Australian Government

Department of Health and Ageing

Delirium Care Pathways

Developed on behalf of the Australian Health Ministers' Advisory Council (AHMAC) by the AHMAC Health Care of Older Australians Standing Committee

2010

Delirium Pathways

ISBN: 978-1-74241-313-6
Online ISBN: 978-1-74241-314-3
Publications Number: 6770

Published by the Australian Government Department of Health and Ageing on behalf of AHMAC.

Copies of this document can be obtained from:
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Department of Health and Ageing
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GPO Box 9848
Canberra City ACT 2601

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This document may be downloaded from the Department of Health website at www.health.vic.gov.au/acute-agedcare

Delirium Care Pathways

Delirium Care Pathways was developed to assist in the coordination of care and to improve how older people are managed during a delirium episode to improve care and minimise adverse outcomes. This document builds upon the *Clinical Practice Guidelines for the Management of Delirium in Older People* to provide a blueprint that guides clinicians in the provision of care in a range of health and aged care settings (including community care).

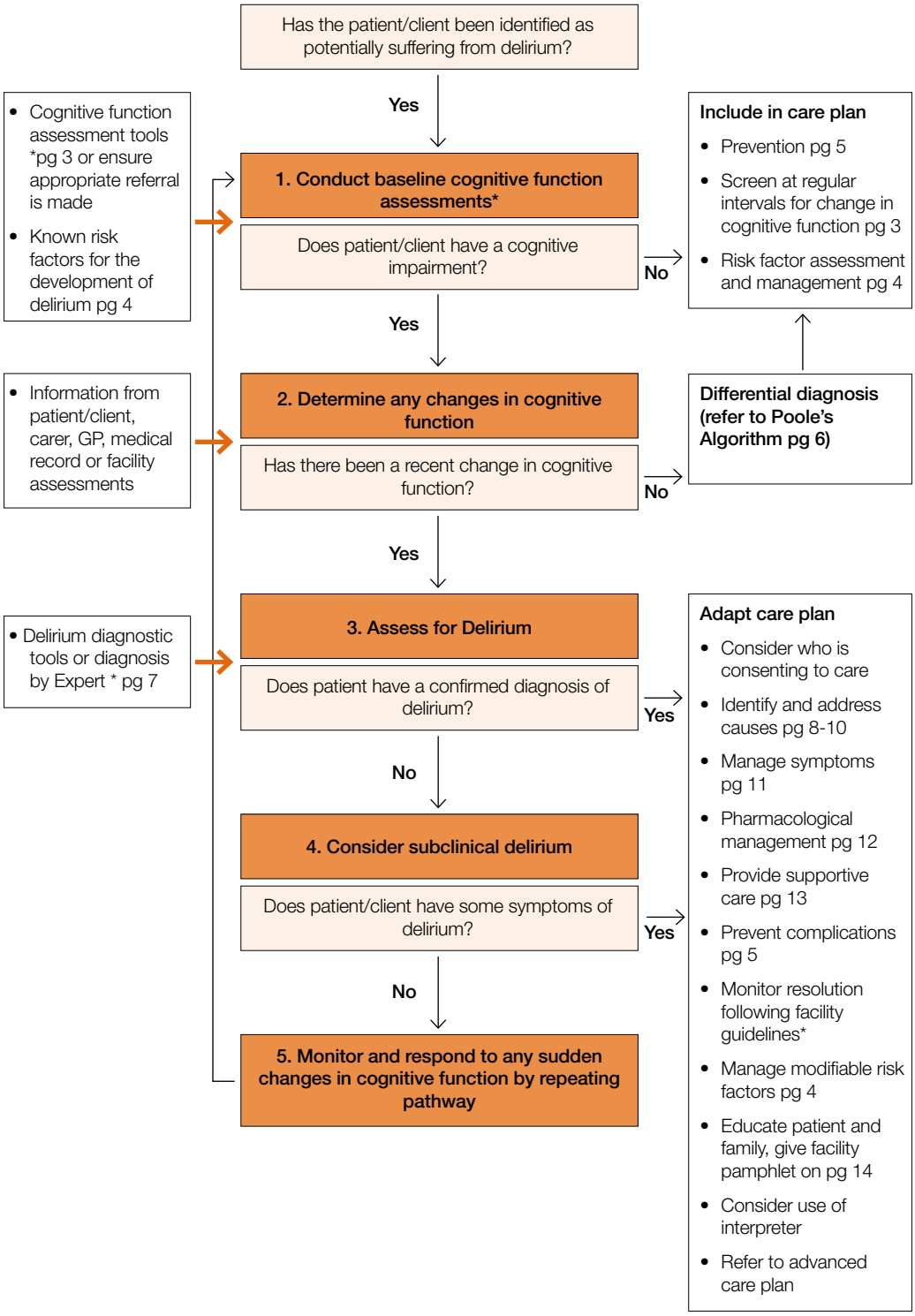
The three examples provided in *Delirium Care Pathways* demonstrate different patient journeys in acute care, community care and residential care. These journeys highlight the management of delirium in different settings and include page references to more information on assessment and management.

Delirium is an important clinical condition which is often left undiagnosed or mismanaged. *Delirium Care Pathways* will assist clinicians and care givers to manage delirium across a range of care settings.

Acknowledgements

This resource has been developed by Associate Professor Victoria Traynor and Nicole Britten, University of Wollongong, under the management of the New South Wales Department of Health, on behalf of the Health Care of Older Australians Standing Committee.

Preventative Strategies for Delirium

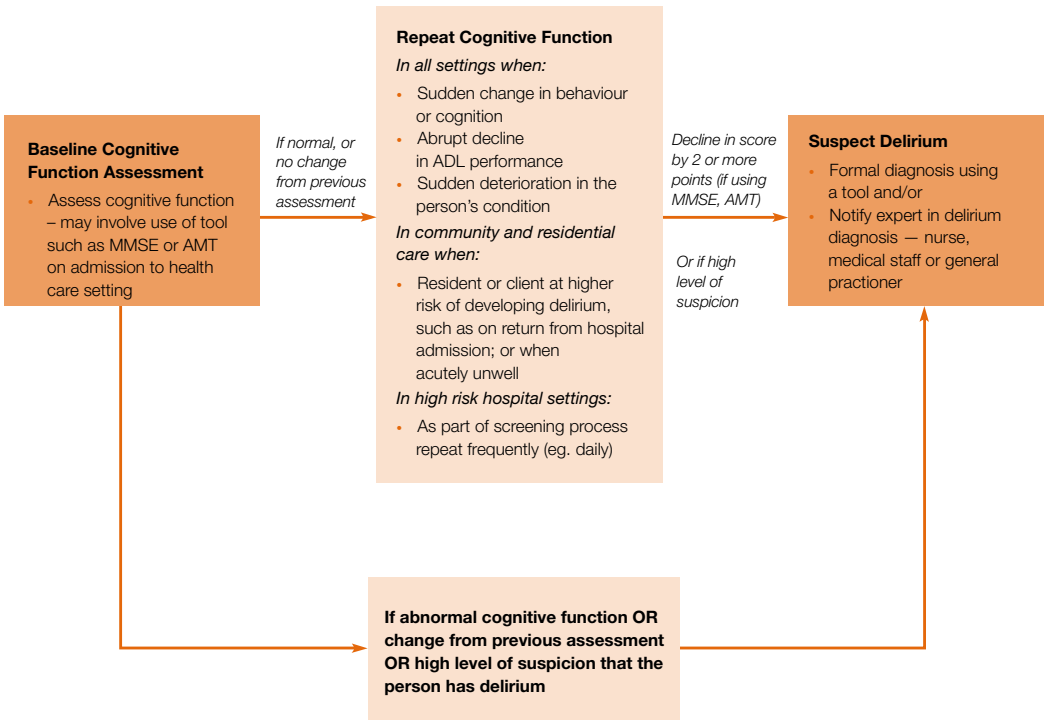


* People to use service/facility preferred diagnostic and assessment tools or other relevant material.

Adapted from: Clinical Epidemiology and Health Services Evaluation Unit 2006, *Clinical Practice Guidelines for the Management of Delirium in Older People*, Victorian Government Department of Human Services, Melbourne, Victoria

Cognitive Assessment

Screening for delirium: the process involved



Adapted from: Clinical Epidemiology and Health Services Evaluation Unit 2006, *Clinical Practice Guidelines for the Management of Delirium in Older People*, Victorian Government Department of Human Services, Melbourne, Victoria.

Risk Factors

Risk factors according to the health care setting

Health care setting	Hospital – intensive care units, aged care wards, and neurology wards (based on published high level evidence*)	Hospital – surgical wards in particular orthopaedic, cardiac and neurosurgery wards (based on published high level evidence*)	Residential care and Community care (no published high level evidence)
Risk factors	• Pre-existing cognitive impairment including dementia • Severe medical illness • Age ≥ 70 years • Visual impairment • Depression • Abnormal sodium • Use of indwelling catheter • Use of physical restraints • Adding three or more medications during hospitalisation	• Pre-existing cognitive impairment including dementia • Severe medical illness • Age ≥ 70 years • Visual impairment • Depression • Abnormal sodium • Use of indwelling catheter • Use of physical restraints • Adding three or more medications during hospitalisation • Exposure to pethidine • Exposure to benzodiazepine • History of delirium • Alcohol related health concerns • Exposure to narcotic analgesics preoperatively	• Pre-existing cognitive impairment including dementia • Illness / infection • Age ≥ 70 years • Visual impairment • Depression • Abnormal serum sodium • Use of indwelling catheter • Use of physical restraints • Multiple medication use • Alcohol related health concerns • Exposure to benzodiazepine • Return from hospitalisation • Hearing impairment

* This list of risk factors has been collated from both risk factor and risk prediction model studies.

Adapted from: Clinical Epidemiology and Health Services Evaluation Unit 2006, *Clinical Practice Guidelines for the Management of Delirium in Older People*, Victorian Government Department of Human Services, Melbourne, Victoria.

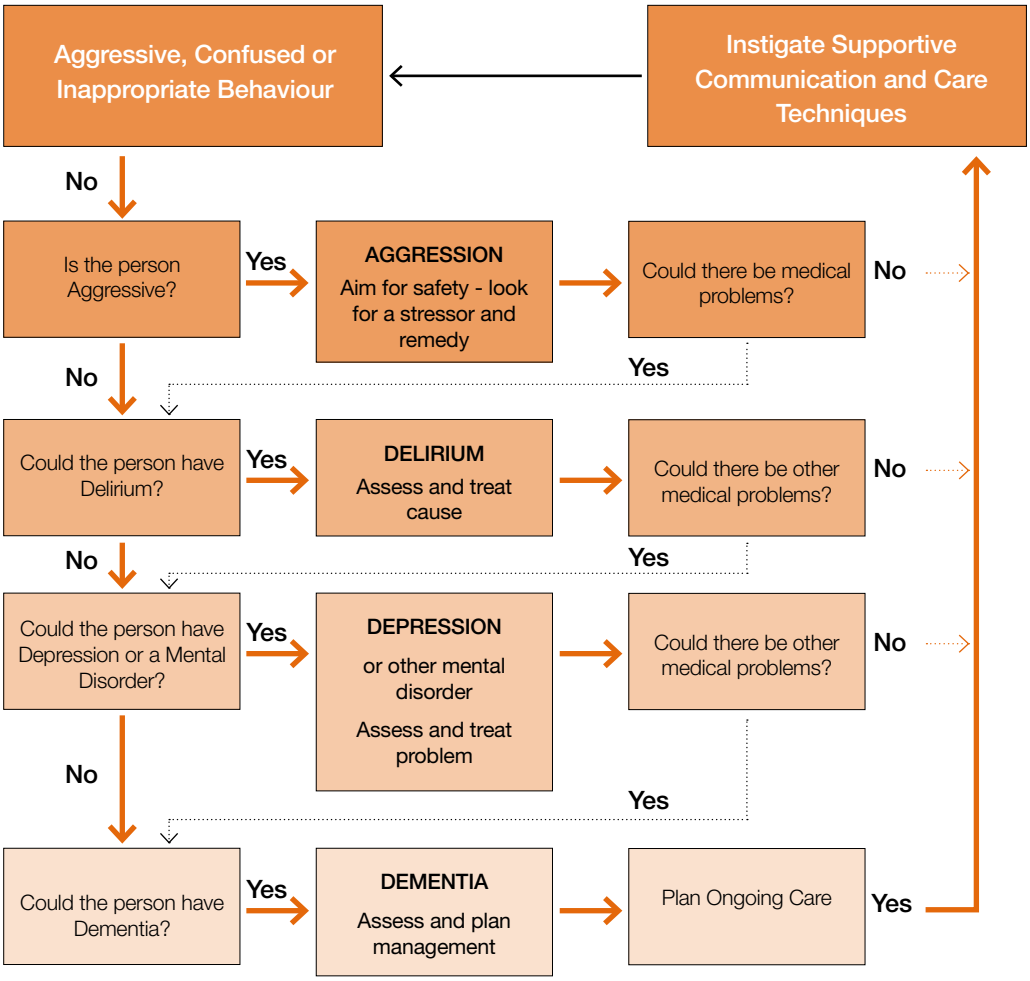
Strategies to Prevent Delirium

Strategies to prevent delirium

Environmental Strategies	Clinical Practice Strategies
• Lighting appropriate to time of day – windows with a view to outside, curtains and blinds open during the day, and minimal lighting at night may reduce disorientation • Provision of single room – reduces the disturbance caused by staff attending other patients in the same room • Quiet environment especially at rest times – noise reduction strategies (eg: use of vibrating pagers rather than call bells) • Provision of clock and calendar that clients can see • Encourage family and carer involvement – includes encouraging them to visit • Encourage family/carer to bring in client's personal and familiar objects • Avoid room changes – frequent changes may increase disorientation	• Encourage/assist with eating and drinking to ensure adequate intake • Ensure that patients who usually wear hearing and visual aids are assisted to use them • Regulation of bowel function – avoid constipation • Encourage and assist with regular mobilisation • Encourage independence in basic ADLs • Medication review • Promote relaxation and sufficient sleep – can be assisted by regular mobilisation, massage, encouraging wakefulness during the day • Manage discomfort or pain • Provide orienting information including name and role of staff members • Minimise use of indwelling catheters • Avoid use of physical restraints • Avoid psychoactive drugs • Use of interpreters and other communication aids for CALD patients/clients • Use of ATSI liaison officer for ATSI populations

Adapted from: Clinical Epidemiology and Health Services Evaluation Unit 2006, *Clinical Practice Guidelines for the Management of Delirium in Older People*, Victorian Government Department of Human Services, Melbourne, Victoria.

Poole's Algorithm: Nursing Management of Disturbed Behaviour in Older People



Adapted from: Poole, J 2002, *Poole's Algorithm: Acute Care: Nursing management of disturbed behaviour in older people in acute care, Sydney*; Department of Aged Care and Rehabilitation Medicine, Royal North Shore Hospital & Community Health Services

Delirium Diagnostic Tools

Brief description of diagnostic tools for delirium

Confusion Assessment Method (CAM)

The CAM is a valid and reliable diagnostic tool for delirium. It was specifically designed for use with the hospitalised older person, to improve delirium identification and recognition. It provides a standardised method to enable non-psychiatric clinicians to detect delirium quickly. The CAM was developed by Inouye et al in 1988-1990 and its performance attributes have been assessed in a number of studies.

Confusion Assessment Method – Intensive Care Unit (CAM-ICU)

The CAM-ICU is a modified version of the CAM intended for use in intensive care units. CAM-ICU is a delirium assessment instrument for use by nurses and physicians, and comprises standardised non-verbal assessments for mechanically ventilated and non-ventilated ICU patients. It was developed by Ely et al in 1999 and its performance attributes have been assessed by its developers in two studies.

Delirium Symptom Interview (DSI)

The DSI is an interview protocol for assessing the seven symptom domains delineated by the DSM-III criteria for delirium. It was developed by Albert et al in 1990-1992 and was designed to be administered (on a daily basis) to hospitalised older people by non-clinicians. The DSI is meant to be used in combination with other data to define cases of delirium and as an alternative to the DSM-III or DSM-III-R diagnostic criteria. Only one study has assessed its performance attributes.

Delirium Rating Scale (DRS)

Although the DRS was originally developed to 'rate the symptoms' of delirium, not as a diagnostic instrument, the study by Rosen et al (1994) assessed the DRS for its ability to accurately diagnose delirium when administered by research clinicians. A number of studies have assessed the performance attributes of this instrument when used as originally intended.

Adapted from: Clinical Epidemiology and Health Services Evaluation Unit 2006, *Clinical Practice Guidelines for the Management of Delirium in Older People*, Victorian Government Department of Human Services, Melbourne, Victoria.

Identify and address the causes of Delirium

Identify and address the causes of delirium

In order to identify and address the causes of delirium, a comprehensive initial evaluation should be performed that includes the following components:

(i) Obtain history

- Medication
  - recent changes
  - include prescription and over-the-counter medications
- Dehydration – diuretics use, hot weather
- Falls
- Infection
- Bladder and bowel function
- Premorbid cognitive and functional status
- Alcohol history
- Past medical history and comorbidities
- Social history
- History of dietary and fluid intake
- Sensory impairments

This information can be obtained from a number of sources such as documented in medical record from previous admissions and consultation with the person with delirium, their general practitioner and/or carer/family members. People with delirium may provide unreliable histories and information should be sought from family members, GP, residential care staff, etc.

(ii) Examination

- Obtain vital signs – temperature, pulse, respirations, blood pressure (lying and standing), and oxygen saturation
- Mental state examination
  - Decreased arousal
  - Decreased attention
  - Disorientation

Adapted from: Clinical Epidemiology and Health Services Evaluation Unit 2006, *Clinical Practice Guidelines for the Management of Delirium in Older People*, Victorian Government Department of Human Services, Melbourne, Victoria.

- Neurological examination
  - New signs
- Chest
  - Auscultation
  - Cough
- Abdomen
  - Palpable faeces/faecal impaction
  - Palpable bladder/urinary retention
- Skin
  - Lesions
  - Signs of dehydration

(iii) Investigations

The following investigations are used to screen for common causes of delirium:

- Urinalysis and MSU (if urinalysis abnormal)
- Full blood examination
- Urea and electrolytes
- Glucose
- Calcium
- Liver function tests
- Chest x-ray
- Cardiac enzymes
- ECG

Further investigations will be dependant upon clinical features and expert consultant advice, and may include:

- Specific cultures eg blood and sputum (if fever present, cough and/or abnormal chest radiograph)
- Arterial blood gases (if short of breath, cough and/or abnormal chest radiograph)
- CT brain (if history of falls, patient/client on anticoagulant therapy or focal neurological signs present)
- Lumbar puncture (if headache and fever and meningism present)
- EEG (may assist in determining aetiology eg non-convulsive status epilepticus)
- Thyroid function tests
- B12 and folate

Adapted from: Clinical Epidemiology and Health Services Evaluation Unit 2006, *Clinical Practice Guidelines for the Management of Delirium in Older People*, Victorian Government Department of Human Services, Melbourne, Victoria.

Tips for identifying the cause of delirium

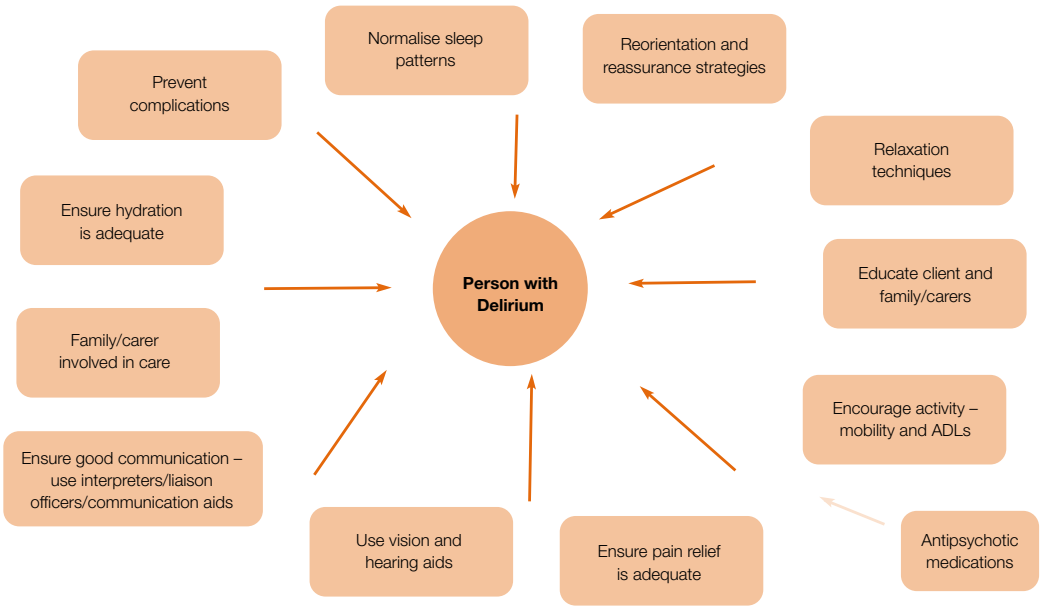
Start with critical management issues

- Has hypoxia been ruled out?
- Has hypotension been ruled out?
- Has hypoglycaemia been ruled out?
- Has major electrolyte disturbance been ruled out?
- Has a history regarding all the medications currently taken been obtained?
- Has an infection been ruled out?
- Has urinary retention been ruled out?
- Has constipation and faecal impaction been ruled out?
- If person agitated/distressed; have pain, thirst, and hunger been ruled out?
- Is an alcohol withdrawal syndrome possible? If yes, refer to the management of alcohol withdrawal delirium guidelines.

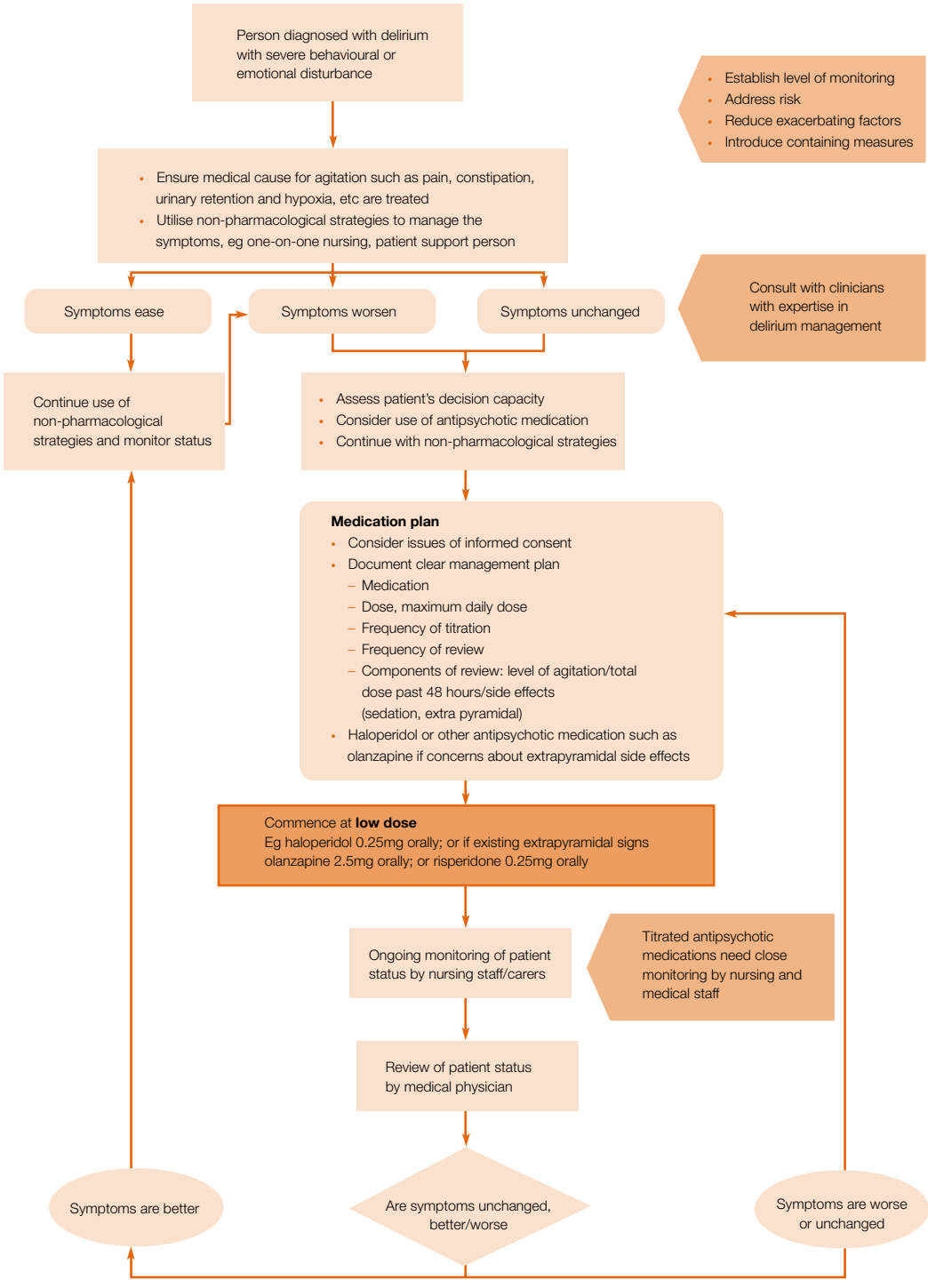
Adapted from: Clinical Epidemiology and Health Services Evaluation Unit 2006, *Clinical Practice Guidelines for the Management of Delirium in Older People*, Victorian Government Department of Human Services, Melbourne, Victoria.

Management

Multicomponent management of delirium symptoms



Pharmacological management of the delirious patient with severe behavioural or emotional disturbance



Adapted from: Clinical Epidemiology and Health Services Evaluation Unit 2006, *Clinical Practice Guidelines for the Management of Delirium in Older People*, Victorian Government Department of Human Services, Melbourne, Victoria.

Supportive Care

In keeping with principles for the prevention of delirium, the provision of a supportive care environment for people with delirium is reported to be an essential component of their management. This includes providing adequate sensory, physical and psychological support. It also includes being sensitive to the needs of ATSI and CALD older persons, which may involve the use of liaison officers, interpreters, use of communication aids, and greater involvement and communication with the family/carers.

Adapted from: Clinical Epidemiology and Health Services Evaluation Unit 2006, *Clinical Practice Guidelines for the Management of Delirium in Older People*, Victorian Government Department of Human Services, Melbourne, Victoria.

Adapted from: Clinical Epidemiology and Health Services Evaluation Unit 2006, *Clinical Practice Guidelines for the Management of Delirium in Older People*, Victorian Government Department of Human Services, Melbourne, Victoria.

How can you help care for someone with delirium?

It is reassuring for people with delirium to see familiar people. Visit as often as you can and try to be available to help with their care. Encourage other family members or friends to help as well.

- Speak slowly in a clear voice when talking to someone who has delirium. Identify both yourself and the person by name.
- Encourage and assist someone with delirium to have adequate food and fluids.
- Knowing the time of day can reduce confusion. Remind them where they are, and what day and time it is. Open the curtains in their room.
- Visual or hearing impairment can make their confusion worse. If someone with delirium usually wears glasses or hearing aids, help them to put them on.
- If someone with delirium is agitated or aggressive, do not try to restrain them. If they want to walk around, let them, but try to make sure that they are safe from falling and that the area is free from hazards.
- Bring personal mementos that help remind the person of home, such as photos, their dressing gown, radio or CD/tape player with favourite music.
- Let staff know any special personal information that may help calm and orient someone with delirium, such as, the names of family and friends, hobbies, significant events, etc.

Contacts

Carers Resource Centres
Ph: 1800 242 636

Aged Care Information Line
Ph: 1800 500 853

National Dementia Helpline
Ph: 1800 100 500

Carers Australia
www.carersaustralia.com.au

Alzheimer's Australia
www.alzheimers.org.au

If you have any concerns or questions about delirium, talk to your doctor.

Adapted with permission from North Coast Area Health Service, NSW.

This brochure provides information for people who have experienced delirium and for their family/carers.

Delirium

Delirium is a common medical problem that is characterised by changes in mental function and occurs more often among older people.

When delirium occurs people are confused and may be either very agitated or quiet and drowsy.

The onset of delirium is always sudden. It usually only lasts a few days but may persist for longer periods.

It can be a serious condition.

Patient Brochure

Who is at risk of developing delirium?

People who:

- are very sick
- have dementia
- are 70 years of age or more
- suffer from depression
- have poor eyesight
- are taking multiple medications
- are having a surgical procedure eg. heart or hip surgery

What are the symptoms of delirium?

People with delirium may:

- appear confused and forgetful
- be unable to pay attention
- be different from their normal selves
- be either very agitated or quiet and withdrawn or sleepy
- be unsure of the time of day or where they are
- have changes to their sleeping habits, such as staying awake at night and being drowsy during the daytime
- feel fearful, upset, irritable, angry or sad
- see things that are not there, but that seem very real to them
- lose control of their bladder or bowels.

How common is delirium?

About one-fifth of older people admitted to hospital, and close to half of the residents in aged care facilities will experience delirium at some stage of their care.

What causes delirium?

Common causes of delirium in older people include:

- infection
- multiple physical illnesses
- constipation
- dehydration/malnutrition
- severe pain
- medications, including 'over-the-counter' medicines
- heavy alcohol consumption
- withdrawal from alcohol or medication, particularly sleeping pills

How does delirium start?

The symptoms happen very quickly, usually over hours or days. A person's behaviour can also fluctuate during the course of a single day.

Delirium is sometimes mistaken for dementia or depression, so it is important for family/friends to notify medical/nursing staff of any sudden change in a person's mental state.

How long does delirium last?

Delirium usually only lasts for a few days but sometimes it will continue for weeks or even months. If delirium is not resolved quickly, it can lead to serious complications such as falls, pressure ulcers, longer length of stay in hospital, and even death.

Will delirium recur?

People who have experienced delirium do have a higher risk of experiencing delirium again.

How is delirium treated?

Delirium is generally associated with an underlying physical illness. However it is not always possible to identify the cause.

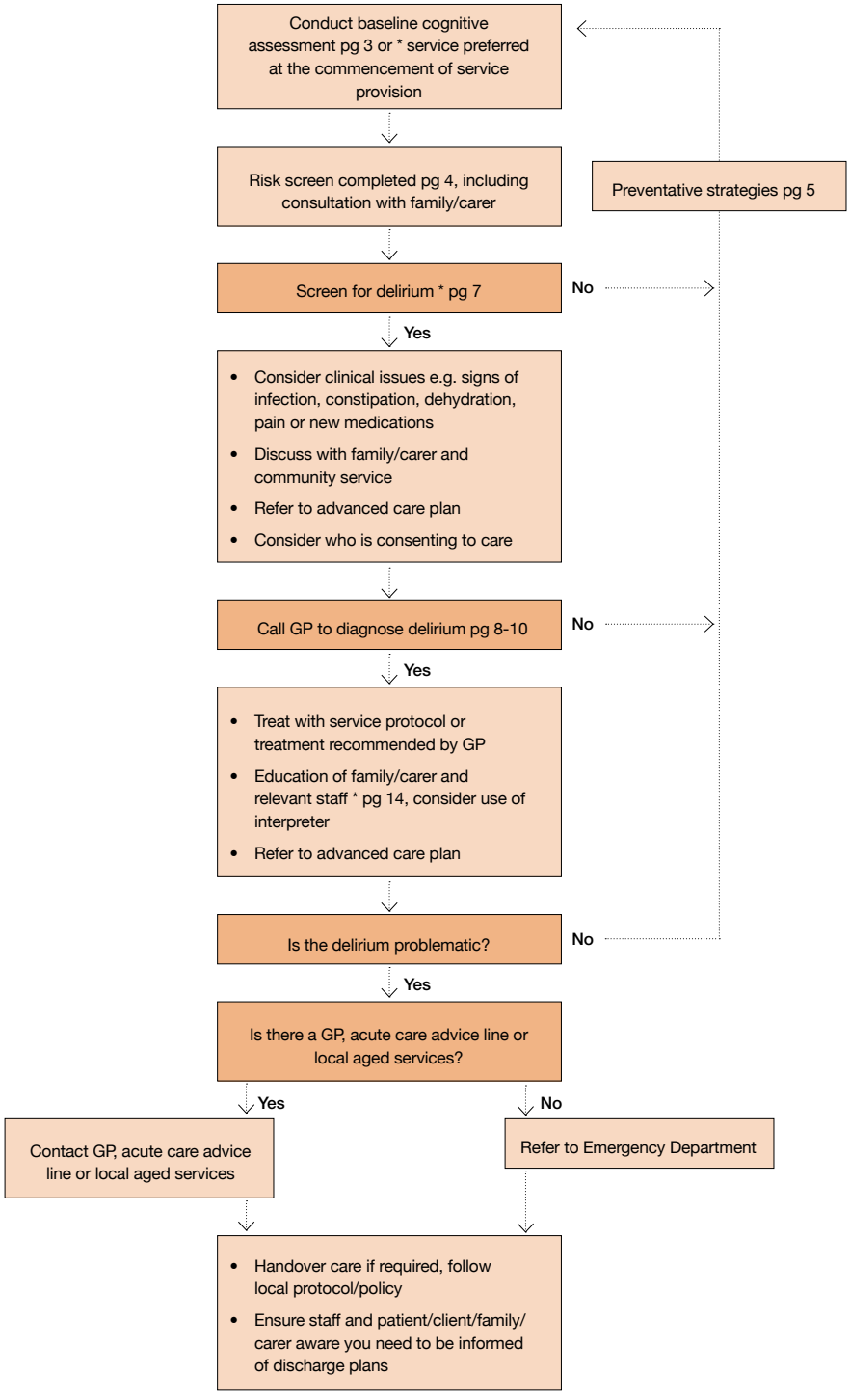
Staff will do a thorough medical assessment to look for and treat the underlying cause of the delirium. Treatment also includes reducing the risk of complications and lessening symptoms.

Role of family and carers

- Family members/carers can provide valuable information to the staff caring for the person with delirium.
- It is important to notify staff of any sudden change in a person's mental or physical condition.

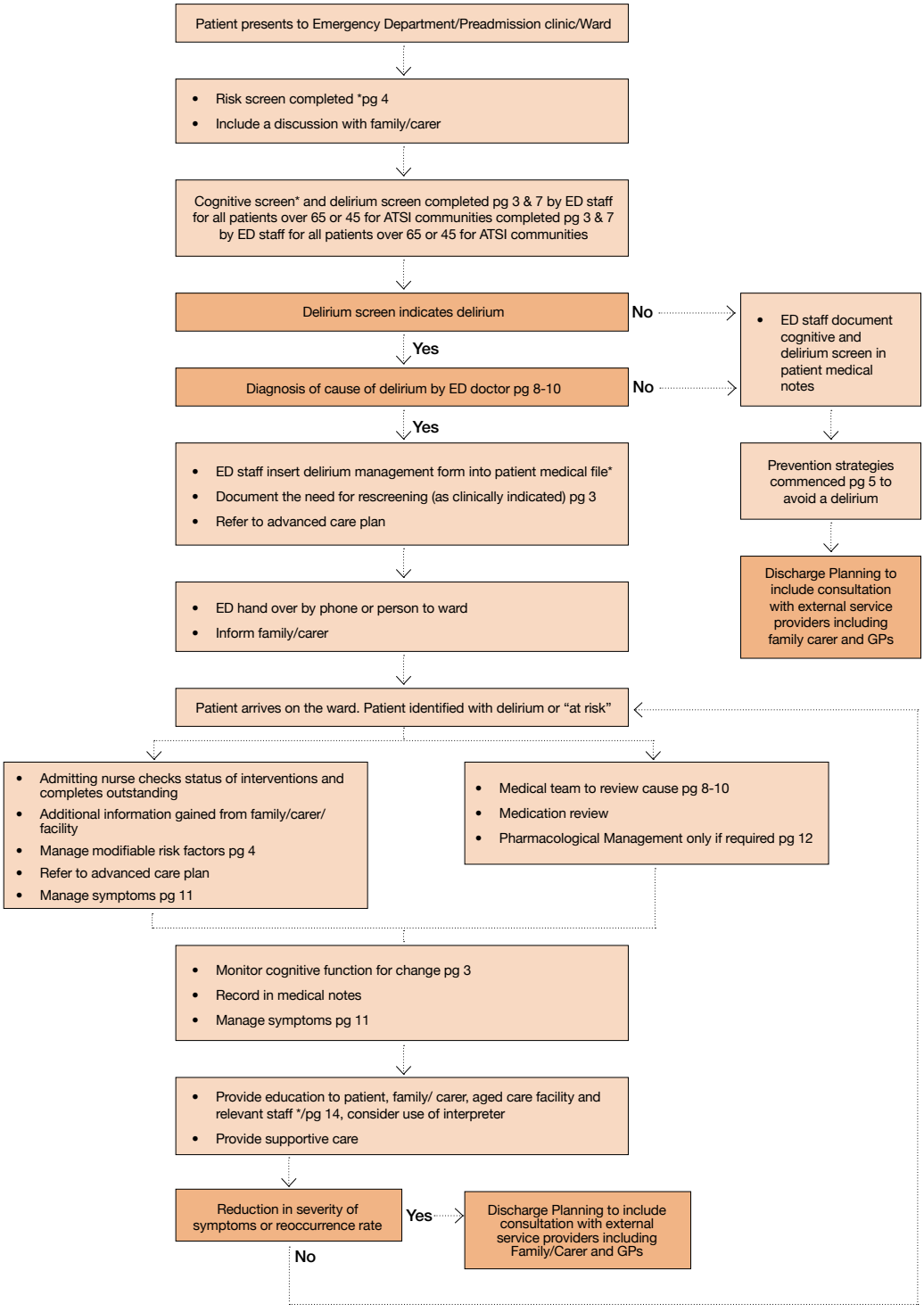
Adapted from: Clinical Epidemiology and Health Services Evaluation Unit 2006, *Clinical Practice Guidelines for the Management of Delirium in Older People*, Victorian Government Department of Human Services, Melbourne, Victoria.

Example of patient/client journey for use in community



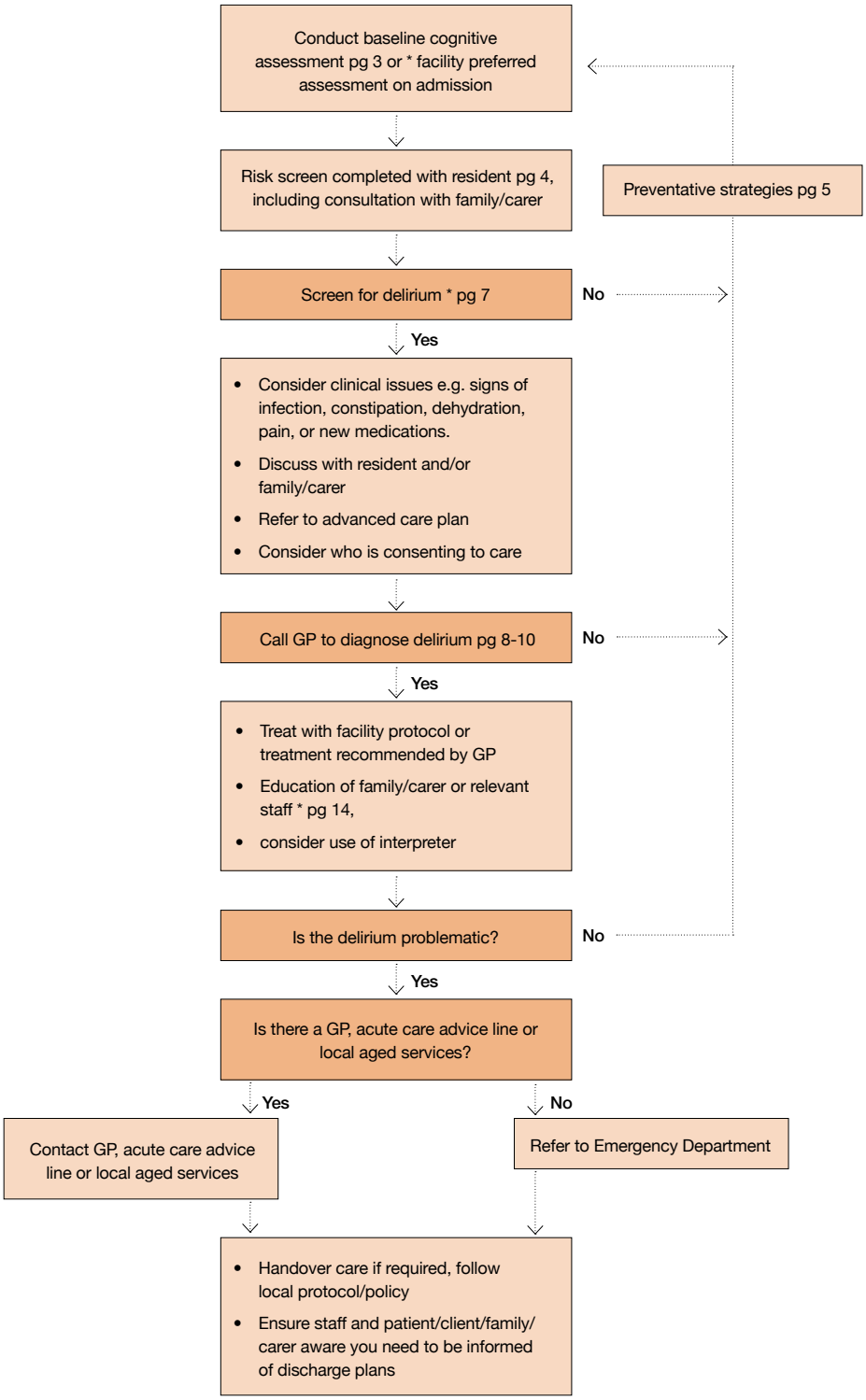
*** To use assessments or screens as used in own facilities/services or other relevant material.**

Example of a patient journey for use in acute care



* To use assessments or screens as used in own facilities/services or other relevant material.
Ref *GWAHS Broken Hill Aged Care Project 2008*

Example of a resident's journey for use in residential care



*** To use assessments or screens as used in own facilities/services or other relevant material.**

Glossary

ADL:	Activities of Daily Living.
AMT:	Abbreviated Mental Test – a 10 question test used to rapidly assess elderly patients for dementia. A score of six or less suggests delirium or dementia, although further and more formal tests are necessary to confirm the diagnosis.
ATSI:	Aboriginal and Torres Strait Islander.
CALD:	Culturally and linguistically diverse.
Cognitive Function:	The mental process of knowing, thinking, learning, reasoning, judging and remembering.
Cognitive Function Assessment Tool:	A recognised and approved formal process for evaluating cognitive function and diagnosing impairment of cognitive function.
Cognitive Impairment:	Reduction in mental functioning and ability to carry out tasks that require thinking, planning, and memory.
Co-morbidity:	The coexistence of two or more medical disorders or disease processes.
CAM:	Confusion Assessment Method. CAM was specifically designed for use with older people, to improve the identification and recognition of delirium. It provides a standardised method to enable non-psychiatric clinicians to detect delirium quickly in high-risk settings.
CAMICU:	Confusion Assessment Method Intensive Care Unit - is a modified version of the CAM for use in intensive care. It incorporates non-verbal, objective assessment instruments. CAMICU is a delirium assessment instrument for use by nurses and physicians, and uses standardized non-verbal assessments for mechanically ventilated and non-ventilated ICU patients. The features and descriptions of delirium are the same as the CAM.

Delirium:	Disturbance of consciousness, attention, cognition and perception that develops over a short period of time (usually hours or days) and tends to fluctuate during the course of the day.
DRS:	Delirium Rating Scale – a diagnostic tool consists of 10 items with a total score range of 0-40. It is based on the DSM-III-R criteria for delirium and covers perceptual disturbance, temporal onset, psychomotor behaviour, sleep wake disturbance, labile mood and variability of symptoms.
DSI:	Delirium Symptom Interview – a diagnostic tool using an interview protocol for assessing the seven symptom domains delineated by the DSM-III criteria for delirium. It is composed of 33 questions that address the domains of: disorientation; disturbance of sleep; perceptual disturbance; incoherent speech; level of psychomotor activity; general behaviour observations.
Dementia:	A progressive decline in cognitive function that affects memory, judgement, attention, language and problem solving.
HCOASC:	Health Care of Older Australians Standing Committee, a subcommittee of the Australian Health Ministers' Advisory Council (AHMAC) Health Policy Priorities Principal Committee (HPPPC).
Hypoglycaemia:	An abnormal decrease in the blood sugar level.
Hypotension:	An abnormal decrease in the blood pressure.
Hypoxia:	A pathological condition in which the body as a whole or a region of the body is deprived of an adequate oxygen supply.
MMSE:	Mini Mental State Examination – a 30 question test, administered in 10 minutes, and used to screen for cognitive impairment. It samples various functions including arithmetic, memory and orientation.
Pharmacological Management:	Treatment of a disorder or disease using drug therapy.
Poole's Algorithm:	A map or model, in the form of a flow sheet, created by Julia Poole, for providing general guidelines for the management of disturbed behaviour in older people.
Psychoactive Drugs:	A medical, drug or chemical substance that affects the mind, mood or other mental processes.

www.ahmac.gov.au

All information in this publication is correct as at September 2011

D0537 September 2011