff, carers and resident and/or the resident's representative may decide together to cease the CSCI.
  Reasons for cessation include [3, 4]:
  - ✓ Resident in terminal phase of illness
  - ✓ Excessive fluid accumulation causing oedema and pain
  - ✓ Urinary frequency and /or incontinence
  - ✓ Absorbed fluid contributing to cardiac failure and pulmonary oedema
  - ✓ Resident does not tolerate therapy, or requests the therapy to be ceased

Monitoring CSCI

- The site should be checked at least once per shift for signs of complications including oedema, redness, inflammation and pain. A clear occlusive dressing is best for the visibility and security of the site, eg. tegaderm or opsite [1-4].
- The resident should be monitored for signs of fluid overload and a fluid balance chart should be maintained.

CSCI site and line changes

- It is currently recommended that the giving set be changed every 72hrs to decrease potential complications [2, 4].
- There is no consensus on the recommended frequency for cannula changes, with recommendations varying from 24-48 hours [1, 2, 4]. Before deciding to relocate the CSCI site, determine that any signs are related to inflammation rather than manipulation of the needle site (eg. starting a new site, changing the dressing). At the first sign of inflammation, change the site. If the redness is related to manipulation, do not relocate the site, however the site should be monitored more frequently. Sofsets or silastic catheters (small angio-catheters, size 24 or less), can be used in the case of metal allergies or rare absorption problems [3].

5. Other Considerations

Education to residents and carers

The GP and care team should consult the resident and his or her family making decisions relating to CSCI therapy. Simple and concise information should be provided to the resident and carer regarding the purpose of the CSCI and its use, and problems that can be encountered. The effectiveness of this education will depend on many factors, including the resident/carer levels of anxiety, command of English and literacy [3].

6. Sources of Information

Where to go for More Information

Draft Guidelines for a Palliative Approach in Residential Aged Care.
Hydration for symptom control and comfort of a resident is discussed in the Guidelines for a Palliative Approach in Residential Aged Care. Draft for Public Consultation (November 2003) prepared by the Australian Palliative Aged Care Project.
Contact: Ros Casey r.casey@ecu.edu.au or (08) 9273 8622.
Website: http//www/apacproject.org.

ThePalliative Care Victoria web site has information information on end of life hydration issues.
Website: www.pallcarevic.asn.au

Aged Care Home staff can contact their local Palliative Care Service for assistance and training in using subcutaneous hydration.

References

1. Joanna Briggs Institute, *Aged Care Practice Manual*. 2nd ed. 2003, Adelaide: JBI.
2. S Mansfield, H Monaghan, J Hall, *Subcutaneous fluid administration and site maintenance.* Nursing Standard, 1998. 13(12): p. 56,59,60,62.
3. Melbourne Citymission, *Palliative Care Clinical Guidelines. Hypodermoclysis Procedure - Hydration using a continuous subcutaneous infusion*. 2003, Melbourne: Melbourne Citymission.
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5. G Slesak, J Schnurle, E Kinzel, J Jakob, K Dietz, *Comparison of subcutaneous and intravenous rehydration in geriatric patients: a randomized trial.* JAGS, 2003. 51(2): p. 155.

Levels of Evidence

The information provided was informed by a Joanna Briggs Institute level IV evidence literature review of evidence on the effectiveness of subcutaneous hydration and aspects of its delivery. Supporting evidence from Melbourne Citymission was used with permission. Information on the contraindications and risks of CSCI was based on level II evidence from a RCT conducted in ACHs. The level of evidence of references used to compile this clinical information sheet is provided in the table below:

Ref No	Author	Year	Level of Evidence (refer to Section 6 of the Aged Care After Hours Kit for explanation)
1	Joanna Briggs Institute	2003	Level IV evidence
2	S Mansfield, H Monaghan, J Hall	1998	Level IV evidence
3	Melbourne Citymission	2003	
4	L Yap, S Tan, W Koo	2003	Level IV evidence
5	G Slesak, J Schnurle, E Kinzel, J Jakob, K Dietz	2003	Level II evidence

Clinical Information Sheet

Managing a resident after a fall

The attached clinical information sheet has been developed to assist ACH staff to work in partnership with GPs and locum doctors for the management of a resident after a fall.

We will revise this pilot Aged Care Home Clinical Information Sheet in September 2004.
A GP version may also be produced based on GP and locum doctor comments on this document.

Please give feedback to Dr Denise Ruth or Rita Wong on 03 8345 5600.

Email admin@nwmdgp.org.au.

Other resources and updates will be made available on www.nwmdgp.org.au.

Aged Care Home After Hours Kit

Clinical Information Sheet

Managing a Resident After a Fall

The following information has been developed to assist ACH staff in making clinical decisions in the assessment and management of a resident after a fall.

The clinical information sheet will cover:

- Assessing a resident after a fall
- Indications for referral
- Reducing the risk of further falls
- Sources of information

- Flow chart for management after a resident falls
- Neurological observation chart
- Sample incident form for reporting a resident fall

This clinical information sheet should be used with consideration to

- the resident's preferences, existing medical care plans, and advance care plan;
- the health professional's knowledge, preferences and professional experience;
- policies and resources available within the ACH, including Falls Prevention Programs.

Pilot document developed: March 2004 To be reviewed: September 2004

1. Introduction

Background

This information sheet was based on Level I evidence produced by the National Institute for Clinical Excellence (London), and American Geriatrics Society, British Geriatrics Society, American Academy of Orthopaedic Surgeons Panel on Falls Prevention as well as clinical guidelines and procedures developed by Joanna Briggs Institute and Queensland Health. The information sheet has been developed with consideration to legislation and any requirements of or recommendations from professional registration groups or regulating bodies (eg. NBV, RCNA, ANF) overseeing the aged care industry in Victoria, Australia. It has been developed using the process outlined in the *Aged Care Home After Hours Kit – Section 6 Clinical Information Sheets,* and a corresponding clinical information sheet has been produced for GPs who work with ACHs.

Falls occur frequently among residents of aged care homes, and residents who have had previous falls are at higher risk [1]. The risk of hip fracture for nursing home residents has been calculated to be 7% per annum [1]. In the needs assessment reported in Section 2 page 3 of this kit, falls and injury was the major reason for after hours medical care for residents, accounting for 19.3% of medical locum doctor visits and 40% of ambulance transfers to hospital emergency department. Nearly half (43%) of those residents attending ED after a fall required admission. This clinical information sheet addresses the need for timely and appropriate assessment and referral of a resident at the time of a fall. It is complementary to existing falls risk assessment guidelines [7,8].

Purpose

This clinical information sheet has been developed to assist in the management of a resident who falls, and to encourage an active partnership between the resident's GP and the ACH staff in immediate management of the resident who falls as well as in on-going falls reduction strategies.

The purpose of this clinical information sheet is to:

- promote a positive health outcome for the resident
- provide guidance to ACH staff members in assessing and managing a resident after a fall
- prevent unnecessary hospital presentation
- promote hospital presentation and admission when this is in the best interests of the resident
- provide basic information for ACH staff on reporting and reviewing a resident fall
- reduce a resident's risk of further falls.

Responsibilities

The clinical information sheet applies to all staff members and medical practitioners attending the care of residents in the ACH. Registered nurses Div 1 and 2, PCWs, medical practitioners and the designated person-in-charge of the ACH are responsible for initiating treatment within their scope of practice when a resident in the ACH falls.

Medical practitioners are responsible for clinical assessment, management and review of a resident after a fall, at the request of ACH staff. The resident's GP is also responsible for review of falls risk, including medication review in consultation with ACH staff.

2. Assessing a Resident After a Fall

Procedure for Clinical Examination after a Fall [2-5]

For quick reference, this procedure has been summarised in Appendix I.

1. Determine if there is any danger to yourself in the environment (eg. water on the floor, blood) before attending the resident.

2. Call for help using the ACH's procedures (eg. emergency call bell or pager system)

3. Initial assessment
   Conduct an immediate assessment of the resident whilst they remain on the ground, or in the position where they fell.

- Quickly assess the resident's airway, breathing and circulation to determine whether they need resuscitation. If so, follow the ACH CPR policy, resident's advance care plan or documented NFR orders, and if appropriate ***contact an ambulance immediately***.
- Identifying the position of the resident will assist in determining parts of the body that may have sustained injury.

4. Response and Level of Consciousness
   - Determine the resident's response and conscious state. (see Neurological Observational Chart)
   - If resident is unconscious, place the resident in the left lateral position, commence head injury observations and ***contact an ambulance immediately***.

5. Airway and Breathing
   - If the resident is unconscious, check the airway is clear and assess for any alterations to anatomy, chest movement and air entry and signs of cyanosis
   - Assess the rate, rhythm, depth and effort of breathing
   - If resident is not breathing ***contact an ambulance immediately***. Follow the ACHs CPR policy.
   - If resident's breathing is unstable or irregular, apply oxygen and ***contact an ambulance immediately*** .

6. Circulation
   - Visually inspect the resident and identify any injuries that are bleeding.
   - Stop any bleeding by applying pressure to the wound.
   - Assess the rate, rhythm and quality of the resident's pulse.
   - Take the resident's blood pressure.
   - Assess the severity of any wounds.
   - If resident will require sutures, contact the resident's GP, locum GP or an ambulance.
   - If resident will not require sutures, assess the wound and apply an appropriate dressing to lacerations and tears.

7. Assessment of Head Trauma
   - Visually inspect head for signs of injury.
   - Run hands over resident's head inspecting for signs of injury (e.g. bumps)
   - If the resident has any signs or symptoms of head injury or states that they have hit their head, commence neurological observations (see Appendix II page 10 Neurological Observations) and notify the resident's GP or an ambulance.

8. Assessment of Lower Body
   - Run hands over lower extremities observing for abnormalities or pain.
   - Observe the resident for signs of a fractured neck of femur (#NOF) including shortening of leg or external rotation of leg. If these signs are present, assume the resident has a #NOF and arrange for transfer to hospital.
   - Assess the resident for reduced range of movement of lower extremities. Consider the resident's functional status prior to the fall.
   - If the resident is experiencing pain, swelling, displacement, disfigurement or reduction in mobility, contact the resident's GP or locum GP to organise an Xray.

9. Assessment of Upper Body
   - Run hands over upper extremities observing for abnormalities or pain.
   - Assess the resident for reduced range of movement of upper extremities. Consider the resident's functional status prior to the fall.
   - If the resident is experiencing pain or reduction in mobility, contact the resident's GP to organise an Xray.

10. Record a set of observations (heart rate, blood pressure, respiration rate, temperature and BSL if indicated). If the resident has any observations that are abnormal for that resident, monitor the resident's condition closely, repeating observations half-hourly until stable. If the resident's condition does not stabilise, contact the resident's GP, locum GP or an ambulance.

11. Assist the resident to a comfortable position. Use a lifting machine to lift the resident – do not attempt to lift a resident off the floor. Ensure the comfort of the resident and provide counselling as required.

12. Question any witnesses to the fall to determine the likely cause of the incident. Complete an incident report according to ACH policy.

13. Notify the resident's next-of-kin or relatives. The next-of-kin should be contacted immediately if the resident has sustained an injury. If the resident has not sustained an injury contact the next-of-kin within the hours that s/he prefers to be contacted.

14. If the resident did not sustain any injuries requiring immediate contact of the resident's GP, ensure that communication is left (according to the ACH's policy) to inform the GP of the event the next time s/he reviews the resident.

15. Record the event in the resident's progress notes and inform other staff members.

3. Indications For Referral

Head Injury

If the resident has sustained a head injury, the following criteria are indications for referral to hospital:

- impaired consciousness (at any time since injury)
- amnesia for the incident or subsequent events
- a fall that suggests a possible penetrating brain injury
- neurological symptoms, e.g.
  - severe and persistent headache
  - nausea and vomiting
  - irritability or altered behaviour
  - seizure
  - evidence of a skull fracture (e.g. CSF leak)
  - Significant extracranial injuries
- uncertainty about the diagnosis after first assessment
- significant medical problems, e.g. anticoagulant use [4, 6].

In making this assessment the registered nurse should consider the resident's previous clinical condition and any advance care planning requests made by the resident and/or his or her representative.

Other Indications for Referral

The following signs and symptoms (where they are a change from the resident's normal clinical condition) indicate immediate referral [3]:

- shortening of leg or external rotation of leg – referral to ambulance for hospital admission
- wounds requiring suturing – referral to locum GP
- extensive bruising, especially if the resident takes anti-coagulants – referral to locum GP for assessment
- changes to resident's vital signs – referral to locum GP for assessment
- pain and/or reduction in mobility –referral for an xray. Determine resident's level of immobility and pain and use clinical evidence to determine whether referral to locum GP is required or whether the resident's GP can assess the resident during normal hours.

4. Reducing the Risk of Further Falls

Collecting as much information as possible following a resident fall maximises the potential for establishing the cause of the fall and initiating improvements that will decrease the risk of future falls. Appendix III provides a sample incident form for reporting a resident fall.

Assessing the Environment

Environmental factors may play a part in either preventing or contributing to falls and the severity of injuries caused by falls. A clear description of the environment should be provided to identify any hazards that may have contributed to the resident's fall. When inspecting the environment be aware of the following:

- poor lighting
- uneven floor surfaces (e.g. slopes, steps, uplifting tiles etc)
- shiny or slippery floor surfaces
- mats and rugs
- obstacles on the floor including power cords
- unstable furniture that a resident may lean on (e.g. over-bed tables)
- cluttered furniture that may make it difficult to access areas of the room
- condition of equipment and furniture (e.g. broken railings, brakes that do not function)
- unsafe aspects (e.g. sharp edges) that may cause injury if a resident does fall or bump
- access to call bells or personal alarm (e.g. is there an alert system, is it functioning, can the resident reach it, is there an adequate response time by staff members)
- condition of and access to mobility aids [7].

Regular auditing of the ACH's environment can help reduce the risk of resident falls, and reviewing the environment immediately following a resident fall can assist in identification of causes of a fall and safety issues that require addressing [7].

Resident Falls Risk Assessment

Following a resident fall, comprehensive assessment of the resident should be conducted by the GP, ACH staff, physiotherapist and other appropriate health professionals in consultation with the resident and his or her relatives. This is a complex clinical area requiring a comprehensive assessment, however the minimum data that is required in assessing the resident's risk of a further fall includes information on:

- history of falls and pattern of injury
- confusion or altered mental state
- anxiety, mood disturbance or sleep disturbance
- sensory or visual impairment
- bowel and urinary continence
- gait and/or balance impairment
- medications
- cardiovascular status including heart rate and rhythm and postural pulse and blood pressure
- any acute conditions including infection, changes in blood glucose level [7].

Medication Review

It is recommended that elderly people at risk of falls and meeting the following criteria undergo a medication review:

- receiving four or more different types of medication
- taking one or more psychotropic medication (tranquillisers, antidepressants or sedative / hypnotics)
- use of cardiovascular medications
- with multiple medical conditions
- with suspected non-adherence
- with symptoms suggestive of an adverse drug reaction
- taking medications with a narrow therapeutic index
- taking more than 12 doses of medication / day [7].

Recommendations for Reducing Falls Risk

Working to reduce the risk of resident falls is essential when caring for older adults. This is an area requiring comprehensive care planning, individual resident and environmental assessments by an experienced multidisciplinary care team. For residents in ACHs, multifaceted interventions are more likely to have an effect in reducing resident falls than implementation of a single intervention in isolation [7, 8]. In brief, the following interventions may be considered after a thorough assessment of the resident:

- reducing the number of medications where possible[8]
- reduction or cessation of psychotropic medications where possible [7]
- review of medications that have a dehydrating effect, including laxatives and diuretics [7]
- promoting the use of mobility assistive devices (e.g. frames) [8]
- use of bed alarms and call bells [8]
- use of hip protectors to decrease risk of injury where a fall occurs [7, 8]
- management of any visual impairment [8]
- hard-soled, low heeled shoes [7, 8]
- individualised exercise programs with a goal of increasing muscle strength, balance and cardiovascular fitness [7]
- assessment of continence and implementation of an individualised continence management plan [7]
- restraint reduction where possible to decrease risk of serious injury if resident falls [7]
- comprehensive nutrition assessment and development of an appropriate meal plan and supplements [7].

5. Other Considerations

Falls Prevention Programs

It is recommended that each Aged Care Home implement a falls prevention program that aims to reduce the incidence of falls and injuries among its resident population. Review of resident's falls risk after a fall could be incorporated into the facility's falls prevention program.

Education on Falls

Residents, relatives and ACH staff should have access to education on managing and preventing falls. Education should include information on:

- the risk of falling, safety issues and activity limitations
- techniques for making position changes slowly and techniques for getting up following a fall
- balance and strength exercises/flexibility and joint stretching techniques/cardiovascular programs
- environmental modification
- use of hip protectors
- the importance of supervision and call bell/personal alarm systems [7].

6. Sources of information

Where to go for More Information

Individual residents can be referred for assistance with falls risk reduction to local Aged Care Assessment Services (ACAS) or hospital Falls and Balance Clinics. Some ACAS will assess a high level care resident at the aged care home.

Assistance with commencing a Falls Prevention Program at the Aged Care Home can be obtained through Falls Prevention Programs located at some local municipalities or hospitals.

National Aging Research Institute

NARI is a centre for medical research (biological, clinical and service delivery) into the causes and consequences of ageing and its social accompaniments. It has conducted several studies into falls prevention, and can provide training and advice on falls prevention.
Contact: 8387 2000
Website http://www.nari.unimelb.edu.au/

Joanna Briggs Institute

An organisation that provides evidence based practice educational resources including literature reviews, procedures and guidelines for health professionals and facilities. A collaborating centre, the Australian Centre for Evidence Based Aged Care is located in Melbourne. Some services are limited to members only.
Contact: 9495 3118
Website: http://www.joannabriggs.edu.au/about/about.php

Hornsby Hip Protectors
Hornsby Ku-ring-gai Hospital is conducting a Hip Protector study that is now in its final stages. The research has focused on the use of hip protectors to reduce injury following a fall and increase the confidence of individuals at high risk of falling. For further information on hip protectors, and to purchase supplies:
Contact: (02)9477-9768
Website: http://www.nsh.nsw.gov.au/hornsby/research/HipProtectionStudyUnit/Index.shtml

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6. National Collaborating Centre for Acute Care, *Clinical Guidelines 4: Head injury Triage, assessment, investigation and early management of head injury in infants, children and adults*. 1st ed. 2003, London: National Institute for Clinical Excellence.
7. Queensland Health, *Falls Prevention Best Practice Guidelines for Public Hospitals and State Government Residential Aged Care Facilities*. 3rd ed. 2003, Brisbane: The State of Queensland, Queensland Health.
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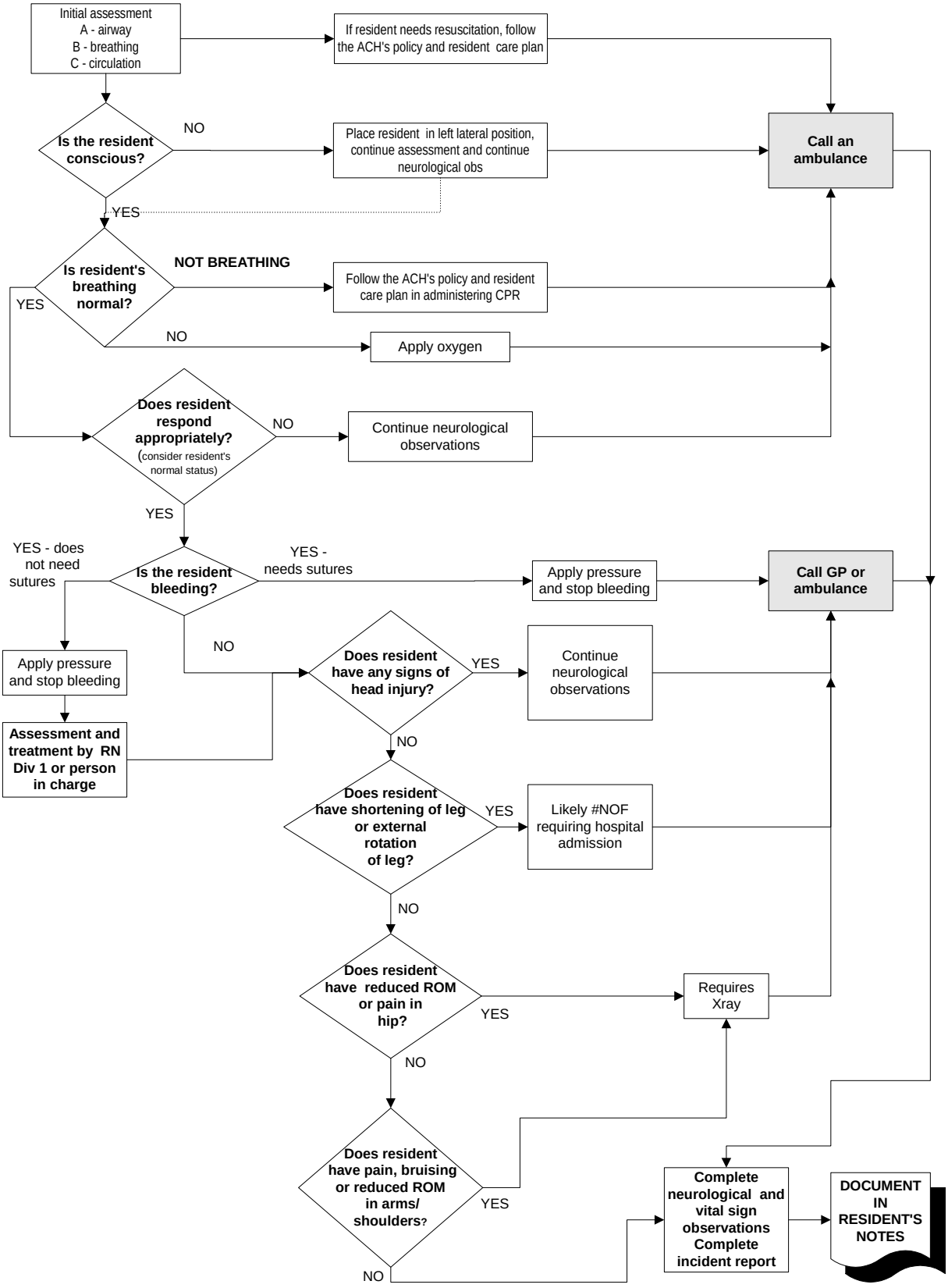
Levels of Evidence

The information for assessing a resident following a fall was developed from Level I evidence on management of head injuries produced by Scottish Intercollegiate Guidelines Network, as well as Level V evidence provided by ACHs detailing the procedures currently used for immediate assessment and management of a resident who falls. Limited published information could be located on recommendations for management of a resident who falls in an ACH. Information on falls assessments and prevention was developed from a variety of Level 1 and Level IV evidence sources. The level of evidence of all references used to compile this clinical information sheet is provided in the table below:

Ref No.	Author	Year	Level of Evidence (refer to Section 6 of the Aged Care After Hours Kit for explanation)
1	S Scherer, C Jennings, M Smeaton, P Thompson, M Stein	2002	Level IV
2	Holloway Hostel	2002	Level V
3	Roxborough Park	2004	Level V
4	Scottish Intercollegiate Guidelines Network	2000	Level I
5	Joanna Briggs Institute	2003	Level IV
6	National Collaborating Centre for Acute Care		Level I
7	Queensland Health	2003	Level IV
8	American Geriatrics Society, British Geriatrics Society, American Academy of Orthopaedic Surgeons Panel on Falls Prevention	2001	Level I

Appendix I - Flow Chart for Management after a Resident Falls



NEUROLOGICAL OBSERVATION CHART

RECORD No.

DATE

TIME

COMA SCALE

Eyes open
- Spontaneously
- To speech
- To pain
- None

Eyes closed by swelling = C

Best verbal response
- Orientated
- Confused
- Inapproriate words
- Incomprehensible sounds
- None

Best motor response
- Obey commands
- Localise pain
- Flexion to pain
- Extension to pain
- None

Usually record the best arrival response

Pupil scale (mm): 1 2 3 4 5 6 7 8

Blood pressure and Pulse rate: 240 230 220 210 200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10

Respiration

Temperature °C: 40 39 38 37 36 35 34 33 32 31 30

PUPILS
- Right: Size / Reaction
- Left: Size / Reaction

+ reacts
– no reaction
c eye closed

LIMB MOVEMENT

Arms
- Normal power
- Mild weakness
- Severe weakness
- Spastic flexion
- Extension
- No response

Legs
- Normal power
- Mild weakness
- Severe weakness
- Extension
- No response

Record right (R) and left (L) separately if there is a difference between the two sides

Neurological Observations

A standard chart should be used to record and display neurological observations assessments and vital signs including the Glasgow Coma Scale, pupil size and reaction and movements of limbs [3]. Neurological observations include assessment of conscious level, vital signs, pupil size and reaction, motor response, and verbal response [3-5].

Glasgow Coma Scale

The Glasgow Coma Scale uses objective observable characteristics and provides a scale by which to measure level of consciousness and response. The scale is used for assessment of eye opening, best verbal response and best motor response [3-5].

Eye Opening

Assessing eye opening provides an indication of the resident's arousal ability. Determine if the resident responds to speech (use a loud voice) or to touch. If the resident does not respond, apply pressure to the fingerbeds to determine if there is a response to painful stimuli. If the resident cannot open his or her eyes due to swelling, record "C", or if the resident's eyes remain continuously open this should be recorded as a non eye opening response [4].

Verbal Response

This assessment determines appropriateness of the resident's speech. The resident's attention should be gained and a conversation attempted, allowing adequate time for the resident to respond. In assessing the resident's best verbal response, consider the resident's preferred language, any diagnosed medical problems that may influence the resident's ability to respond (e.g. deaf, previous stroke) and level of confusion prior to the fall and determine if there are any changes to the resident's pre-fall condition.
Assess the resident's response and record:

- oriented - resident can respond appropriately to person/place/time
- confused - resident can talk but is not orientated
- inappropriate words – speaks only a few words, usually only in response to physical or painful stimuli
- incomprehensible sounds – unintelligible sounds such as moans
- none – no response after prolonged stimulation [3, 4].

Motor Response

Assess the resident using simple commands to determine if the resident has the awareness / ability to repond by movement. If the resident does not respond to verbal commands such as "squeeze my hands" or "open your eyes" check the resident's best motor response to painful stimuli by pressing the resident's fingerbeds. In assessing the resident's best motor response, consider the resident's usual level of comprehension, usual ability to move his or her body and any existing medical diagnoses that may contribute to the resident's ability to move (e.g. previous stroke, dementia).
Record:

- obeys command –follows your command
- localises pain – moves limb away from painful stimuli in a purposeful way or attempts to push painful stimulus away
- flexion to pain – responds to painful stimuli by bending arms up but does not localise pain
- extension to pain - responds to painful stimuli by straightening arms but does not localise pain [3, 4].

Assessment of Pupils

Assessment of the resident's pupil size and response to light can provide an indication as to presence and extent of head injury as a result of a fall. The neurological observation chart should provide a pupil scale on which to assess pupil size. An assessment should first be made as to whether the resident's pupils are of equal size and then whether they react equally to exposure to light [3, 4].

Assessment of Limb Movement

Assessment of the resident's limb movement can give an indication as to the presence and extent of head injury as a result of a fall. Instruct the resident to move their limbs laterally or lift up against gravity or against resistance. If the resident does not respond to your request, assess limb movement in response to pain. Observe the type of movement the resident can perform, and compare the strength of limbs on both sides of the body. In assessing the resident's limb movements and strength, consider the resident's previous condition and any medical diagnoses that may preclude normal limb movement (e.g. previous stroke, musculoskeletal disorders). Consider whether the resident has sustained injuries to the limbs during the fall that may preclude normal movement (e.g. fractures).
Record:

- normal power – movements are within the resident's normal power strength
- mild weakness – cannot fully lift limbs against gravity and struggles to move against resistance
- severe weakness – can move limbs laterally but cannot move against gravity or resistance
- spastic flexion – arms slowly bend at elbow and are stiff
- extension – limbs straighten [3, 4].

APPENDIX III – SAMPLE INCIDENT FORM FOR REPORTING A RESIDENT FALL

RESIDENT NAME: DATE OF BIRTH:
INCIDENT REPORTED BY:
INCIDENT WITNESSED BY:

Location of incident:

Date and Time of incident:

What was the resident doing when they fell?
……
……

Was the NOK/ relatives notified? YES NO

What assistance does resident need to walk?
ALONE 1 STAFF 2 STAFF DOESN'T WALK

Balance problems YES NO
Uses a wheelchair YES NO
Uses a walking aid YES NO
Specify type……
Was walking aid in reach? YES NO N/A

MEDICATIONS
Does the resident take any of the following medications?
Record time last administered before incident.

Diuretics NO YES: ……
Sedatives NO YES:……
Antihypertensives NO YES:……
Antipsychotics NO YES:……
Hypoglycaemics NO YES:……
Enemas/Supps NO YES:……
Narcotics NO YES:……

What footwear was the resident wearing?
Shoes slippers socks nothing other

Did the footwear fit properly? YES NO
Were they done up properly? YES NO
Does the resident have hip protectors? YES NO
Were the hip protectors on? YES NO

Was the floor surface wet? YES NO
Slippery/shiny floor YES NO
Mats/Rug present YES NO
Nonslip mat present YES NO
Uneven level/steps YES NO
Were any other hazards on the floor? YES NO
Unstable furniture present YES NO

What was the light level? BRIGHT DIM DARK

Vision Impaired YES NO
Was resident's glasses on? YES NO N/A

Was the call bell within reach? YES NO
Was the call bell used? YES NO

Were restraints in use? YES NO
Specify type……

Disorientated/Confused YES NO
Previous History of falls YES NO
Injuries sustained:……
……
Was GP or ambulance called?……
……

SKIN TEARS
Where on the body was tear sustained?
……
Approx length ……
Dressings used/ other treatment……
……

ADDITIONAL COMMENTS (e.g. difficult behaviour of resident, staffing issues etc)
……
……
……
……

FORM COMPLETED BY: DATE:

Clinical Information Sheet

Cardiac Chest Pain

The following clinical information sheet has been developed to assist ACH staff members and medical practitioners attending residents of ACHs in managing residents with cardiac chest pain.

The clinical information sheet will cover:
- Cardiac Chest Pain
- Assessment of Chest Pain
- Initial Management of Angina
- Initial Management of Acute Coronary Syndromes (Unstable Angina and Acute Myocardial Infarction)
- Management of Cardiac Arrest
- Medications
- Other Considerations
- Sources of Information and References

Although chest pain is a symptom of a wide variety of diseases, 10-34% of chest pain in the general population is related to cardiac disease [1], and coronary artery disease (CAD) accounts for 50% of episodes of chest pain in adults aged over 50 years [2]. Coronary artery disease is the leading cause of death in adults. Twenty-seven percent of males and 17% of females aged 65-75 years have existing CAD, and the risk increases dramatically after age 75 [3]. Sixty percent of Australians admitted to hospital with unstable angina are aged over 65yrs [4], and 10% of individuals with CAD first present with unstable angina [4].

Chest pain related to CAD is a significant health problem for nursing home residents. The needs assessment reported in Section 2 of this kit showed that chest pain was a common reason for presentation to hospital Emergency Departments.

1. Cardiac Chest Pain

This CIS is about chest pain due to coronary ischemic syndromes. These syndromes are attributable to myocardial ischaemia secondary to coronary obstruction. The syndromes are divisible into stable angina and acute coronary syndromes (ACS). These conditions are distinguished by the mechanism of coronary artery obstruction, which varies in a way that has important implications for prognosis and treatment. The underlying pathology is usually, but not always, coronary atherosclerosis. Smoking, hyperlipidemia, hypertension, obesity and diabetes mellitus are risk factors that accelerate coronary atherosclerosis [9-12].

In ACS, unlike stable angina, the clinical manifestations and the risk change over time. This means that clinical progress must be regularly reviewed, using clinical findings and investigations to recognise specific patterns that can be used to categorise patients in order to establish prognosis and best treatment options. Hence treatment cannot be entirely separated from diagnosis. Drugs and revascularisation interventions should be seen as complementary treatment modules rather than as competing approaches [12].

Angina

Although the onset of symptoms is often sudden in stable angina, the underlying problem is chronic, slowly progressive atherosclerotic obstruction. Severe obstructive coronary atherosclerosis restricts myocardial blood flow. When exercise or emotional stress creates a demand for more blood flow, this cannot be achieved due to the obstruction. Anginal pain signals temporary myocardial ischaemia that subsides promptly with rest as the increased demand subsides. Hence the pain usually bears a predictable relationship to familiar activities involving effort or stress. Although this is the usual presentation, not all patients experience typical chest pain. Some patients, especially the elderly, experience atypical pain, or shortness of breath or light headedness (angina equivalent). Others may have no symptoms (silent ischaemia).

Effort angina is categorised as stable if, for at least the past month, angina has been precipitated by the same amount of exertion. This usually means toleration of the usual level of activity and no rest pain apart from emotional stress [9-12].

Whilst the nature of angina pain is usually described as a heavy or crushing pressure, alternative pain characteristics should not exclude the diagnosis of angina [6]. Twenty-two percent of individuals with angina present with sharp, stabbing pain, 13% have pleuritic pain and 7% have pain that is reproducible by chest palpation [10]. If the pain is very brief; constant; radiating to the lower extremities; able to be localised with one finger; or primarily in the middle or lower abdomen it is unlikely to be angina [4, 6, 13].

Precipitants, aggravating factors or alternative diagnoses which should be considered include anaemia, obesity, aortic stenosis, hypertension, thyrotoxicosis and hypertrophic cardiomyopathy [12].

Acute Coronary Syndromes

Acute coronary syndromes share the same underlying pathology, namely an atherosclerotic plaque that abruptly becomes active with endothelial rupture, vasoconstriction, platelet adhesion, thrombosis and/or inflammation. The exact syndrome depends on the extent of thrombosis, distal platelet and embolism and resultant myocardial necrosis. Over about two months, the plaque responsible for the initiation or exacerbation of clinical symptoms becomes less active, and the initially higher risk of MI, arrhythmia and death settles back to the level that existed prior to the acute event [12].

The acute coronary syndromes are differentiated on the basis of extent and duration of chest pain, ECG changes and biochemical markers. They are differentiated into syndromes associated with ST elevation on the ECG (ST elevation myocardial infarction, STEMI) and those without ST elevation (non-ST elevation myocardial infarction, NSTEMI) associated with either ST depression, T-wave inversion or no changes on the ECG [9-12].

NSTEMI is differentiated from unstable angina by biochemical evidence of myocardial necrosis. The diagnosis of myocardial necrosis has become clouded with the use of different biochemical markers. At the current time, an elevated troponin above the 99th percentile of the local reference range is taken to indicate a myocardial infarction. However, a troponin above the 97th percentile is considered abnormal and the term 'minimal myocardial damage' has been used. Unstable angina and NSTEMI represent a continuum and their management is similar [12].

Special Considerations in the Elderly

Older adults are at a greater risk of existence of underlying CAD and have a higher risk of multi-vessel CAD, meaning that there is and increased risk of an adverse outcome from chest pain. The risk increases dramatically after age 70 [6].
It should also be considered that older adults, particularly those with diabetes, are more likely to have atypical signs and symptoms in the presentation of cardiac pain [6, 10, 11, 13].

2. Assessment of Chest Pain

In assessing chest pain, determining the nature of the pain and the likely cause is imperative to ensure the most appropriate management strategies are implemented. Differential diagnoses of chest pain include [1, 14]:

- Cardiovascular causes e.g. myocardial infarction, unstable angina, aortic dissection, aortic aneurysm, pericarditis, aortic stenosis, mitral valve prolapse.
- Respiratory causes e.g. pulmonary embolism, pneumothorax, severe pneumonia
- Gastrointestinal causes e.g. oesophageal spasm or rupture, perforated peptic ulcer, gastric reflux, indigestion
- Musculoskeletal causes
- Psychiatric causes
- Trauma, neoplasm

In order to decide whether a resident with chest pain has a condition requiring urgent medical attention, symptom evaluation is of utmost importance. Severity of pain is an unreliable indicator of severity of the underlying condition. Assessment of type of pain, referral of pain and response of pain to various interventions is important in differentiating

between cardiac and non-cardiac chest pain [1, 14]. The following table outlines the general characteristics of certain types of pain:

Cause of pain	Referred pain	Tenderness	Response to positioning	Response to food/fluid	Response to NTG
ischaemic cardiac	yes	no	no	no	yes
Non- ischaemic cardiac	yes	no	no	no	no
pulmonary	usually no	usually no	no	no	no
pneumothorax	no	no	yes	no	no
musculoskeletal	no	yes	yes	no	no
gastrointestinal	sometimes	no	no	yes	no
aortic aneurysm	yes	no	no	no	no
psychiatric	no	no	no	no	no

Table from: L. Erhardt, J. Herlitz, L. Bossaert, et al., *Task force on the management of chest pain.* Eur Heart J, 2002. 23(15): p. 1153-1176.

Characteristics of Angina

Typical angina signs and symptoms include [1, 3, 4, 6, 9, 11, 13, 15, 16]:

- substernal chest pressure or heaviness
- pain described as squeezing, pressing, constricting, bursting, as a band around chest or as a weight on chest
- deep but poorly localised
- radiating to left arm, neck or jaw
- nausea
- diaphoresis
- fear or feeling of impending doom
- pain relieved by rest or nitroglycerin (NTG)
- brought on by physical exertion or emotional stress
- pain lasts 2-10 mins and rarely longer than 30 mins
- shortness of breath
- pallor
- pain not reproducible by palpation
- dizziness
- significant change in pulse

Some individuals, particularly older adults and/or diabetics, present with atypical signs and symptoms including [6, 10, 11, 13]:

- lack of chest pain but pain related to exertion or stress radiating to left arm, neck or jaw
- epigastric discomfort related to exertion or stress
- unexplained fatigue
- indigestion, gas, belching
- lightheadedness
- right arm pain
- confusion
- sharp stabbing pain

Assessing Angina

In the assessment of the resident's chest pain, determine the following [1, 4, 6, 15, 16]:

- Time of onset of pain
- Position of pain including any radiation
- Description of pain
- Severity of pain
- Length of pain episode
- Frequency of pain episode
- Any accompanying signs and symptoms
- What precipitated the pain?
- Does anything exacerbate the pain?
- Does anything relieve the pain?

3. Initial Management of Stable Angina

Stable angina exists when [4, 6, 9, 11, 13]:

- the resident has a previous diagnosis of angina; and
- the angina has a predictable onset and intensity; and
- the angina can be prevented or controlled with rest and/or administration of NTG.

The aims of treatment are to [12]:

- relieve or prevent pain
- slow progression of atherosclerosis
- improve prognosis.

An early therapeutic step is to assess the occurrence of pain in relation to the resident's lifestyle. Drug therapy should be initiated immediately. Risk factors including hypertension, smoking, hyperlipidemia, obesity and diabetes mellitus should be assessed and managed appropriately. Advice should be given regarding regular moderate exercise and avoidance of heavy, sudden and unaccustomed exertion and acute emotional stress where practicable. Further investigation should be considered for all residents presenting with chest pain, particularly those for whom doubt regarding diagnosis impedes management and those who do not respond promptly or satisfactorily to medical treatment. Early revascularisation therapy should be considered on an individual basis. The resident should be instructed to cease activities as soon as pain is felt and too shorten the attack, use:

- glycerol trinitrate spray 400 micrograms metered dose sublingually, repeat the dose once after 5 minutes if pain persists (maximum of 2 metered doses)

OR

- glyceryl trinitrate tablet 300 to 600 micrograms sublingually, repeat every 3 to 5 minutes to a maximum of 1800 micrograms

OR

- isosorbide dinitrate 5 mg sublingually, repeat every 5 minutes if pain persists, up to a maximum of 3 tablets.

Avoid nitrates if the patient has used sildenafil (Viagra) in the previous 24 hours or tadalafil (Cialis) in the previous five days.

Procedure for Managing Stable Angina

1. Provide the resident with reassurance. Increased anxiety can worsen the symptoms [1, 2].

2. Return the resident to bed, preferably in an upright position [9, 10].

3. Administer oxygen 2-4L via nasal cannula [2, 9, 10, 16].

4. Assess and record the resident's vital signs [2, 6, 9].
   - Heart rate – take on both arms, assess for bruits, irregularities or unequal pulses
   - Blood pressure – take on both arms
   - Respiration – assess for rales in lungs
   - Temperature

5. Assess and record the frequency and severity of angina pain [9].

6. Administer sublingual NTG as prescribed by the resident's GP [2, 3, 5, 8-10, 16] Check the resident's medication chart and follow the GP's orders. Check that the medication has not expired, is labeled with the resident's details and has been stored appropriately before administration. The patient should sit or lie down, particularly when first using NTG because of the possibility of hypotension.

7. Reassess the frequency and severity of the resident's angina pain within 1-3 minutes [9].

8. Repeat administration of sublingual NTG after 5 minutes if the resident's pain has not resolved. Apply oxygen mask (6-10L) if the resident has increasing shortness of breath [9].

9. Reassess the frequency and severity of the resident's angina pain within 1-3 minutes.

10. Repeat administration of sublingual NTG after 5 minutes if the resident's pain has not resolved.

11. If the resident's pain has not resolved after 3 doses of anti-anginal medication or 20 minutes *immediately contact an ambulance* [1-3, 6, 8-10] .

12. Administer aspirin as prescribed by the resident's GP or as a nurse-initiated medication unless it is contraindicated [1, 2, 4, 5, 10, 16]. Check that the medication has not expired, is labeled with the resident's details and has been stored appropriately before administration. If possible the resident should chew the medication [1, 2, 4, 10, 16].

13. Administer analgesia as prescribed by the resident's GP [1, 2, 5, 10]. Check that the medication has not expired, is labeled with the resident's details and has been stored appropriately before administration. Where an order is available, morphine sulphate is recommended for relieving anginal pain as it has both analgesic and anxiolytic properties [1, 5, 10].

14. Reassess the resident 5-minutely until ambulance services arrive.

15. Provide the resident with reassurance, promote comfort and maintain airway whilst awaiting ambulance services [1].

16. Provide the ambulance service with the resident's medical history, time of onset of pain, characteristics of pain, treatment initiated and the resident's response to treatment.

17. Document and communicate to other staff members and the resident's GP and next-of-kin according to the ACH's policy.

4. Initial Management of Acute Coronary Syndromes (Unstable Angina and Acute Myocardial Infarction)

Acute Coronary Syndromes

Patients presenting with rest pain or severe exacerbation of stable angina require immediate risk assessment, usually in hospital. Patients are differentiated into high, low or intermediate risk depending on various factors, outlined in Appendix 1. A clinical decision as to whether the patient is likely or unlikely to have coronary disease will also influence initial treatment [12].

STEMI

When the thrombus completely occludes the coronary artery the result is severe myocardial ischaemia with ST elevation on the ECG. This may cause sudden death from ventricular fibrillation. If the coronary occlusion is not relieved, myocardial infarction develops progressively over the next 6 to 12 hours [12].

The aim of emergency treatment of STEMI is to [12]:

- prevent and treat cardiac arrest
- relieve pain
- reperfuse the myocardium urgently, to minimise infarct size.

With STEMI it is important to reopen the artery and re-establish flow as soon as possible. This may be achieved by the administration of thrombolytic therapy or by primary percutaneous intervention (PCI). Thrombolytic therapy consists of a

combination of fibrinolytic agent, an antiplatelet agent, and an antithrombin. Reperfusion therapy should be delivered as soon as feasible, usually within 30 minutes of arrival in hospital [12].

Procedure for Initial Management Prior to Hospital

1. Provide the resident with reassurance. Increased anxiety can worsen the symptoms [1, 2].

2. Return the resident to bed, preferably in an upright position [9, 10].

3. Administer oxygen 2-4L via nasal cannula [2, 9, 10, 16].

4. Assess and record the resident's vital signs [2, 6, 9].
   - Heart rate – take on both arms, assess for bruits, irregularities or unequal pulses
   - Blood pressure – take on both arms
   - Respiration – assess for rales in lungs
   - Temperature

5. Assess and record the frequency and severity of angina pain [9].

6. If available administer glyceryl trinitrate spray 400 micrograms sublingually, repeat after 5 minutes if pain persists (up to a maximum of 2 metered doses) OR glyceryl trinitrate tablet 600 micrograms sublingually, repeat every 3 to 5 minutes up to a maximum dose of 1800 micrograms (3 tablets) OR isosorbide dinitrate 5 mg sublingually, repeat after 5 minutes if pain persists, up to a maximum of 3 tablets [2, 9, 10, 12, 16]. Check that the medication has not expired and has been stored appropriately before administration.

7. *Immediately contact an ambulance* [6]. Follow directions of the telephone operator.

8. Administer aspirin as prescribed by the resident's GP or as a nurse-initiated medication unless it is contraindicated [1, 2, 4, 5, 10, 16]. Check that the medication has not expired, is labelled with the resident's details and has been stored appropriately before administration. If possible the resident should chew the medication [1, 2, 4, 10, 16].

9. Administer analgesia as prescribed by the resident's GP [1, 2, 5, 10, 12]. Check that the medication has not expired, is labeled with the resident's details and has been stored appropriately before administration. Where an order is available, morphine sulphate is recommended for relieving anginal pain as it has both analgesic and anxiolytic properties [1, 5, 10].

10. Reassess the resident 5-minutely until ambulance service arrives.

11. Provide the resident with reassurance, maintain airway and promote comfort whilst awaiting the ambulance service. Provide the ambulance service with the resident's medical history, time of onset of pain, characteristics of pain, treatment initiated and the resident's response to treatment.

12. Document and communicate to other staff members and the resident's GP and next-of-kin according to the ACH's policy.

Hospital Diagnosis

Once the resident is transferred to the emergency department, further diagnostic tests will be conducted to confirm the diagnosis and determine the resident's prognosis and management strategies [4, 6].

Electrocardiogram (ECG)

An electrocardiogram (ECG) is an electrical recording of the heart and is crucial in the diagnosis of unstable angina and AMI [4, 6, 10]. An abnormal ECG is a strong positive indicator of angina related to CAD, although as many as 82% of individuals experiencing chest pain have normal or near-normal ECGs [13]. The ECG results are particularly valuable if recorded whilst symptoms are occurring and if the resident has previous ECGs for comparison.

Although an ECG can be performed by pathology services, in the event of an acute episode of angina the ECG should be performed in an emergency department with specialised facilities. If the resident is confirmed to have angina related to CAD treatment needs to be initiated immediately [13].

Cardiac Markers

The term cardiac markers refers to proteins (e.g. creatine kinase, cardiac troponins, myoglobin) released into the resident's blood following ischaemia of heart tissue [4, 6, 13]. Blood tests are usually conducted to detect early cardiac markers, the levels of which are increased in the blood within 6 hours after onset of symptoms. Further tests will be conducted to detect definitive cardiac markers, the levels of which are increased in blood 6-9 hours after onset of symptoms. Cardiac marker levels have a high sensitivity and specificity for AMI and remain abnormal for several days after onset [17].

5. Management of Cardiac Arrest

Cardiac arrest, is said to have occurred where the patient is unconscious, not breathing and has no carotid pulse [18]. Cardiac arrest may develop quickly, or after a prolonged period of decreased oxygen supply to the cardiac tissues. Cardiopulmonary resuscitation (CPR), a technique used to revive a patient experiencing cardiac arrest through heart compression and lung inflation, is indicated where there has been an abrupt and potentially reversible cessation of cardiac and or respiratory function [9, 18]. CPR should only be initiated by staff members who have received competency training in the technique [9].

Rate of survival following cardiac arrest and initiation of CPR is related to the type of arrhythmia, duration of arrest, time taken to initiate resuscitation and the age of the patient, with those aged over 70 having a significantly lower chance of survival. Survival rates to discharge following CPR in an acute hospital setting are reported to be approximately 22% [9].

Procedure for Cardiopulmonary Resuscitation

1. Establish the resident is experiencing cardiac arrest [9, 18].
    1. Determine conscious state
    2. Determine if resident is breathing
    3. Assess for a carotid pulse

2. Call for assistance [9, 18].

3. 2nd person arriving on the scene [9]:
   Prepare oxygen and air viva
   Assist with CPR in a ratio of 2 inflations:15 compressions

4. 3rd person arriving at the scene [9]:
   Immediately contact and ambulance
   Place board under resident
   Provide hands-on assistance as required

5. If the resident is not breathing, commence expired air resuscitation [19]. Deliver 5 full inflations over 10 seconds on commencing [9].

   If the resident has no pulse, commence CPR. A minimum of 60 compressions should be administered over one minute, using a ratio of 2 inflations to 15 compressions with 2 operators [19-21].

5. Assess for signs of circulation after one minute. If there are no signs of recovery, continue CPR. If the resident has a spontaneous pulse present, continue expired air resuscitation until breathing returns whilst continuously monitoring radial or carotid pulse [22].

6. Continue CPR until there are signs of spontaneous circulation, the resident recovers, the ambulance arrives, a medical doctor pronounces the resident dead or continuing CPR becomes impossible [23].

Expired Air Resuscitation

Check that the patient's airway is clear and look, listen and feel for signs the resident is breathing. If there are no signs that the patient is breathing, commence expired air resuscitation [9, 18, 19].

Stand at the patient's head, facing the feet and maintain the airway in an open position by using both hands to tilt the patient's head back and jaw thrust. Place mask over nose and mouth and press firmly to face, elevating jaw into mask to achieve a good seal. Attach air viva to mask and inflate lungs, observing for chest rise and listening for exhalation [24].

Cardiac Compression Technique

The recommended point for compression is midline over the lower half of the sternum. To locate the compression point first locate the lower end of the sternum by running the fingers along the lower rib from the outside in until they meet in the middle. Locate the upper end of the sternum by feeling the groove between the collar bones. The mid point of the sternum is then located by extending the fingers equidistant to meet in the middle of the sternum. Place one thumb at this point, then apply the other hand in position on the lower half of the sternum [25].

The heel of the hand should be placed in position with the fingers parallel to the ribs and slightly raised, then the other hand is placed securely on top of the first, locking the thumb around the wrist of the lower hand. Positioning of shoulders should be over the patient's sternum and arms should remain straight. Use your body weight to exert pressure through the heel of the lower hand [20].

Compressions should be applied in a steady rhythm allowing equal time for compression and relaxation, depressing the sternum 4-5cms, or approximately one third of the depth of the patient's chest [20]. Where there is only one staff member performing CPR, rate of compressions should be at least 60 compressions per minute, at a ratio of 15 compressions to 2 inflations. If 2 staff members are performing CPR compressions are performed at a ratio of 5 compressions to 1 inflation, administering at least 60 compressions per minute [21].

5. Medications

Aspirin

It is recommended that Acetylsalicylic acid (aspirin) be administered as soon as possible when a resident is suspected of suffering from unstable angina unless a clear contraindication exists (e.g. active bleeding) [4-6, 26, 27]. Dosage should be 160-325mg aspirin of non-enteric coated aspirin. Where possible the resident should be instructed to chew the aspirin for quicker absorption [2, 4-6, 16, 26].

Aspirin is recommended as a first line treatment in preventing and reducing the fatality from AMI. Aspirin has demonstrated anti-thrombotic effects – it reduces the formation of blood clots thereby reducing the risk of arterial blood flow occlusion [26, 27]. Administration of aspirin when a resident is suspected of having an acute coronary event decreases the fatality rate by as much as 50% [1, 2, 27]. Administering aspirin within 24 hours of AMI significantly lowers the risk of further signs and symptoms over the following month [26].

Aspirin is also used as in the ongoing medical management of residents with CAD as it provides a prophylactic anti-thrombotic effect that reduces risk of acute cardiac episodes. Doses usually commence at 150mg of aspirin daily, and may be decreased to 75 mg daily one month following an AMI. [26, 27].

Nitroglycerin

All patients with angina should have an order for sublingual NTG [3-8]. Sublingual NTG becomes effective within 1-3 minutes. It may be administered every 5-minutes for up to 3 doses. If the resident's angina has not resolved after 3 doses of 15-20minutes, the ambulance service should be contacted immediately [3-8].

Nitroglycerin (NTG) is administered for its effect in relieving ischemic cardiac pain, and for its effect in dilating the vascular smooth muscle in vessels throughout the body. Nitroglycerin (NTG) dilates arteries, increasing the coronary artery blood flow [8]. Nitroglycerin (NTG) is used to control symptoms by either relieving angina, or preventing it when undertaking activities known to provoke angina (e.g. climbing stairs) [7].

Nitroglycerin (NTG) used for acute attacks of angina comes in a sublingual tablet and a mouth spray. Sublingual tablets should be placed under the resident's tongue, or between the gum and cheek, and allowed to dissolve. The tablet should not be swallowed [7]. Nitroglycerin (NTG) spray should be administered by holding the spray close to the resident's open mouth and administering one spray underneath the resident's tongue [7].

Nitroglycerin (NTG) is also used in the ongoing management of angina, in the form of a buccal tablet or extended release tablet or a tansdermal patch [7]. Tolerance to all forms of nitrate therapy develops rapidly (ref TG). Sustained-release isosorbide mononitrate administered once-daily, or a glyceryl trinitrate patch worn for less than 16 hours per day, avoids this complication by allowing a nitrate-free period. The commonly used regimen of isosorbide dinitrate 3 or 4 times daily results in rapid development of tolerance (ref TG).

In patients who have a low ischaemic threshold, rebound ischaemia may develop during the drug-free interval when the glyceryl trinitrate patch is not worn (ref TG). This problem may be less common during the low drug-concentration period with sustained-release isosorbide mononitrate, which may therefore be useful for patients with a very low ischaemic threshold (ref TG). It should be noted that a combination of long-acting nitrate regimens (eg sustained-release isosorbide mononitrate plus transdermal glyceryl trinitrate) results in the rapid development of tolerance and should be avoided (ref TG).

6. Other Considerations

Risk of Adverse Outcome

The risk of an adverse outcome (e.g. death or AMI) following a cardiac event is determine by the resident's signs and symptoms and existing risk factors of severe CAD.

Residents who present with severe and prolonged chest pain lasting (> 20 mins); chest pain at rest or minimal activity; severe dyspnoea; rales; loss of consciousness; hypotension; cyanosis; tachycardia or bradycardia; positive cardiac markers and/or ECG changes and who are aged over 75 years have a high risk of an immediate or severe outcome [4, 6, 13, 15]. For these residents, the 30-day rate of death or AMI is 12-30%

Residents who are aged over 70 years or have a past history of prior AMI, cardiovascular or peripheral vascular disease, or those who present with prolonged chest pain lasting (> 20 mins); chest pain at rest that responds to treatment (e.g. rest or sublingual NTG) and borderline ECG of cardiac marker results have a medium risk of an adverse outcome [4, 6, 13]. For these residents the 30-day rate of death or AMI is 4-8% [13]. These patients are usually monitored for 6 hours until they are stable, then assessed and managed medically, unless their condition worsens [13].

Residents who present with neither prolonged (> 20mins) chest pain nor chest pain at rest and have a normal (or unchanged from previous) ECG have a low risk of an adverse outcome [4, 6]. The 30-day rate of death or AMI is <2% [13]. These patients are usually managed by the GP with a focus on medical management and reduction of lifestyle risk factors [13].

Education

All residents with a history of angina should be educated to report symptoms to the ACH staff as soon as they occur. ACH staff should be provided with ongoing education on the assessment and management of chest pain; use of medications related to the treatment of angina; and the importance of contacting emergency services as soon as possible if a resident is experiencing unstable angina [2, 4, 6, 8, 15, 16].

Medication Advisory Committee

The medication advisory committee should consider including aspirin and nitroglycerin on a "nurse-initiated medications" (refer to Clinical Information Sheet on Medication Management) list for the prompt management of cardiac chest pain. The medication advisory committee should develop clear guidelines for the use of these medications in the management of unstable angina and/or AMI. The ACH should develop policies and procedures to ensure adequate stock of nurse-initiated medications, including a stock rotation system to ensure medications do not expire.

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Levels of Evidence

The information presented is developed from Level I evidence produced by the American College of Cardiology American Heart Association, Australian National Health and Medical Research Council, and Scottish Intercollegiate Guidelines Network. Information in this clinical information sheet represents the most effective current management strategies for chest pain based on systematic review of the literature. The following table outlines the level of evidence of each reference:

Ref No	Author	Year	Level of Evidence (refer Section 6 of the Kit for explanation)
1	L. Erhardt, J. Herlitz, L. Bossaert, et al	2002	Level I evidence
2	National Heart Foundation of Australia,Cardiac Society of Australia and New Zealand	2000	Level IV evidence
3	Scottish Intercollegiate Guidelines Network	2001	Level I evidence
4	National Health and Medical Research Council	1996	Level I evidence
5	M Graber	2001	Level IV evidence
6	Braunwald et al	2002	Level I evidence
7	nitroglycerin.com	2003	Level V evidence
8	T. Ryan, E. Antman, N. Brooks, et al	1999	Level I evidence
9	Joanna Briggs Institute	2003	Level IV evidence
10	G. Fonarow	2001	Level IV evidence
11	J. Fox	2001	Level IV evidence
12	eTG (editors)	2004	Level IV evidence
13	Guidelines and Protocols Advisory Committee	2003	Level IV evidence
14	Northern Hospital	2001	Level IV evidence
15	Institute For Clinical Systems Improvement	2002	Level IV evidence
16	Canadian Association of Emergency Physicians Rural and Small Urban Committee	1998	Level IV evidence
17	A. Wu, F. Apple, W. Gibler, R. Jesse, M. Warshaw, R. Valdes	1999	Level I evidence
18	Australian Resuscitation Council	2002	Level IV evidence
19	Australian Resuscitation Council	2002	Level IV evidence
20	Australian Resuscitation Council	2002	Level IV evidence
21	Australian Resuscitation Council	2002	Level IV evidence
22	Australian Resuscitation Council	1996	Level IV evidence
23	Australian Resuscitation Council	2002	Level IV evidence
24	Australian Resuscitation Council	1998	Level IV evidence
25	Australian Resuscitation Council	1997	Level IV evidence
26	Campbell et al	1997	Level I evidence
27	E. Awtry,J. Loscalzo	2000	Level IV evidence

Appendix One: Acute Coronary Syndrome Risk Assessment

Residents considered to be at high risk are those with [4, 6, 10]:

- chest or left arm pain as the primary symptom that replicates a previous episode diagnosed as angina;
- a known history of CAD;
- diaphoresis;
- pulmonary oedema;
- hypotension; and
- rales.

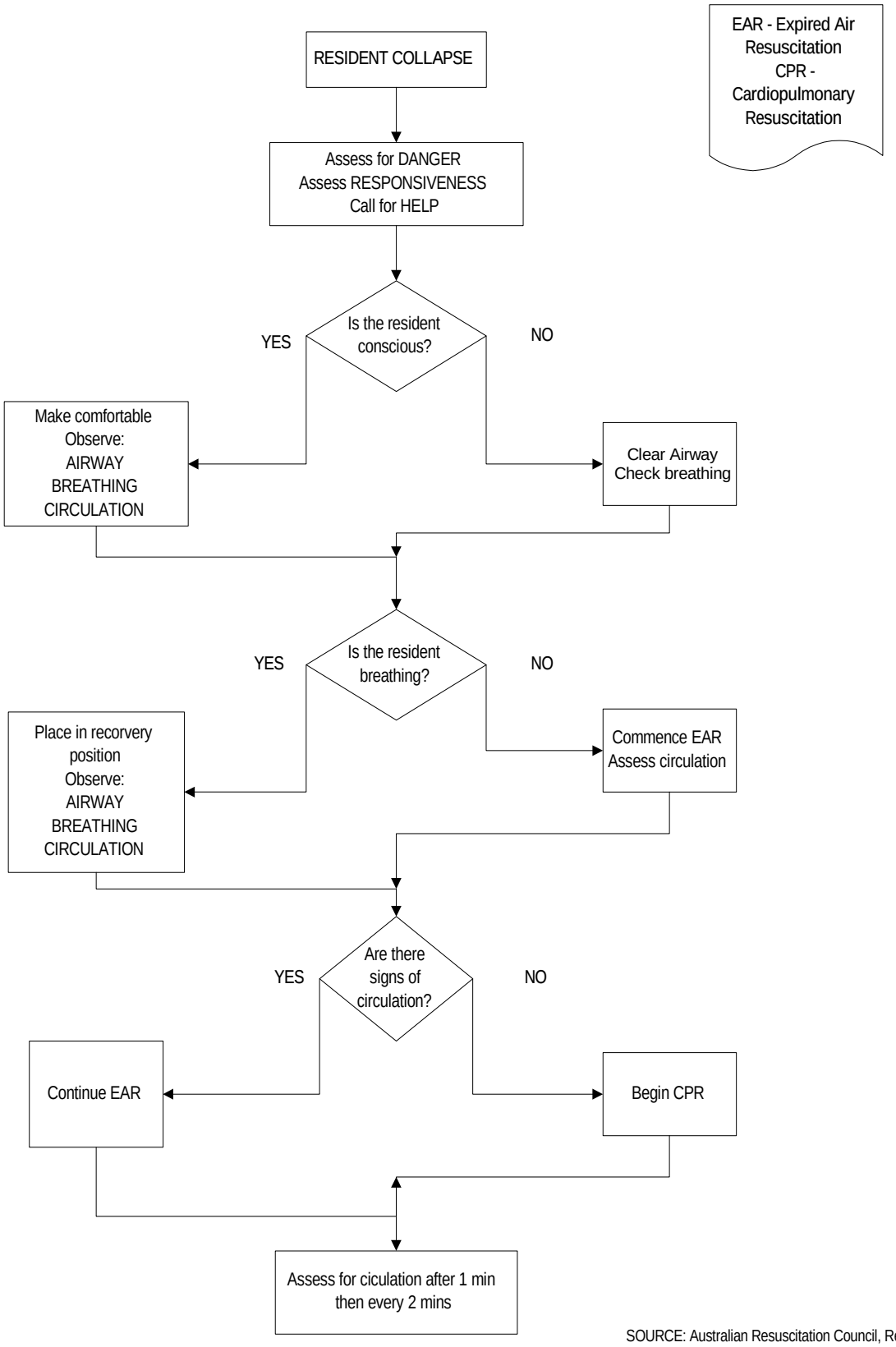
Residents considered to be at medium risk are those with [4, 6, 10]:

- chest or left arm pain as the primary symptom;
- history of diabetes mellitus;
- history of peripheral vascular disease;
- male gender.

Residents considered to be at low risk are those with [4, 6, 10]:

- absence of high or medium risk factors;
- signs and symptoms present that may be cardiac related;
- chest discomfort that is reduced by palpitation.

Appendix Two: Life Support Flow Chart



SOURCE: Australian Resuscitation Council, Revised Policy Statement 2002 - Basic Life Support Flow Chart. 2002

Clinical Information Sheet

Asthma Management

This information sheet has been developed to assist GPs with the management of asthma for residential aged care patients.

The clinical information sheet covers:
- Asthma Assessment
- Asthma Management
- Further Information and References
- Flow charts

40% of all Australians have respiratory signs and symptoms that are consistent with asthma at some stage during life [1]. Asthma rates as one of the top 10 reasons for a visit by a GP [1] and as many as 40% of asthmatics are admitted to an emergency department each year as a result of an acute asthmatic episode [2]. Mortality from asthma is highest in the very young and the very old and prompt recognition and management of symptoms indicative of an acute asthma attack is essential to promote a positive clinical outcome for the older adult [2, 3].

Asthma in older adults may be a continuation of disease that commenced at a younger age or the individual may be newly diagnosed in later life. Diagnosis of asthma in older adults is complicated by the need to distinguish between other diseases with similar presentations that are common in older adults (e.g. chronic obstructive pulmonary disease, acute myocardial infarction) and differentiating between normal ageing and disease processes. Although triggers for asthma are the same in all age groups, older adults are less prone to airborne allergens but more likely to have an adverse effect from medications [3]. Older adults may have age related lung changes that contribute to asthma (e.g. reduced muscle strength, increased chest wall rigidity) or reduce the older adult's awareness of asthma signs and symptoms. Older adults may also have age-related changes that influence their compliance with treatment or ability to initiate treatment (e.g. arthritis, dementia) [3]. Due to co-morbidity (e.g. COPD, CV disease) older adults with asthma often have earlier thresholds at which they require medical supervision or treatment in an acute hospital for asthma exacerbation [3].

The resident's GP is responsible for assessment, providing a written asthma management plan, and regular review (3-6mths) of response to therapy. The asthma management plan should include goals of therapy; daily medication regime including doses and when to use medications; specific triggers for the resident's asthma; and an action plan for managing exacerbation [1, 3].

GPs registered for PIP payments are eligible to claim the MBS item for providing an Asthma 3+ Visit Plan for residents with moderate to severe asthma. The Asthma 3+ Visit Plan requires the GP to see the resident at least 3 times over one to four months to review management of asthma. At least two of these visits should be planned in advance. Asthma 3+ Visit Plan should incorporate diagnosis and assessment (including spirometry if indicated), development of a written asthma management plan, review of progress and resident education [10].

1. Asthma Assessment

Characteristics of Asthma [1-5]

Asthma is a chronic inflammatory disorder of the airways in which inflammation causes episodes of breathlessness, wheezing, coughing and chest tightness. An episode of asthma is associated with airway obstruction caused by contraction of the airway smooth muscle and swelling of the airway walls. The airway becomes more susceptible to various stimuli that causes an inflammatory response (e.g. exercise, cold air, cigarette smoke, allergens) [1-4]. Airflow obstruction that occurs in asthma is reversible either spontaneously or with treatment, although reversibility may be incomplete in older adults [3].

Signs and symptoms of asthma include shortness of breath, chest tightness, wheeze, cough, use of accessory muscles for respiration, sputum production, tachycardia, hypertension, diaphoresis (sweaty). Signs and symptoms are recurrent, variable and intermittent; often worse at night or in the early morning; and regularly provoked by specific triggers such as exercise, allergens (e.g. house dust mite, pollens, pets and moulds), irritants or infections [1, 2, 4, 5].

Diagnosing Asthma

Asthma diagnosis and assessment of severity are based on history, physical examination and diagnostic tests including spirometry and peak expiratory flow monitoring. Asthmatics frequently have a history of allergic disorders such as rhinitis, sinusitis, respiratory signs and symptoms related to medications (e.g. aspirin, non-steroidal anti-inflammatory drugs) or signs and symptoms that are exacerbated by allergens [1, 3-5].

Spirometry measures the volume of air expired in 1 second from the lungs (FEV_1) or total volume of air expired as fast as possible (FVC). Results are compared to the resident's previous best values, or to predicted values for his or her age range [1, 3-5]. The resident's FEV_1 or FVC are also measured following treatment with bronchodilators or corticosteroids to measure response of airways to asthma treatment. Lower than predicted values, values that decrease throughout a session, and values that improve following medication therapy are consistent with a diagnosis of asthma [1, 3-5]. Whilst spirometry is a valuable diagnostic tool it is often difficult for older adults to perform due to poor technique and coordination, general weakness and muscle wasting or severe airflow restrictions. Comparing FEV_1 or FVC to the resident's previous best values rather than predicted values is recommended in older adults [3].

Peak expiratory flow (PEF) measures the maximum airflow that can be generated during forced expiration. It is used to detect presence or absence of airflow obstruction by detecting variation from the individual's previous best value. Although useful for individuals who have intermittent symptoms [1], the sensitivity and specificity of peak flow monitoring has not been established in older adults [3]. Age-related factors such as rigidity of the chest wall, muscle weakness and reduction in coordination may influence PEF in older adults [3]. Peak expiratory flow monitoring requires effort and cooperation by the individual [3], therefore its use in dementia is unlikely to be reliable. . Peak flow monitoring is most useful when multiple readings are taken over time, rather than isolated measures of PEF [1, 3, 4, 6]. Peak flow measuring should be conducted first thing in the morning, prior to medications [1, 4, 6]. Review of the resident's medication regime is indicated if PEF is 15-20% below the resident's own predicted values [6].

Classification of Asthma [1, 3-5]

Classification of asthma helps to determine the long-term management strategy for the resident's asthma. Throughout the asthmatic individual's lifespan classification of his or her asthma may be stepped up or down, depending upon response to therapy and ongoing history of the disease.

Mild asthma:

- signs and symptoms of an acute asthma attack occur less than 2 times/week
- nocturnal signs and symptoms occur less than 2 times/month
- the resident has no symptoms between episodes of exacerbation
- pre-treatment PEF is >80% of the resident's predicted value.

Moderate asthma:

- signs and symptoms of acute asthma attack occur more often than 2 times/week
- signs and symptoms affect the resident's sleep and activity less than 1 time/week
- chronic signs and symptoms requiring relieving medication occur daily or every other day
- pre-treatment PEF is 60-80% of the resident's predicted value or is variable by 20-30%.

Severe asthma:

- signs and symptoms occur almost continuously
- exacerbation occurs frequently
- the resident awakens from asthma at night frequently
- the resident restricts his or her activity
- pre-treatment PEF is <60% of the resident's predicted value or is variable by 20-30%.

Ongoing review

Regular monitoring of the resident's signs and symptoms is essential in the long term management of asthma [1-5]. It is recommended that older adults with asthma be reviewed by their GP at least every 3-6 months, even if the asthma is diagnosed as mild. Decrease in lung function can be insidious and needs prompt attention, however in older adults a decrease in lung function is often mistaken for normal ageing [3]. Every 3-6 month the GP should interview the resident (or carers) regarding signs and symptoms; conduct a clinical examination; and evaluate objective assessments of lung function (e.g. peak flow readings or spirometry) [3].

Signs and symptoms that the resident's asthma is not under good control are [1, 3-5]:

- nocturnal or early morning waking with wheeze or cough;
- increase in coughing that produces sputum;
- increase in use or, or decreased response to reliever medications;
- decreased tolerance of activity; or
- change in intensity of dyspnoea.

Residents at High Risk of an Asthma-related Death

Residents with the following features are at a high risk of an asthma-related death and should be reviewed by their GP as soon as possible following an exacerbation [1, 4, 5]:

- past history of sudden severe exacerbations
- past history of admission to intensive care or intubation for asthma
- more than 1 hospital admission or more than 2 visits to the emergency department for asthma in the past 12 months
- admission to hospital or emergency department visit for asthma within the past 30 days
- use of more than 2 cannisters of a short-acting beta$_2$-agonist in the past 30 days
- recent or current use of oral steroids for asthma
- multiple medical diagnoses, particularly chronic obstructive pulmonary disease or cardiovascular disease.

2. Asthma Management

Management Goals

In older adults goals of asthma management are harder to reach as optimal lung function may not be attainable and often airway obstruction may not be completely reversible [3]. Goals of therapy should be established in consultation with the resident and/or his or her representatives. In general treatment of asthma in older adults aims to [3]:

- achieve a desired quality of life
- optimise pulmonary function
- control cough and nocturnal signs and symptoms
- prevent emergency admissions to hospital
- avoid aggravating other diseases
- minimise medication side effects.

The management of asthma focuses on medication therapy, ongoing objective assessment and avoiding environmental triggers [1, 3-5].

Environmental Strategies

Ongoing management of asthma includes identifying specific triggers for asthma and developing a management plan to assist in avoiding exposure to triggers [1, 3-5]. Allergens are a common asthma trigger [1, 3-5], although older adults are less prone to environmental allergens than younger asthmatics [3]. House dust mite, pollens, pets and moulds are the most common environmental allergens that trigger asthma. Allergy testing can assist in identifying if an individual's asthma is likely to be triggered by allergens [1, 3-5], however its usefulness in older adults is questionable as older adults generally have a lowered response on skin prick tests [3]. If an asthmatic resident's asthma is known to be triggered by environmental allergens, strategies to reduce exposure should be implemented.

Immunisation

It is highly recommended that elderly people with asthma be immunised against pneumonia and influenza [1, 3-5]. See the Clinical Information Sheet on Immunisation for further information.

Medication

Asthma medications are either used to relieve signs and symptoms of asthma or to prevent the development of asthma symptoms. Residents diagnosed with mild asthma usually require a reliever medication only. Residents with moderate-severe asthma are likely to be require preventer as well as reliever medication [3].

Reliever Medications

Reliever medications provide relief from acute asthma symptoms within minutes and provide ongoing relief for up to 4 hours and are generally prescribed on a p.r.n. (as required) basis for administration when the individual displays signs and symptoms of an exacerbation of asthma. Short acting beta$_2$-agonists are the most effective reliever medications as they cause smooth muscle relaxation of the airways within minutes [1, 2, 4, 5, 7]. However, some of the side effects of short acting beta$_2$-agonists (e.g. salmutamol, terbutaline) are arrhythmias, hypokalaemia and increased blood pressure, therefore the use of these medications by residents with cardiovascular disease should be carefully monitored [3].

Ipratropium bromide (an anticholinergic bronchodilator), the effect of which is much slower than short acting beta$_2$-agonists, is a reliever medication used more often in chronic obstructive pulmonary disease than asthma[1, 4, 7]. Despite having a slower onset than short acting beta$_2$-agonists [1, 4], Ipratopium bromide has been shown to have significant effect for older adults. Due to fewer systemic side effects this medication is recommended as the reliever medication of choice for older adults with concurrent cardiovascular disease who are taking beta-adrenergic blocking agents [3]. Ipratropium is as effective as inhaled beta-2- agonists in maintenance therapy of COPD, It is also indicated for severe asthma with short-acting beta-2-agosnist. Tiapropium has a longer duration of action than ipratropium allowing once daily dosing, Its efficacy seems slightly better than ipratropium in maintenance therapy of COPD. Anticholinergic adverse effects, eg dry mouth, occur more often than with ipratropium [8].

Theophylline has an anti-inflammatory effect as well as a being a bronchodilator. This medication has a very narrow therapeutic range and toxicity is common, therefore it is generally recommended only for severe asthma and is not recommended for use in older adults unless absolutely necessary [1, 3, 5].

In Australia, all reliever medications are packaged in a blue/grey container [7]. It is important to monitor the use of all reliever medications, as increased use, or a decreased response to the medication is an indication that the resident's asthma is getting worse and requires review by the GP [1].

Preventer Medications

Preventer medications help control inflammation in the airways. The most commonly used preventative medications are inhaled corticosteroids (e.g. fluticasone propionate; beclomethasone dipropionate), the use of which has been shown to lead to a reduction in number of asthma exacerbations and emergency hospital admissions [2]. The most common side effects from inhaled corticosteroids are oral candidiasis and throat hoarseness. Residents should be encouraged to use a spacer for administering corticosteroids and to rinse the mouth well after each dose [1, 3-5, 7]. Residents on larger doses on inhaled corticosteroids are at risk of osteoporosis as corticosteroids cause a decrease in bone mineralisation. Calcium supplements and regular screening for osteoporosis are recommended for individuals at risk [1, 3]. Other inhaled preventative medications include antiallergic agents excluding corticosteroids (e.g. sodium cromogylcate; nedocromil sodium) and leukotriene receptor anatagonists (e.g. montelukast sodium).

Systemic Corticosteroids

Oral corticosteroids (e.g. prednisolone) are prescribed to treat persistent and/or acute exacerbations of asthma and if used promptly may avoid emergency department admission [4]. If the resident had previously had stable asthma, oral corticosteroids usually have an effect within 3-4 hours and therefore treatment should be initiated as soon as possible [1, 4, 5]. Initially a large dose is administered, followed by a tapering course over 5-10 days. Systemic corticosteroids may aggravate cardiovascular disease [3] and if used over a long-term period the risk of diabetes mellitus or osteoporosis increases significantly [3, 4].

Adverse Effects of Medication

Adverse reactions increase with age and as many as 10% of emergency department admissions of older adults with asthma are related to adverse medication effects [3]. The ACH pharmacist may review medications and check for medication interactions (e.g. non-potassium sparing diuretics and beta$_2$-agonists) and medications that are known to exacerbate asthma (e.g. aspirin, non-steroidal anti-inflammatory drugs) [3].

Medication Delivery Devices

Inhalation is the preferred route for asthma medication because there is a rapid response to medication, reduced side effects and lower doses of medication can be used. Inhaled asthma medications can be delivered via a metered dose inhaler (MDI), dry powder inhaler or a nebuliser [2, 7]. Metered dose inhalers deliver the correct dose of medication through activating the inhaler, and include aerosol inhalers and dry powder inhalers. To attain the maximum benefits from medication, reduce medication side effects and achieve a rapid response to medication the medication delivery device must be used correctly [2, 7]. The ACH Clinical Information Sheet on Asthma Manmagement provides details for ACH staff on use of metered dose inhalers, spacers, autohalers, dry powder devises and nebulisers.

First aid management of an acute asthma attack (add ref)

1. Sit the resident comfortably upright. Be calm and reassuring.

2. Give 4 puffs of a blue Reliever inhaler (e.g. Ventolin, Bricanyl).
   Relievers should preferably be given through a spacer, if available. Use 1 puff at a time and ask the person to take 4 breaths from the spacer after each puff.

3. Wait 4 minutes. If there is no improvement, give another 4 puffs.

4. If little or no improvement,
   Call an ambulance immediately
   And state that the person is having an asthma attack.
   Give 4 puffs every 4 minutes until the ambulance arrives. Up to 6 - 8 puffs every 5 minutes may be given for a severe attack while waiting for the ambulance.
   Give Oxygen 8l/min by facemask if available.

3. Further Information and References

Where to go for more information

Asthma Foundation of Victoria.

The Asthma Foundation of Victoria provides training programs, information sheets, helpline and website.
Contact: 9326 7088, or 1800 645 130 (Helpline). Website: http://www.asthma.org.au/

National Asthma Council

The National Asthma Council Australia provides information for health professionals, asthmatics, and the general community. Contact: (03) 8699 0476 or 1800 032 495 (Hotline). Website: http://www.nationalasthma.org.au/index.htm

Pulmetrics

Pulmetrics is a mobile spirometry service that provides measurement and interpretation of spirometry on residents referred by their GP. Pulmetrics provide on-site spirometry in the Melbourne metropolitan area if at least 6 residents are booked for the service. Residents are bulk-billed so there is no out-of-pocket expense for either the resident or GP and the results provide the GP with objective assessment data on the resident's lung function. Contact: (03) 9842 5347 or 0410 538 410

References

The Clinical Information Sheet has been developed using the process outlined in the *GP Residential Aged Care Kit – Section 6 Clinical Information Sheets. A* corresponding information sheet has been developed for ACH staff.

The information was developed from level I evidence produced by the National Asthma Council Australia, Scottish Intercollegiate Guidelines Network and British Thoracic Society, as well as level IV evidence produced by the National Heart Lung and Blood Institutes, USA specific to asthma in the elderly. The following table outlines the level of evidence of each reference.

Ref No	Reference	Level of Evidence Refer section 6 of kit for explanation
1	National Asthma Council Australia, *Asthma Management Handbook 2002*. 2002, Canberra: Commonwealth Government Department of Health and Ageing.	Level I evidence
2	J Sims, *Guidelines for Treating Asthma.* Dimensions of Critical Care Nursing, 2003. 22(6): p. 247-250.	Level IV evidence
3	National Institutes of Health (National Heart Lung and Blood Institutes), *Considerations for Diagnosing and Managing Asthma in the Elderly*. 1996, New York: U.S. Department of Health and Human Services.	Level IV evidence
4	Scottish Intercollegiate Guidelines Network and British Thoracic Society, *British guidelines on the management of asthma*. 2003, London: SIGN and BTS.	Level I evidence
5	National Institutes of Health (National Heart Lung and Blood Institutes), *Practical guide for the diagnosis and management of asthma*. 1997, New York: U.S. Department of Health and Human Services.	Level IV evidence
6	Joanna Briggs Institute, *Aged Care Practice Manual*. 2nd ed. 2003, Adelaide: JBI.	Level IV evidence
7	Asthma Australia, *Asthma medications and delivery devices*. 2003, Canberra: Asthma Australia.	Level IV evidence
8	F Bochner, ed. *Australian Medicines Handbook 2004*. 2004, Hyde Park Press: Richmond, SA.	Level IV evidence
9	Asthma Victoria, *Nebulisers*, in http://www.asthma.org.au/informationsheets/nebulise.doc *(accessed March 2004)*, Asthma Victoria. 2000	Level IV evidence
10	National Asthma Council Australia, *Partnership for Asthma Care*. 2002, Canberra: Commonwealth Government Department of Health and Ageing.	

FLOW CHART FOR ASTHMA MANAGEMENT

SUSPECTED ATTACK

Signs and symptoms of Asthma can include-:

- **Wheeze**
- **Cough**
- **Sputum production**
- **Increase use of accessory muscles (eg abdominal)**
- **Hypertension**
- **Chest tightness**
- **Tachycardia**
- **Diaphoresis**

Sit resident down:

- **Reassure resident**
- **Assess severity of Asthma**

Mild-Moderate – Asthma

- No physical exhaustion
- +/- Wheeze
- Able to talk in sentences

Moderate – Asthma

- HR 100-120 bpm
- Wheeze mod-loud
- Talks in phrases

Severe Asthma-:

- Physical exhaustion (tired)
- HR > 100 bpm
- Blue around lips
- Wheeze if quiet or no wheeze
- Talks in words

Administer -:

- Nebuliser (Ventolin/Salbutamol) or
- 4 puffs of Salbutamol with an MDI and spacer (treatment may need to be repeated for a maximum of 3 treatments)

Effective treatment -:

- Continue 2-4 puffs of Salbutamol from an MDI with a spacer every 4 hrs for 24-48 hours
- Contact GP to organise a review

However, if return of symptoms -:

- Continue 2-4 puffs of Salbutamol from an MDI with a spacer every 4 hours for 24-48 hours
- Contact GP or locum GP within 24 hours for review and commence oral steroids

Unchanged or symptoms worsen despite with treatment Salbutamol -:

- **CALL AN AMBULANCE**
- **Continue nebuliser every 15-30 minutes until ambulance arrives OR**
- **4 puffs of Salbutamol from an MDI with a spacer which can be repeated every 4 min**

Practice must be registered for PIP payment 1800 222 032

ASTHMA 3+ PLAN ITEM NUMBERS IN AGED CARE HOMES

Patient must be moderate to severe asthmatic

1st Visit	2nd Visit	3rd Visit	
Level B Consult Item 35 Fee: $30.20 + $21.10# $51.30	Level B Consult Item 35 Fee: $30.20 + $21.10# $51.30	Level B Consult *Item 2547 Fee: $30.20 + $21.10# $51.30	**Total** Fee: $153.90 + $100.00 Incentive payment $253.90
Level C Consult Item 43 Fee: $57.35 + $21.10# $78.45	Level C Consult Item 43 Fee: $57.35 + $21.10# $78.45	Level C Consult *Item 2553 Fee: $57.35 + $21.10# $78.45	**Total** Fee: $235.35 + $100.00 Incentive payment $335.35
Level D Consult Item 51 Fee: $84.45 + $21.10# $105.55	Level D Consult Item 51 Fee: $84.45 + $21.10# $105.55	Level D Consult *Item 2559 Fee: $84.45 + $21.10# $105.55	**Total** Fee: $316.65 + $100.00 Incentive payment $416.65

Minimum Time 4 weeks, Maximum Time 4 months

*Triggers the $100 incentive payment per patient which is paid quarterly after the 3rd visit, in addition to the normal RAC consultation MBS benefit

The above figures are based on 1 patient. Additional $5 payment for bulk billing concessional patients can apply, ie: Resident who holds a pensioner card, health care card or a Commonwealth Seniors Health Card.

$21.10 divided by the number of patients seen, up to a maximum of 6 patients. For seven or more patients – the fee for relevant item plus $1.50 per patient eg: If a GP sees 7 patients at the one ACH the remuneration for level B consult is ($30.20 x 7) + ($1.50 x 7) = $221.90

For further information, refer to Explanatory Notes A.29 in 'Medicare Benefits Schedule Book Nov 2003'

Who is eligible for the 3+ Plan?

People with moderate or severe asthma:

- Asthma symptoms of wheeze, cough or SOB on most days
- Use reliever medication more than 3 times per week
- Uses preventer medication
- Past hospital attendance (admission) for asthma exacerbation

Remember:

- At a minimum the Asthma 3+ Visit Plan must include:
  - Documented diagnosis and assessment of moderate to severe asthma;
  - At least 3 asthma related consultations in the previous 4 weeks (minimum) to 4 months (maximum);
  - Review of the patient's use of asthma related medication, planned recalls for at least two of these consultations;
  - Provision of a written asthma action plan and self-management education to the patient. (If the patient is unable to use a written action plan, alternative patient education may be provided and documented in the medical record) and review of asthma action plan.

- The Asthma 3+ plan should be provided to a patient by one GP or in exceptional circumstances by another GP within the same practice.
- The patient's medical record should include documentation of each of these requirements and the clinical content of the patient held written action plan
- All visits should be billed under the normal attendance items with the exception of the visit that completes all of the minimum requirements of the Asthma 3+ Visit
- For guidelines on the requirements for each visit, refer to the 'National Asthma Council – Partnership For Asthma Care' brochure

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Guide for using EPC items for case conference in residential aged care facility

Patient eligibility

Residents who suffer from at least 1 medical condition that has been, or is likely to be, present for at least 6 months or is terminal, and requires care from at least 3 formal health care providers (including the GP)

Maximum of 5 case conferences per patient per year.

GP can either organise/coordinate or participate.

Eligible members of multidisciplinary care team most suited for Aged Care Homes:

Medical Practitioners

Allied Health Professionals:

Registered Nurses	Personal Care Worker
Physiotherapists	Asthma Educators
Pharmacists	Podiatrists
Diabetes Educators	Dieticians
Mental Health Workers	Psychologists
Occupational Therapists	Optometrists
Social Workers	Speech Pathologists
Dental Therapists	Dentists

Items:

GP organise & coordinate a Case Conference in Residential Aged Care Facility

☐ Item 734 (15-29 min) ☐ Item 736 (30-44 min) ☐ Item 738 (≥45 min)

GP participate in a Case Conference organised by the Residential Aged Care Facility

☐ Item 775 (15-29 min) ☐ Item 778 (30-44 min) ☐ Item 779 (≥45 min)

Completing the streamlined checklist below will meet requirements for case conference EPC item nos.

Date of case conference _____ Time started _____ Time Completed _____

Verbal consent given by patient or next of kin ☐

Case conference organised & coordinated by: ☐ GP or ☐ Aged Care Home

Participant names & disciplines:

1. _____ (GP)

2. _____

3. _____

Other participants (optional):

Patient _____

Relative/s _____

Other service provider/s _____

Outcomes

RAC patient summary & plan (or other statement of issues & management that were discussed), and this documentation of case conference has been:

☐ Placed in resident's record (eg kept in yellow sleeve for after hours care providers)

☐ Placed in patient record at general practice

☐ Given to participants

Any other action: _____

Review date set for: _____

Completion of item number

This guide is advisory only and should be used in conjunction with the Medicare Benefits Schedule Book – A.22 explanatory notes

Quick Guide for the RAC Patient Summary & Plan Template

This 1-page quick guide is to assist the more experienced Medical Director user in installing & filling out a RAC patient summary & plan.

Before you open the template

The template is populated with information from the patient record.

1. Check past history

While in Medical Director open the patient record. Check that the past history items are up-to-date

Click on the *Past History* tab to see if the patient's past history of medical conditions has been recorded correctly.

2. Allergies

From the **Edit** menu select **Patient Details** (or press <F10>) and then click on the Notes tab/Allergies and Warnings. Fill out the allergy details.

3. Updating the Address Book

The aged care home facility details are taken from the Medical Director Address Book. You must ensure that the Address Book is up-to-date with their details.

After Opening the RAC Patient Summary & Plan Template

1. Checkboxes

These can be checked by highlighting the checkbox and typing an x (make sure that you don't use the Shift or Caps Lock keys).

2. Removing unwanted rows in a table

Highlight the rows you wish to remove and from the **Table** menu select **Delete** and then **Rows.**

3. Adding a row to a table

Insert the cursor in the row above where you wish to add a row and from the **Table** menu select **Insert** and then **Rows Below**.
Note: Columns can also be added to a table using the same method.

4. Inserting and Removing Page Breaks

As you type in information or "populate" the template from the Medical Director database you may encounter the following layout problems:

- a table broken in two (half spilling onto the next page)
- a single (or a few) lines at the top or bottom of the page (widows and orphans)
- a blank page
- an almost blank page

What has happened here is that there is a Page Break inserted in the text. You can't see it but you can delete it. Insert the cursor at the end of the text that is sitting on the top of the page. Press the **Delete** key on the keyboard. The text from the following page returns to its correct position.

To insert a page break - insert the cursor in the line above the table (NOT IN THE FIRST LINE OF THE TABLE) or above the text and from the **Insert** menu select **Page Break** (or press Control + Enter).

To delete a page break - you only have a few lines on a page; the rest of the text is on the next page

Residential Aged Care Patient
Medical Summary & Plan

Aged Care Home: _____ **Phone:** _____

Patient details:

Name:
Date Of Birth:
Pension no.
Medicare no.
DVA no.

Nationality: _____
Religious preference:_____
Interpreter needed: _____
Health Fund & No: _____
High / Low level care bed

GP

Name:
Address:
Ph: BH AH
Fax: Mobile
Arrangements for after hours care:
_____

Next of Kin

Name:
Relationship:
Address:
Ph: BH AH
Medical power of attorney: No ☐ Yes ☐
Who? _____

In the event of a sudden deterioration in the patient's condition:

NOK to be contacted: ☐ Business Hours ☐ All Hours

GP to be contacted: ☐ Business Hours ☐ All Hours

Current Medications As per attached drug chart or Webster sheet (including OTC, topical & complementary)

TO BE COMPLETED BY GP:

Allergies

Past Medical history

Current Problems and Care Plan

Problem	**Summary of treatment, including after hours**

Goals of care (as discussed with patient and NOK)

_____

_____

_____

Date	GP Signature

Review 6 monthly or after any major change in health status eg: within 7 days post discharge from hospital						
Reviewed	Date		Date		Date	
	GP Signature		GP Signature		GP Signature	

Documentation for completion / review of Medical Summary & Plan

MBS/EPC Item:

a) **GP Consultation** at a Residential Aged Care Facility

☐ Item 43 (level C, 20-39 min) ☐ Item no. 51 (level D, ≥45 min)

b) **Case Conference** (maximum 5/year)

GP organising & coordinating a Case Conference in Residential Aged Care Facility

☐ Item 734 (15-29 min) ☐ Item 736 (30-44 min) ☐ Item 738 (≥45 min)

GP participating in a Case Conference organised by the Residential Aged Care Facility

☐ Item 775 (15-29 min) ☐ Item 778 (30-44 min) ☐ Item 779 (≥45 min)

c) **GP contribution/review of the resident's Care Plan** prepared by the Residential Aged Care Facility

☐ Item 730 (maximum 3-monthly)

For Case Conference in Residential Aged Care Facility:

Completing the streamlined checklist below will meet requirements for case conference EPC Item nos.

Date of case conference _____ Time started _____ Time Completed _____

Patient or NOK consent gained ☐

Case conference organised & coordinated by: ☐ GP or ☐ Aged Care Home

Participants name (discipline):

1. _____ (GP)
2. _____
3. _____

Other participants (optional):

Patient _____

Relative/s _____

Other service provider/s _____

Outcomes

Medical summary & plan and this documentation of case conference has been:

☐ Placed in resident's record (kept in yellow sleeve for after hours care providers)

☐ Placed in patient record at general practice

☐ Given to all participants

Any other action: _____

_____

Review date set for: _____

Case Conference – An information sheet for residents and their relatives/carers

What is a Case Conference?

A case conference is a meeting held between your GP and at least two other health care providers, each of whom provide a different kind of service to you (the resident). The aim is to jointly agree on the types of care you need. Case conferences provide the opportunity to plan for urgent or short-term health care needs in a coordinated fashion, or to coordinate care for specific aspects of your condition.

Some examples of care providers who may participate in a case conference include:

- Nurse
- Personal Care Worker / Personal Care Attendant
- Pharmacist
- Physiotherapist
- Social Worker
- Occupational Therapist

You and your relatives/carers may also be invited to attend and participate in the case conference to provide important information that may need to be considered when planning for your health care needs.

Who would benefit from a Case Conference?

Residents:

Anyone who has a condition that lasts longer than six months (eg: diabetes, arthritis, asthma or intellectual disabilities) and needs the care of their GP and at least two other health workers (eg: nurse, personal care worker, physiotherapist).

Relatives/Carers:

You and your relatives/carers who are involved in case conferencing will gain a more comprehensive understanding of your health care needs. Hence, you and your relatives/carers, GP and Aged Care Home staff can work together in the implementation of the care.

Who conducts the case conference?

Your GP or the Aged Care Home staff can organise a case conference. The case conference will usually be held at the Aged Care Home, however, the Aged Care Home staff or the GP will discuss the date, time and venue with you and your relatives/carers prior to confirmation of the case conference.

The case conference may take place with everyone in the same room, or it may take place over the telephone. Case conferences vary in length, depending on the complexity of the issues being discussed.

What happens during a case conference?

Prior to the case conference you and/or your relative/carer (if you are unable), must provide consent, and with your help, decide what purpose the case conference has and what problems or issues will be discussed. If there is anything you DO NOT wish to be discussed, please tell your GP or Aged Care Home staff before the case conference takes place.

Produced by the North West Melbourne Division of General Practice
March 2004

Case Conference – An information sheet for residents and their relatives/carers

How do I find out the results?

Your GP or Aged Care Home staff will provide you with a written summary of the case conference and an opportunity to briefly review the outcomes.

Will it cost me anything?

Medicare pays a rebate to the GP for conducting case conferences. If your GP bulk bills then it will not cost you anything for the GP to attend. Sometimes you may be required to pay the other health providers for their part in the case conference as Medicare does not cover these fees. Any referrals to specialists or other health workers that are recommended as part of the case conference will be separately charged. *Any costs incurred by the resident should be made clear at the time of gaining consent.*

What issues/concerns would I like to discuss at the case conference?

To get the most benefit out of a case conference, we recommend that prior to the case conference, you list and discuss your issues/concerns together with your relatives/carer or anyone else you may think appropriate.

Use the table below to list your issues/concerns so you can refer to them during the meeting.

Issue	Comment	Outcome

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