

Assessing and prescribing beds and recliner / fallout chairs in the palliative care context

25th Aug 2022



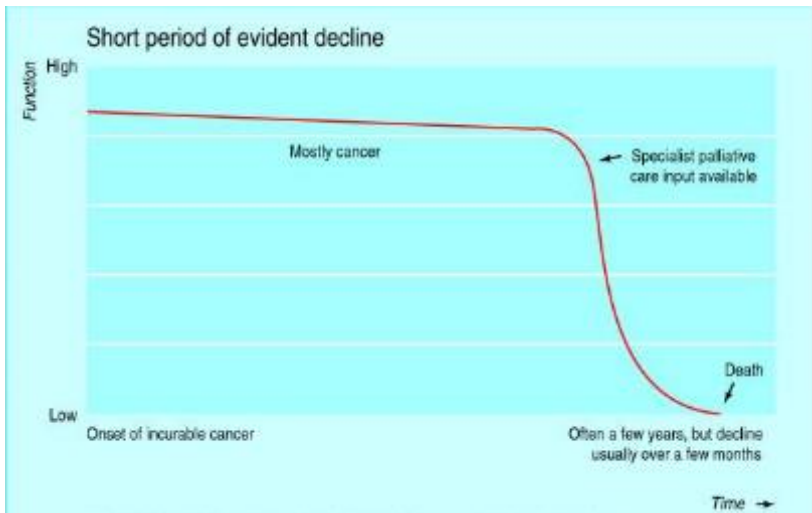
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Learning objectives

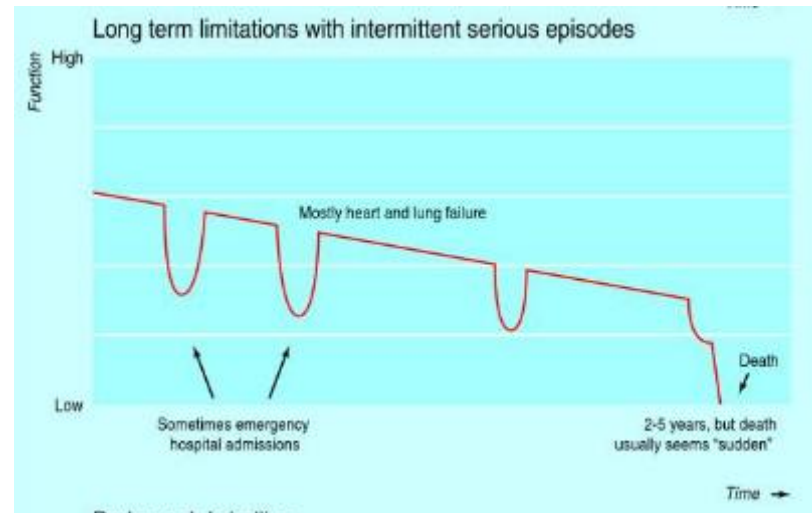
- Understand the context of prescribing in palliative care
- Know the role of and processes involved in PCEP in subsidising bed and chair hire at end-of-life
- Apply clinical reasoning to the prescription of beds and chairs
- Learn about education opportunities in palliative care



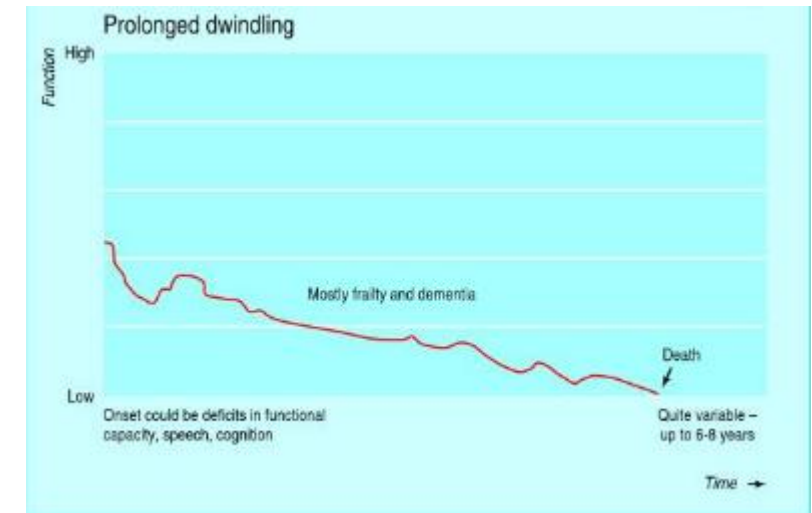
Illness trajectories and palliative care¹



Trajectory 1: short period of evident decline, typically cancer



Trajectory 2: long term limitations with intermittent serious episodes, typically organ system failure (heart failure, COPD, renal failure, liver failure)



Trajectory 3: prolonged dwindling, typically frailty/dementia



Palliative care symptoms

- Fatigue
- Pain
- Shortness of breath
- Nausea
- Depression
- Anxiety
- Constipation
- Loss of appetite
- Difficulty sleeping



Considerations for prescribing assistive equipment in palliative care¹

Interviews with patients and caregivers in the community.

Three themes:

1. Patients and carers place value on ongoing participation in everyday activities
2. Dependency – a two-way street
3. The pragmatics of choosing, using or declining assistive equipment

1. Morgan, D.D., et.al. (2022) The Complexities of Prescribing Assistive Equipment at the End Of Life – Patient and Caregivers' Perspectives. *Healthcare* 10, 1005. <https://doi.org/10.3390/healthcare10061005>



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Prescribing beds and chairs through PCEP



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Poll: Have you prescribed beds, recliners or fallout chairs through

(Tick all that apply)

- PCEP
- NDIS
- DVA
- My Aged Care
- Self-funded clients
- I've never prescribed these



Key resources

- [MASS Palliative Care Equipment Program \(MASS PCEP\) website](#)
- [MASS PCEP Guidelines](#)
- [MASS Palliative Confirmation Form](#)
- [MASS Palliative Confirmation Extension Form](#)
- [MASS Palliative Care Equipment Program \(PCEP\) Prescriber Information Sheet: Daily Living and Mobility Aids](#)
- [QLD Health Palliative Care Network information sheet](#)

Previous webinar



Seating & sleeping equipment

Seating

- Electric recliner*
- Fall out chair*
- High back chair
- Pressure cushion

Sleeping

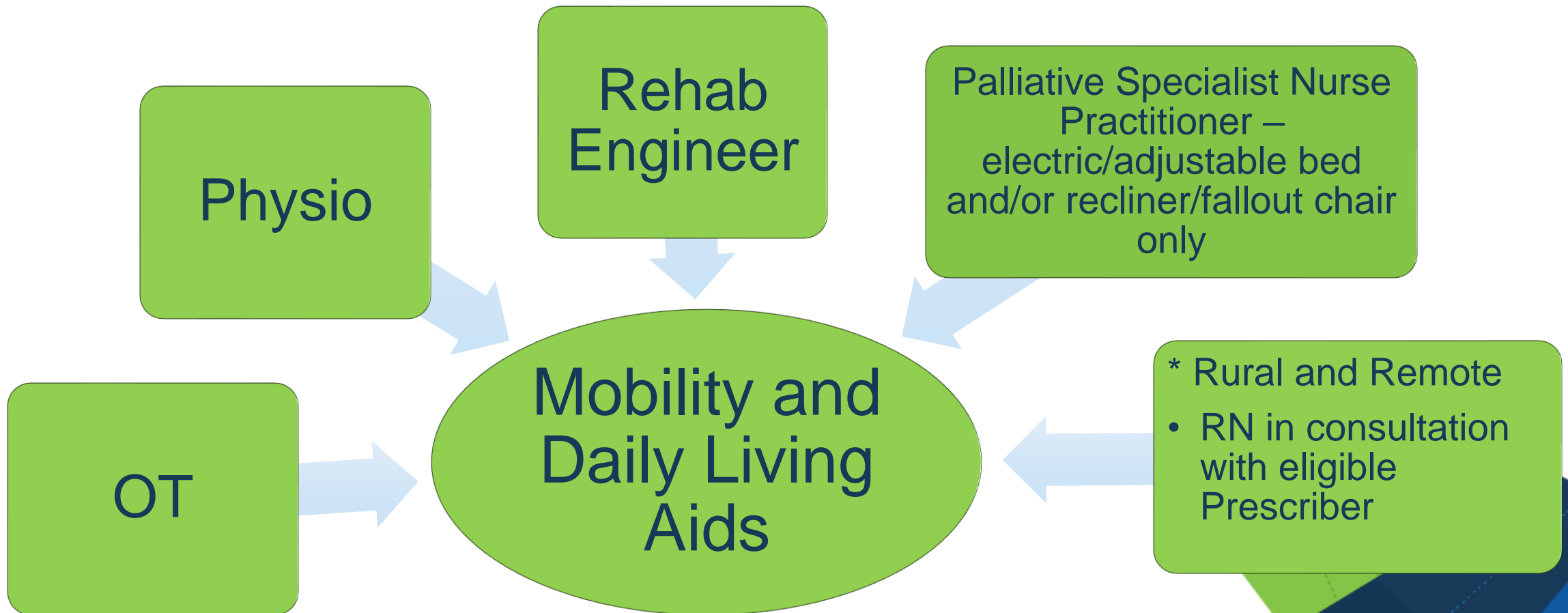
- Electric adjustable bed*
- Pressure mattress or overlay
- Sleep positioning cushions
- Bed backrest
- Bed cradle



Volume of hires so far with PCEP

Item	Number of people
Electric/Adjustable Bed hire / purchase	2173
Overbed Table hire / purchase	1054
Electric Recliner hire / purchase	755
Monkey Bar or Gooseneck hire / purchase	623
High-backed height adjustable Chair hire / purchase	263
Bed Extender hire / purchase	158
Bed Backrest - Wedge	105
Bolster hire / purchase for Adjustable Bed	75
Portable IV Pole	53
Fallout Chair hire / purchase	46
Heel Wedge	35

Eligible Prescribers for MASS PCEP



Clinical eligibility for electric adjustable bed, electric recliner or fallout chair

Australia-modified Karnofsky Performance Status (AKPS)

The Australia-modified Karnofsky Performance Status (AKPS) Scale is a measure of the patient's performance across the dimensions of activity, work and self-care at phase start [4]. It is a single score between 10 and 100 assigned by a clinician based on observations of a patient's ability to perform common tasks relating to activity, work and self-care. A score of 100 signifies normal physical abilities with no evidence of disease. Decreasing numbers indicate a reduced performance status. A score of 0 indicates the patient has died, however this score is not used as no further patient assessments are documented following the death of a patient.

- AKPS score of 40 or below
- This is different to general eligibility for MASS PCEP

AKPS ASSESSMENT CRITERIA	SCORE
Normal; no complaints; no evidence of disease	100
Able to carry on normal activity; minor sign of symptoms of disease	90
Normal activity with effort; some signs or symptoms of disease	80
Cares for self; unable to carry on normal activity or to do active work	70
Able to care for most needs; but requires occasional assistance	60
Considerable assistance and frequent medical care required	50
In bed more than 50% of the time	40
Almost completely bedfast	30
Totally bedfast and requiring extensive nursing care by professionals and/or family	20
Comatose or barely rousable	10
Dead	0



AKPS case study

Roger had metastatic liver cancer. He was previously still living at home alone while fatigued (**AKPS 70**). As his health went downhill, his daughter moved in to help with showering and preparing meals (**AKPS50**). He gradually started spending more and more time in bed only getting up for meals, showers and for short sits on his front deck (**AKPS40**). At this point, an occupational therapist visited and prescribed an electric adjustable bed as she could foresee more time in bed, and more difficulty with bed mobility.



Bed and recliner / fallout chair



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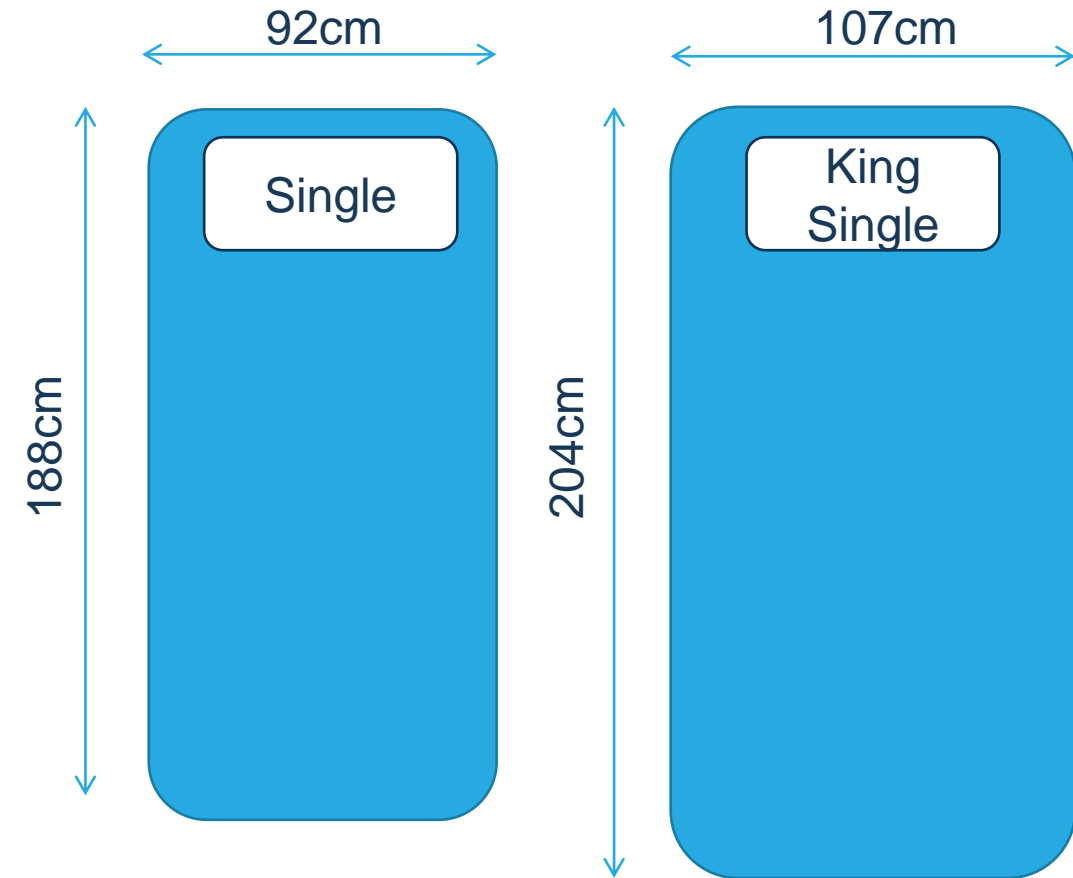


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Generally PCEP only fund an electric adjustable bed or a recliner / fall out chair.

“Applications for Recliner/Fall Out chair AND electric/adjustable bed – MUST provide clinical justification related to: the functional tasks and occupational roles that both items would enable the applicant to engage in.”

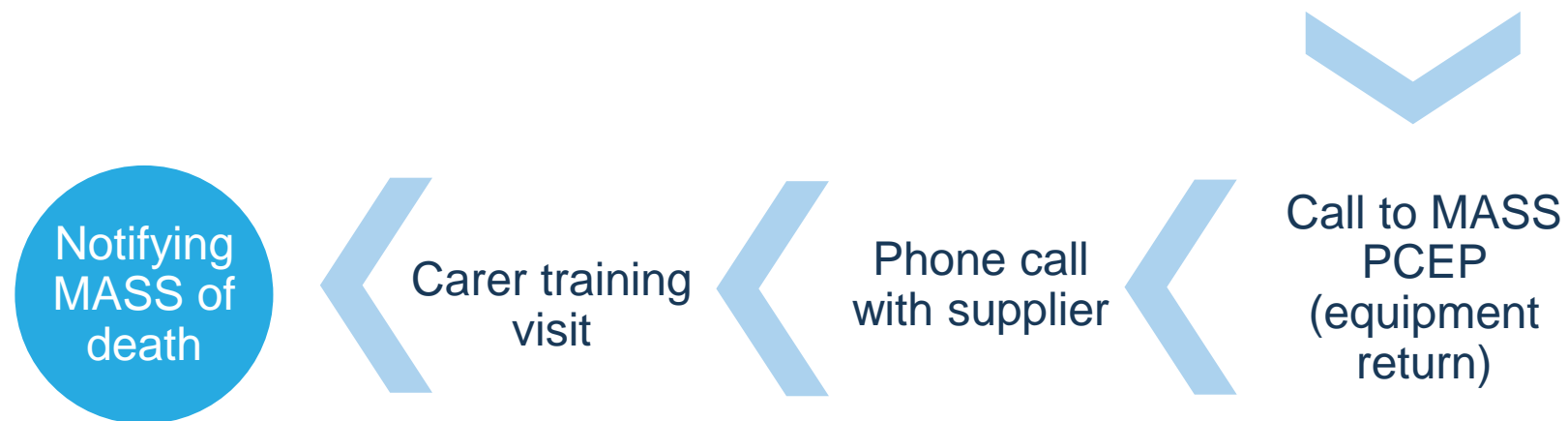
Single versus king single beds



- Single beds are standard
- Single bed with extension can accommodate persons up to 2m tall
- King single beds are significantly more expensive than single beds, less available and add some risks. PRMs less available.
- Need for king single must be clinically justified (not preference)



Case study: Evelyn & Monica



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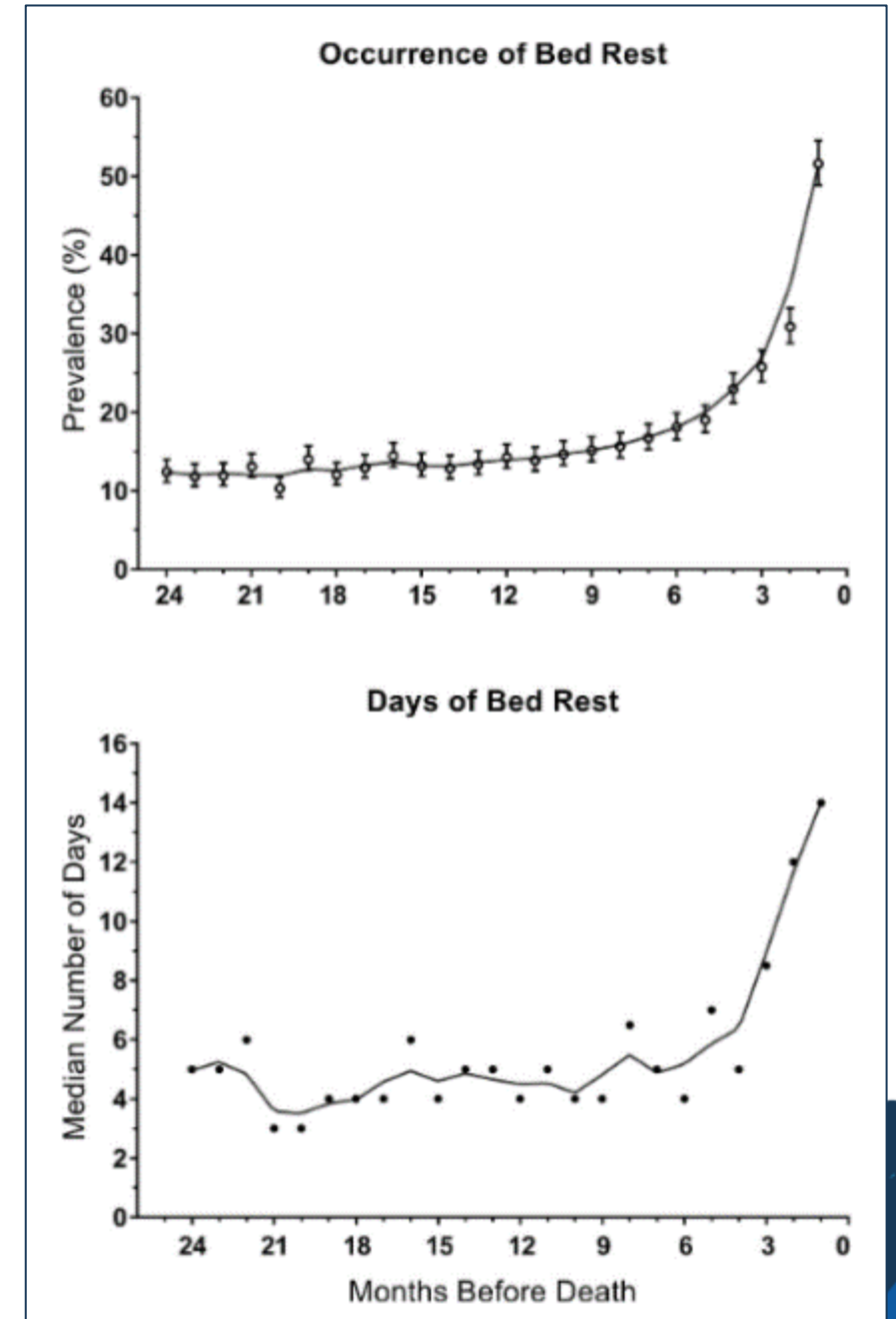
BEDS



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Bed rest at end-of-life¹

- Bed rest increases substantially at end of life
- Both in prevalence of bed rest and number of days in bed
- When prevalence/days in bed doubles from previous few months, there is usually about 3 month lifespan left



The value of beds¹

“While the use of a hospital bed complied with nurses’ manual handling requirements to assist with bathing in bed, for one couple, placing the bed in the lounge enabled the patient to be part of family life. She could lie down to sleep then adjust her position to sit up to watch television with her grandchildren, who would also climb on the bed with her to cuddle.”

“I think was the important thing for me to have her within the lounge... being part of the whole family when they come.”



When is a non-adjustable bed not suitable

- Breathing difficulties
- Undertaking ADLs (e.g., feeding) in bed
- In-bed mobility restrictions¹
- Difficulty transferring
- Needing an appropriate height to provide cares¹
- Symptom management
- Safety



What bed angle best supports breathing?



Head of bed angle of 30-45 degrees reduces risk of ventilator-associated pneumonia¹

COVID-19 recommended resting angle of 30-45 degrees or prone²

ICU Patients >30 degrees associated with improvement of functional residual capacity, oxygenation and reduction of work of breathing. People who are obese may benefit from angles up to 70 degrees³

Heart failure, raising head of bed may decrease severity of sleep apnoea with Cheyne-Stokes respiration⁴

Balance bed angle with 1) pressure injury risk as a result of shear and 2) ability to sleep.

1. Hiner, C., Kasuya, T., Cottingham, C., & Whitney, J. (2010). Clinicians' perception of head-of-bed elevation. *American Journal of Critical Care*, 19(2), 164-167.
2. Zhu, Y., Wang, Z., Zhou, Y., et al. (2020). Summary of respiratory rehabilitation and physical therapy guidelines for patients with COVID-19 based on recommendations of World Confederation for Physical Therapy and National Association of Physical Therapy. *The Journal of Physical Therapy Sciences*, 32, 545-549.
3. Mezidi, M., & Guérin, C. (2018). Effects of patient positioning on respiratory mechanics in mechanically ventilated ICU patients. *Annals of Translational Medicine*, 6(19), 384.
4. Lévy, P., Naughton, M.T., Tamisier, R., et al. (2022). Sleep apnoea and heart failure. *European Respiratory Journal*, 59, 2101640.



What bed angle best supports feeding and saliva management?



For those who are PEG feeding, it is recommended to position the backrest at a 30 - 45° angle during¹ and after mealtimes

For oral intake (including medications), try to achieve as upright as possible ($\geq 60^\circ$)^{2,3}, adding pillows if required.

1. Farrag, K, Shastri, Y.M., Beilenhoff, U. et.al. (2019). Percutaneous endoscopic gastrostomy (PEG): a practical approach for long term management. *BMJ* 364:k5311 doi: 10.1136/bmj.k5311.

2. Kagaya, H., Inamoto, Yoko, Okada, S. & Saitoh, E.(2011). Body Positions and Functional Training to Reduce Aspiration in Patients with Dysphagia. *JMAJ* 54(1): 35–38.

3. Alghadir A.H.,Zafar H, Al-Eisa E.S., & Iqbal Z.A. (2017). Effect of posture on swallowing. *Afr Health Sci.* 17(1):133-137. doi: 10.4314/ahs.v17i1.17.



In-bed mobility & transferring

- Head raise
- Knee break
- Overbed triangle
- Bed rails
- Slide sheets
- Bed height adjustment



Using slidesheets



Unravelling Method

Using Slide Sheets

What bed height is best for providing cares?



Adjustable bed heights reduce the time spent in unsafe positions during care tasks¹

For manual activities, positioning the bed height between the third knuckle and radial styloid of the carer may be appropriate²

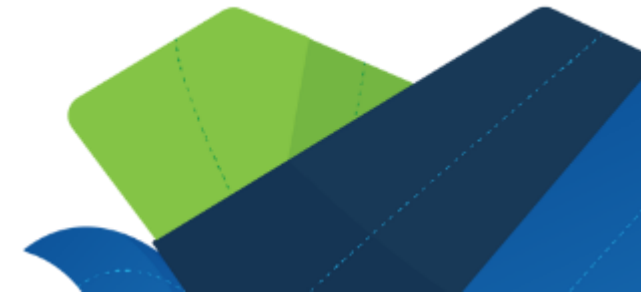
1 Caboor, D.E., Verlinden, M.O., Zinzen, E. et al. (2000). Implications of an adjustable bed height during standard nursing tasks on spinal motion, perceived exertion and muscular activity. *Ergonomics*, 43(10), 1771-1780.

2 Alperovitch-Najenson, D., Milyoner, S., Horesh-Sztulman, D., et al. (2022). Optimal bed height for passive manual tasks. *Journal of Bodywork & Movement Therapies*, 29, 127-133.



Symptom management

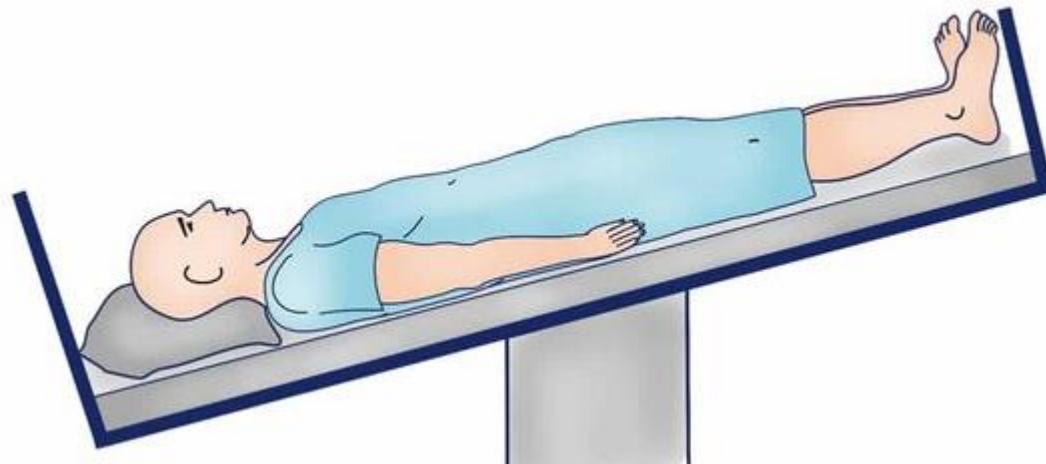
- Dyspnoea / apnoea (head raise or reverse Trendelenburg)
- Postural drainage of secretions (Trendelenburg)
- Oedema management (Trendelenburg or modified Trendelenburg)
- Positional pain management



Position glossary

Trendelenburg positions can make slidesheet transfers easier for carers

Term	Definition
Trendelenburg position	Person lying with their legs above their head
Modified Trendelenburg position	Person lying flat on back with head level to body and legs raised
Reverse Trendelenburg position	Person lying with the head above their feet



Consider Trendelenburg contraindications such as increased intracranial pressure and airway oedema

Safety

Individual assessment is needed

In a systematic review of falls prevention, facility-wide use of low height beds did not reduce injuries or falls rates and ward-wide use of bed exit alarms did not reduce injuries or falls rates.¹

Domiciliary Equipment Service

Bed Entrapment Zone Measuring Tool

Prior to measuring the zones, take the following person measurements. If an adult's head or neck measurements are smaller than these Standard measurements or an adult's chest depth is larger than 318mm, consider implications for bed safety.

Head Breadth (distance across the face from ear to ear): Greater than 120mm	Neck breadth (diameter/width) Greater than 60mm	Chest Depth (anterior to posterior of chest) Less than 318mm
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For instructions on measuring the zones with regard to bed rails, refer to [Instructions for Measuring Entrapment Zones](#)

Some zones may be relevant for other bed equipment /accessories where gaps are created in the bed system and are indicated as follows: BS (Bed Stick), M (mattress)

Entrapment / Falls Zone	Test Tool(s) Required	Equipment Program Requirements for Adults	Equipment Program Requirements for Children	Pass (P) or Fail (F)	
Zone 1 - Within the rail	BS	Cone, spring scale	<120mm	<30mm	
Zone 2 - Under the rail		Cone, spring scale	<120mm with compressed mattress	<30mm with compressed mattress	
Zone 3 - Between the rail and mattress	BS	Cone	<120mm	<30mm	
Zone 4 - Under the rail at the end of rail		Cone and cylinder (assembled)	<60mm and opening under the rail at its end >60°	Full length rails supplied	
Zone 5 – Between split rails	N/A	N/A	N/A – these rails not supplied	N/A – these rails not supplied	
Zone 6 - Between the end of the rail and the side edge of the head or footboard		Cylinder	Head end: <60mm and Foot end: <60mm or >318mm	<30mm	
Zone 7 - Between the head or footboard and the mattress	M	Cone	<120mm	<30mm	
Height to top side of rail from uncompressed mattress		Tape measure	220mm	Case-by-case	



This is a modified version of SA Health's comparison chart

Other things to consider in your assessment

- Bed length
- Bed width
- User weight / safe working load (especially > 160kg)
- Power supply and battery back up
- Ability for bed to fold / dismantle to get in / out of house
- Mattress compatibility
- Aesthetics



Example considerations for assessment

- Sleep positions
- Sleep routines
- Client's height
- Client's weight
- Client's popliteal height (if stand transferring)
- Carer wrist height
- Width of doorways and access from front door to bedroom
- Respiratory function
- Oedema
- In-bed mobility: lying to sitting up in bed
- In-bed mobility: moving up the bed
- In-bed mobility: rolling
- In-bed mobility: lying to sitting on side of bed
- Pressure injury risk (e.g., Waterlow + clinical opinion)
- Rail safety checklist if proposing bed rails
- Power supply and cord locations

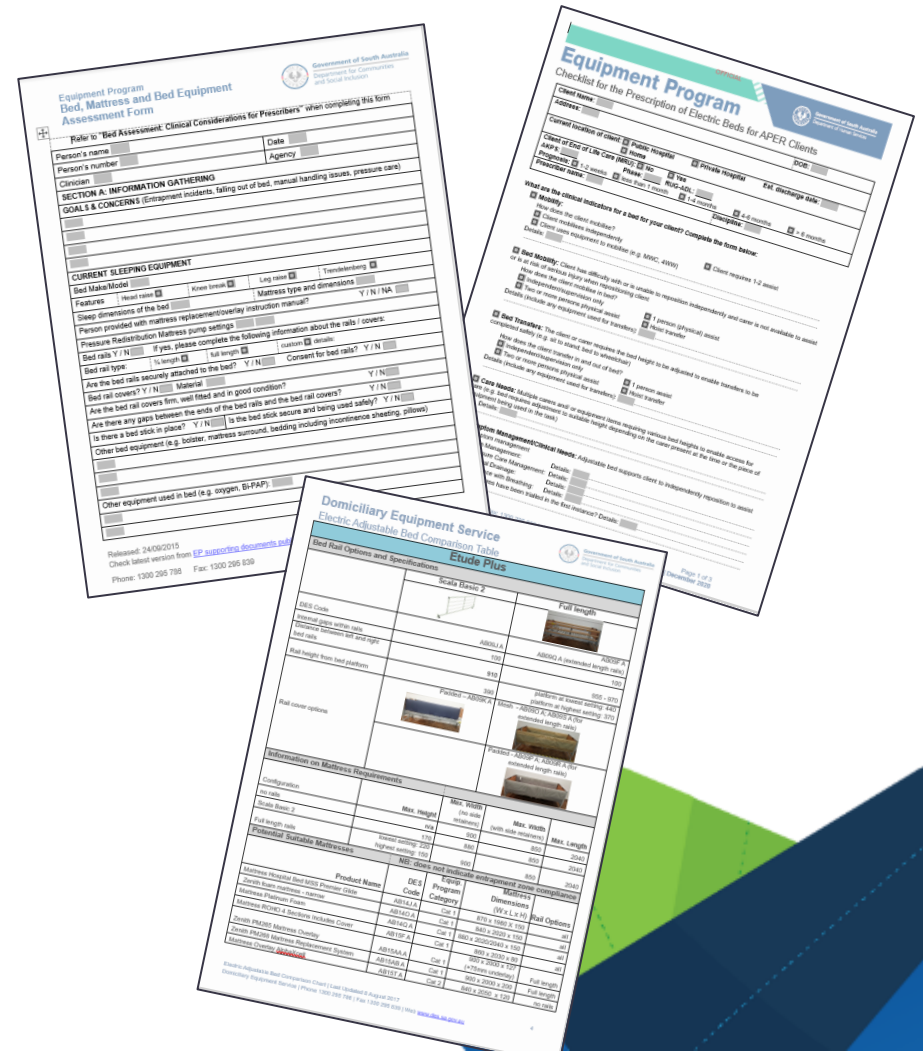


Examples of bed assessment tools¹

Beds and Bed Accessories

- [Bed, Mattress and Bed Equipment Assessment Form](#) (MS Word Document 306.0 KB)
- [Bed Assessment Clinical Considerations for Prescribers](#) (MS Word Document 120.5 KB)
- [Bed Entrapment Zone Measuring Tool](#) (MS Word Document 3.0 MB)
- [Bed Rails Clinical Considerations for Prescribers](#) (MS Word Document 325.5 KB)
- [Bed Sticks Clinical Considerations for Prescribers](#) (MS Word Document 388.5 KB)
- [Chair Bed Blocks or Bed Raiser Clinical Considerations for Prescribers](#) (MS Word Document 227.0 KB)
- [Beds checklist' to Checklist for the Prescription of Electric Beds for APER Clients](#) (MS Word Document 344.2 KB)
- [Criteria Screening Tool, Electrically Operated Bed](#) (MS Word Document 64.4 KB)
- [Customised Chair or Bed Raise Specification Form](#) (MS Word Document 147.5 KB)
- [Electric Adjustable Bed Comparison Table](#) (MS Word Document 451.1 KB)
- [Entrapment Zone Compliance Matrix](#) (MS Word Document 79.2 KB)
- [Guide to Assessing Entrapment Risk](#) (MS Word Document 122.5 KB)
- [Initial Considerations for an Electric Bed Prescription](#) (MS Word Document 61.5 KB)
- [Instructions for Measuring Entrapment Zones](#) (MS Word Document 2.2 MB)
- [Overway Bedtable Clinical Considerations for Prescribers](#) (MS Word Document 134.5 KB)
- [Recognition of Prior Learning Assessing and Prescribing Adjustable Beds](#) (MS Word Document 135.0 KB)
- [Specific Eligibility Criteria Electric Beds](#) (MS Word Document 100.5 KB)

Equipment Program - Prescribing Equipment - by Equipment Type



Examples of beds available through suppliers¹



Premium Homecare



Aspire community



Aspire community bed package



Peak sigma



Houghton community bed



K-Dee II Bed

Examples of beds available through suppliers¹



Walmsley Hi-Lo



Etude Plus



Example bed specifications

	Head raise / backrest (°)	Knee bend (°)	Trendelenburg (°)	Reverse Trendelenburg (°)	High-low (mm)	SWL (kg)	Max patient load (kg)	Bed length (mm)	Bed width (mm)
Premium Homecare bed	60	30	10.5	10.5	220-710	220	180	2140-2240	1025
Aspire Community Bed	60	30	10.5	10.5	220-710	220	180	2140-2240	1025
Peak Sigma bed	73	22	12	12	330-820		200	2200	930
Walmsley Hi-Lo Bed	75	45	No	No	240-740	250			
Etude Plus bed	70	15	11	11	400-800	180	165	2190	1020
Houghton Community bed	73	37	12	12	360-760	235	200	2180	930
K-Dee II bed	70	23	11	11	335-725	213	178	2100	980

'Cuddle beds' and companion beds

Not funded by MASS PCEP
Clients may fund this privately



[Oversized 'Cuddle Beds' Bringing Families Closer To Palliative Care Patients - Hellocare](#)

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CHAIRS



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Bed or recliner or fallout chair?



Where do they want to be and with whom



Manoeuvrability around house



Desire to rest in side-lying



Ability to transfer and walk



Case examples



Heart failure

Electric adjustable bed



Dementia

Fallout chair



Oncology

Recliner chair

Considerations when prescribing chairs

- Client's diagnosis and prognosis
- Physical functioning
- Cognitive functioning (e.g., ability to use controls)
- Ability to transfer and/or compatibility with transfer aids
- Skin integrity
- Continence
- Pain management
- Seizure activity or uncontrolled movements
- Capabilities of carer
- Home environment
- Activities to be carried out in chair
- Availability of power
- Environmental risks (e.g., others controlling electrics)
- Aesthetics



MASS Palliative Care Equipment Program (PCEP) Prescriber Information Sheet: Daily Living and Mobility Aids

Seating Aid	Options
Electric Recliner	Static
Static Fallout / Water Chair	Comment if special requirements
Hilite Chair	Comment if special requirements
Pressure Redistribution Cushion for Seating	<ul style="list-style-type: none">• Enter size required• Comment if special requirements e.g. continence cover. Options: Foam, Gel, Air, Hybrid



Single Motor

- One motor – leg rest and back rest move at the same time (usually leg rest kicks in first)
- Less buttons on hand controller, so simpler to use
- Can be placed closer to the wall and still recliner therefore good in small spaces



Dual motor



- Controller by 2 motors. Leg rest and back rest move independently of each other
- More buttons on hand controller due to independent movement, so some may find it more difficult to operate
- Benefits is more freedom of movement thanks to independence between back rest and leg rest



Size

- Range of sizes and best fit for maximum support and comfort
- Bottom at the back of the seat and feet flat on the floor
- 2 fingers width between the back of the knees and the front of the edge of the chair
- Seat should be wide enough for person to sit comfortably, but not so wide that lose the support of the chair and can't use the arm rests



Tips for use

- Leave chair in an upright position when not in use, to make sitting down easier
- When sitting down, always feel for the chair at the back of the thighs, before lowering self down



Pressure redistribution surfaces



- Avoid multi-cell air (e.g., ROHO, Star) and hybrid foam-gel cushions on recliners
- Consider viscous gel (e.g., Action), single cell air (e.g., Repose, simple foam, or nothing at all instead



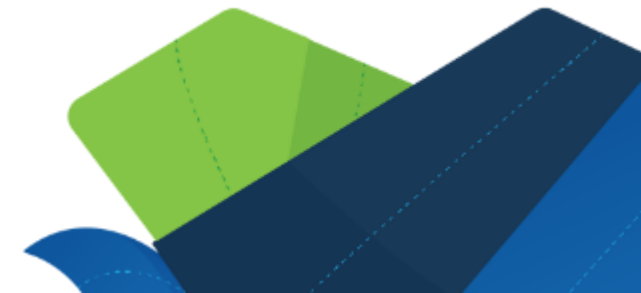
Example of chairs available through supplier loan pools¹

Aircomfort chair



- Total surface air pressure system
- Lift and recline mechanism
- Front and rear castors
- Size large (seat width 600mm), medium and small (seat widths 500mm)

1. Availability will vary by location



Example of chairs available through supplier loan pools¹

Lift/Recline Chair



Supplier: Aidacare

- Small (460mm seat width)
- Medium (510mm seat width)
- Large (560mm seat width)
- 530mm seat depth
- 700mm backrest height
- Seat to floor height 510mm
- User height 1630-1830mm
- SWL147kg
- 2 motor function

Pressure relief chair / K-Care Daily Chair



- Attendant propelled
- Memory foam with stretch upholstery
- TIS + recline + legrest elevate
- Seat width 510mm
- Seat depth 460mm
- Backrest height 710mm
- SWL 180kg

1. Availability will vary by location

Examples of chairs available through supplier loan pools¹



Days Comfort Chair



Aircomfort Deluxe Bed



Aspire Cambridge recliner



Alivio Donatello Recliner



Alivio Michaelangelo Recliner



Oscar Barwon Lift Chair

Examples of chairs available through supplier loan pools¹



Topform Ashley Lift Chair



Configura Comfort Chair



Pride recliner



Help client help MASS

- Highlight that equipment is on loan and will need to be well maintained
- Protect equipment if animals are around



Figures 1 & 2: Actual damage to loaned PCEP recliner



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Palliative care education



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External learning opportunities

Caresearch Website - Health Practitioner Education



Student

Novice PC practitioner

Developing PC practitioner

Advanced PC practitioner

QH Staff learning opportunities

Palliative care for busy therapists. Looking at occupation at the end of life. (QHEPS Intranet only)

Palliative Care Occupational Therapy State-wide Collaborative (QHEPS Intranet only)



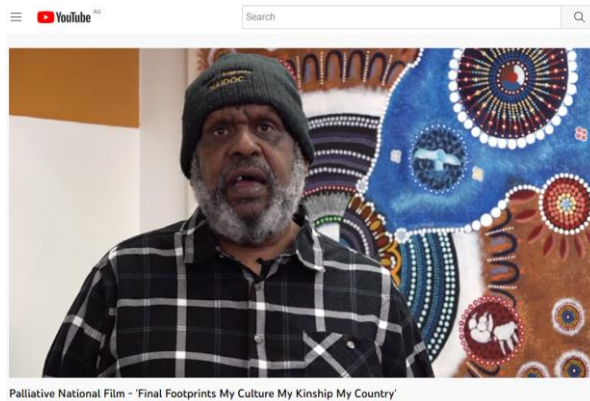
Education for palliative care for Aboriginal & Torres Strait Islander peoples



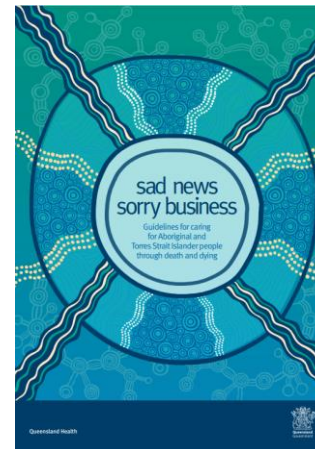
[caring@home for Aboriginal and Torres Strait Islander Families](#)



[National Palliative Care – Supporting Palliative Care for Aboriginal and Torres Strait Islander Communities](#)



[Palliative National Film - 'Final Footprints My Culture My Kinship My Country' - YouTube](#)



[Sad news, sorry business - Guidelines for caring for Aboriginal and Torres Strait Islander people through death and dying](#)



[Palliative Care and End-of-Life Care - Health System - Australian Indigenous HealthInfoNet](#)

Feedback form

Complete the feedback form
to receive a certificate of
attendance

[Link to feedback form](#)



Upcoming MASS Education

- Overview of Products in the new MASS Contenance Standing Offer Arrangement: [Webinar Registration](#)
- Pressure Re-distribution Cushions Remote Hands-on Learning Programme
 - [Refer to the information sheet to find out more](#)
 - [Complete an expression of interest](#)
- Emerging Research in Pressure Redistribution Support Surfaces: [Webinar Registration](#)
- Cultural Considerations regarding the Provision of Assistive Technology (AT) to First Nations Peoples: [Webinar Registration](#)
- Assessing for and Prescribing Bathing and Toileting Aids: [Webinar Registration](#)
- Meeting the Assistive Technology, Contenance and Pressure Management Needs Bariatric Clients: [Webinar Registration](#)

Contacts

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