

SESLHD GUIDELINE COVER SHEET



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SUMMARY	The purpose of this document is to outline the key considerations and recommended guidelines for use of bed and/or chair alarm units. The target patient group is adult inpatients that will benefit from use of alarm units as part of their individualised falls prevention and management plan. Considerations include purchasing suitable alarm units, patient selection and assessment, alarm unit testing, reporting faulty units and maintenance.

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Falls prevention and management: Guideline for use of bed/chair alarm units (Adult Inpatients)

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Section 1 - Background

Patient safety aims to continually improve the care provided to patients to reduce harm. Falls are the most commonly reported adverse event in hospitals and while the majority of inpatient falls are associated with minor injury, more serious events such as fractures, intracranial injury and death also occur.

Risk factors for falls in hospital include cognitive impairment and/or delirium, balance and mobility limitations, incontinence, visual impairment, orthostatic hypotension, medications and environmental considerations¹. Preventing falls and harm from falls in hospital requires an individualised, multifactorial approach and should be part of routine care for people at risk of falls and fall injury in hospitals.

One strategy as part of an individualised falls prevention and management plan may be the use of a bed and/or chair alarm unit. This approach may be useful for patients who forget or do not realise their limitations, such as those with an acute delirium, dementia or who are deemed impulsive and are unlikely to call for staff assistance prior to mobilising.

This guideline outlines the key considerations and guidelines for wards and units using bed and/or chair alarm units as a fall prevention strategy.

Section 2 - Principles

This guideline should be used in conjunction with [SESLHDPR/380 - Falls prevention and management for people admitted to acute and sub-acute care](#), which outlines best practice and details tools to facilitate clinical decision making in the prevention and management of falls and fall injuries in individuals identified at risk of falling.

The use of a bed/chair alarm as a sole fall prevention strategy does not decrease the risk of falls. Alarm units are to be used as one part of a comprehensive falls risk assessment and management plan.

Bed/chair alarm units are not appropriate for patients who have a florid delirium, demonstrated by intense restlessness, confusion, disorientation, insomnia, delusions, and visual or tactile hallucinations.

Bed/chair alarm units are not to be used as a substitute for an Individual Patient Special (IPS) where clinical assessment deems 1:1 supervision as the most appropriate management strategy for the observed behaviours.

It is expected that medical, surgical and older adult mental health wards have access to bed/chair alarm units. Site-based recommendations may differ, but if individual wards do not feel they serve a patient population that requires purchase of at least one bed/chair alarm unit, it is recommended that they negotiate a process whereby they can borrow an alarm unit from another ward when required. This requirement should be communicated to all nursing unit managers by the site-based falls prevention and management committee.

Other relevant policy and procedure documents include:

[SESLHDGL/ 088 - Standard 5: Comprehensive Care Guideline](#)

[SESLHDPR/345 - Delirium - prevention, diagnosis and management of Delirium in Older People in Acute and Sub-Acute Care](#)

[SESLHDPR/421 - Bedrails - Adult - for use in Inpatient and Residential Settings](#)

[SESLHDPR/483 - Restraint - use of \(adult patients\)](#)

[SESLHDGL/042 - Falls Prevention and Management: Guideline for Designated High Risk Observation Rooms \(Adult Inpatients\)](#)

As in any clinical situation, there will be factors which cannot be addressed by a single guideline. This document does not replace the need to use clinical judgement with regard to individual patients and situations.

Section 3 - Definitions

Bed/chair alarm:

Refers to an electronic monitoring system that alarms when a patient attempts to get up from their bed or chair. There are different types and brands of alarm units available, based on the mechanisms described below. Please refer to **Appendix A** for further information.

- **Wireless fall alarm system**

An alarm unit with a wireless interface to a paging or call bell system.

- **Sensor mat fall alarm system**

This alarm unit connects directly to a chair / bed sensor pad. A wireless fall alarm system includes a sensor mat.

- **Pull-string fall alarm system:**

An alarm unit that has a magnet and a pull-string cord that attaches to the patient.

Comprehensive care:

Health care that is based on identified goals for the episode of care. These goals are aligned with the patient's expressed preferences and healthcare needs, consider the impact of the patient's health issues on their life and wellbeing, and are clinically appropriate.

Designated high risk observation room:

A designated patient care room which adheres to the recommendations described within [SESLHDGL/042 - Falls Prevention and Management: Guideline for Designated High Risk Observation Rooms \(Adult Inpatients\)](#) and has been set up to allow for continuous visual monitoring of adult inpatients assessed as being at high risk of having a fall.

Fall

For the purposes of this Guideline, a fall is defined as 'an event which results in a person coming to rest inadvertently on the ground or floor or other lower level'².

High falls risk:

Refers to patients who score ≥ 9 on the Ontario Modified Stratify (Sydney Scoring) falls risk screening tool, who have identified risk factors for falls or who are deemed clinically to be at risk of falls. Clinical judgement overrides an individual risk screen score.

Section 4 - Responsibilities

4.1 Unit Managers are responsible for:

- Identifying and facilitating access to the equipment and devices required for the patient population being served
- Ensuring all nursing staff are trained in implementing individual patient falls risk management strategies
- Ensuring that all nursing staff are aware of the availability and location of the alarm units and mats, and are trained in their use, including manufacturer's guidance on storage, infection control, maintenance and features
- Ensuring that testing and maintenance of alarm units occurs in line with this guideline
- Ensuring there is a process for the ongoing replacement of damaged or faulty mats, in line with the manufacturer's recommendations
- Ensuring there is a process for repair/replacement of faulty alarm units
- Ensure there are clear regular processes for checking alarm unit/ mat functionality prior to use.

4.2 Nurses are responsible for:

- Completing the relevant falls risk screen within 8 hours of admission to the ward/unit
- Identifying patients at risk of falls who may be suitable for a bed/chair alarm unit as part of their individualised, multifactorial falls prevention plan
- Ensuring patients with symptoms of confusion, disorientation or agitation are screened for delirium and referred for medical review as appropriate
- Ensuring alarm type is appropriate for the individual patient
- Testing the alarm unit prior to first use with each patient to ensure it is functioning
- Checking the alarm unit is switched on and functioning each time the patient returns to their bed/chair e.g. after toileting
- Documenting the use of the bed/chair unit on the patient's care plan
- Removing faulty alarm units and/ or mats from circulation and reporting all faults to the nursing unit manager or nurse in charge
- Implementing an appropriate toileting /continence management plan for patients who are incontinent of urine and/or faeces to ensure the integrity of sensor mat falls alarm systems.
- Cleaning the sensor mats and alarm units before use on another patient in line with [SESLHDGL/029 - Infection Control: Cleaning \(Shared\) Patient Care Equipment](#) and manufacturer guideline for multi-patient use
- Completing mandatory and other relevant training in falls risk screening, assessment and management.

4.3 Allied Health Clinicians are responsible for:

- Contributing to the identification of patients who may be suitable for a bed/chair alarm unit as part of their individualised, multifactorial falls prevention plan

- Checking the alarm unit is switched on and functioning each time the patient returns to their bed/chair e.g. after toileting, therapy
- Removing faulty alarm units and/ or mats from circulation and reporting all faults to the Nursing Unit Manager or Nurse In Charge
- Completing mandatory and other relevant training in falls risk screening, assessment and management.

4.4 Medical teams are responsible for:

- Contributing to the identification of patients who may be suitable for a bed/chair alarm unit as part of their individualised, multifactorial falls prevention plan
- Reviewing patients with symptoms of confusion, disorientation or agitation for presence of delirium and consider referral to geriatric medical team for advice regarding management
- Completing mandatory and other relevant training in falls risk screening, assessment and management.

Section 5 - Guidelines for use of bed/chair alarm units

5.1 Purchasing suitable bed/chair alarm units

- There are a range of commercially available bed/chair alarm units, each which have advantages and disadvantages
- Each ward/unit should consider factors such as patient population, alarm unit functionality, ease of use and cost when deciding which type of alarm unit to purchase. Nursing and allied health staff on ward-based patient safety programs for falls prevention should be involved with this process
- Please refer to **Appendix A** for a details around available alarm units. Recommendations have been made on the basis of trial and acceptability on wards with a high risk patient profile, such as aged care units
- If a ward is notified by a supplier about a change in product, backlog of orders or supplier change please notify the facility falls prevention and management committee
- Prior to purchasing a new product from a supplier not included in this guideline, wards should consult with the facility falls prevention and management committee and products committee.

5.2 Patient selection

- Any staff member involved in the care of the patient can identify patients that may benefit from use of a bed/chair alarm unit
- Patients identified at high risk for a fall should be assessed for suitability for a bed/chair alarm unit as part of their individualised, multifactorial falls prevention plan
- **Suitable patients may include those who:**
 - Forget or do not realise their limitations, such as those with an acute delirium, dementia, brain injury or who are deemed impulsive and are unlikely to call for staff assistance prior to mobilising
 - Cannot be placed into a high risk observation room, either due to lack of availability or for clinical reasons such as the need for isolation in a single room*
**Patient safety should be prioritised when allocating a bed to those at high risk of falls and injury. Discussion should occur between the bed manager or nurse in charge and a member of the infection control team to ensure that bed placement meets the patient's clinical needs.*
 - Are from a Culturally and Linguistically Diverse Background (CALD) where timely explanation of falls risk status and/or formal cognitive assessment is not possible and there is limited understanding of falls risk prevention strategies
 - Are on multiple medications or medication where the side effects may put the patient at high risk of falls and fall injury e.g. benzodiazepines, anti-psychotics, opiates, sedatives.

- **Bed/chair alarm units are not appropriate for:**
 - Patients who have a florid delirium, demonstrated by intense restlessness, confusion, disorientation, insomnia, delusions, and visual or tactile hallucinations.
 - Patients who do not spend long periods at a time sitting in a chair or lying in a bed e.g. wandering patients.
- **Bed/chair alarm units are not to be used:**
 - As a substitute to an Individual Patient Special (IPS) where clinical assessment deems 1:1 supervision as the most appropriate management strategy for the demonstrated behaviours.

5.3 Setting up the bed/chair alarm unit

- Alarm units should be used according to the manufacturer's instructions
- Inform the patient/carer/family member about the use of the alarm unit as an additional falls prevention strategy and gain verbal consent where possible
- Place the appropriate sensor on the bed and/or chair
- Ensure the patient is comfortable
- If using a pull string alarm, attach the pull cord to the patient's gown or clothing and ensure there is enough tension on the cord to remove the magnet from the alarm unit if the patient gets up from the bed or chair. Caution should be exercised when setting up these systems. The cord and unit must be placed such that the cord does not pose a risk that the patient will become tangled or entrapped.
- Turn the alarm unit on and ensure it has batteries
- Test the alarm unit prior to first use with each individual patient to ensure it is working e.g. ask the patient to stand from the chair or get up from the bed and wait for the alarm to sound. Ensure the alarm can be heard from the distances required e.g. from the corridor outside a single room with the door closed
- If the alarm unit is not working, contact the Nursing Unit Manager or Nurse In Charge to test the unit
- Consider common reasons for the alarm not working e.g. power point not switched on, batteries require changing)
- Faulty or non-functioning alarm units should not be used
- Trial a different unit, where available. If no suitable units are available, alternative strategies to manage the identified falls risk will need to be implemented
- Clean the alarm unit and sensor mats between patients with neutral detergent cleaning wipes and as per the manufacturer's instructions.

5.4 Reporting faulty alarm units

- Faulty alarm units must be removed from circulation at the time the fault is identified. They must not be returned to the pool of working alarm units

- It is suggested that bed/chair alarm units that are not working are given to the Nursing Unit Manager or team leader, with a written description of the fault e.g. not alarming, unable to hear alarm sound outside the patient's room.

5.5 Maintenance of alarm units

- Discussion should occur with the supplier at the time of purchase regarding:
 - The need for routine/regular maintenance
 - The process for repair and/or replacement of damaged/ faulty alarm units
 - Different manufacturer's offer different warranty periods on their alarm units and mats. However, alarm units and mats can be used beyond the warranty period if they are still functional. Staff need to follow the manufacturer's guidelines around storage, maintenance, cleaning/ infection control and check functionality of the alarm units and mats prior to use. If the item is found to be damaged/faulty, they should be removed from use and repaired or replaced in line with manufacturer guidelines.
- The healthcare facility's biomedical engineering department may also be able to provide a repair service for certain types of alarm unit systems
- It is advised that the site-based falls prevention and management committee or relevant quality committee liaise with biomedical engineering departments regarding the type of support that can be sought with regard to bed/chair alarm units. This should be communicated to all Nursing Unit Managers within the facility.

5.6 Ongoing patient assessment

- The provision of a bed/chair alarm unit does not negate the need for an individualised care plan detailing falls prevention strategies for the patient.
- While a bed/chair alarm unit is in use, ongoing assessments including repeat Ontario Modified Stratify (Sydney Scoring) and individualised care plan outlining falls prevention strategies should be attended as per [SESLHDPR/380 - Falls prevention and management for people admitted to acute and sub-acute care](#)
- Patients who are using a bed/chair alarm unit must not be left unattended in the bathroom
- Prior to ceasing use of a bed/chair alarm unit, consider if the patient:
 - Is either no longer at high risk of falls, or
 - No longer displays the behaviours for which the alarm unit was initially implemented, or
 - Has a comprehensive falls risk management plan in place that negates the need for a bed/chair alarm unit.

Section 6

Documentation

In line with [SESLHDPR/336 - Health Care Record - Documentation](#), documentation in the health care record must provide an accurate description of each patient/client's episode of care or contact with healthcare personnel.

Use of a bed/chair alarm unit as a part of a patient's individualised falls prevention plan should be documented as part of the patient's care plan.




References

1. Australian Commission on Safety and Quality in Health Care. Preventing Falls and Harm from falls in Older People: Best Practice Guidelines for Australian Hospitals. Sydney: ACSQHC; 2009
2. World Health Organisation. Falls [Internet]. 2016 [cited 2016 April 26]. Available from http://www.who.int/violence_injury_prevention/other_injury/falls/en/
3. [SESLHDPR/336 – Documentation in the Health Care Record](#)
4. [SESLHDPR/380 - Falls prevention and management for people admitted to acute and sub-acute care](#)
5. [SESLHDGL/029 - Infection Control: Cleaning \(Shared\) Patient Care Equipment](#)
6. [SESLHDGL/042 - Falls Prevention and Management: Guideline for Designated High Risk Observation Rooms \(Adult Inpatients\)](#)
7. [SESLHDPR/345 - Prevention, Assessment and Management of Delirium in Older People](#)
8. [SESLHDPR/421 - Bedrails - Adult - for use in Acute and Subacute Care Settings](#)
9. [SESLHDPR/483 – Restrictive practices with adult patients](#)

Version and Approval History




Date	Version no:	Author and approval notes
04/07/17	Draft	Processed by Executive Services prior to submission to the SESLHD Clinical and Quality Council for endorsement.
14/07/17	0	Approved by SESLHD Clinical and Quality Council for publishing.
03/10/18	0	Executive Services updated links in Appendix A to the instructional videos and links to SESLHD Policy references.
March 2020	1	Update to Executive Sponsor. Published by Executive Services.
October 2023	1.1	Minor review to update new supplier contact details and pricing. Additional information regarding escalation of alarm issues and processes for managing and checking functionality and warranty instructions.


Appendix A: Recommended alarm units

Brand	Description	Images	Supplier details	Instructional Video Links
<p>Proxi-Mate</p> <p>Proxi-mate Pro Wireless System</p> <p>Proxi-mate Pro Nurse Call System</p>	<p>There are two types of Control Units.</p> <ul style="list-style-type: none"> • The Proxi-mate Pro Wireless System, which communicates directly with a standard 'pager' (supplied) or a wall mounted enunciator, • The Proxi-Mate Nurse Call System is designed to be connected to an installed nurse call system. • The Wireless System can 'talk' to up to eight different pagers and the 16-character messages can be configured to suit a wide array of needs. • The sensor mat is not weight or pressure based. It functions by way of induction (touch sensing), the system monitors changes in electric field between the person (human body) and sensor resulting in the immediate detection of patient movement for accurate detection 	  	<p>Keystone Healthcare Services Australia Pty Ltd Address: 2/2 Network Drive, Carrum Downs VIC 3201 Phone: 1300 547 877 Website: https://keystonehealth.care/ Email: orders@keystonehealth.care</p>	<p>http://seslhnweb/Falls_Prevention/devices.asp</p>

Brand	Description	Images	Supplier details	Instructional Video Links
	<ul style="list-style-type: none"> Tone options on the wireless and NCS bedside unit include: Loud (the default high-pitch alarm), Chirp (lower pitch, intermittent alarm), and Off (the bedside unit will not emit noise, though the pager or NCS interface still alarms) The pager cannot be silenced/muted. The Proxi-mate NCS triggers the alarm through the hospital's interface, but the tone, alert, and the message displayed is dependent on the configuration by your NCS provider. This can be altered by your NCS provider. <p><u>COST: Keystone Healthcare</u></p> <ul style="list-style-type: none"> Proxi-mate Pro Nurse Call System Includes: Proxi-mate Pro Nurse Call Unit, Wall Bracket, Standard 6.25mm Stereo Plug (other sizes available), Sensor Matt, and Power Pack *Adapter may be required* Hire cost Inclusive of Mat Daily Hire: \$13.00 Monthly Hire: \$295.00 Purchase price: \$1,519.00 			

Brand	Description	Images	Supplier details	Instructional Video Links
	<p>Proxi-mate Pro Wireless System (pager) Includes: Proxi-mate Pro Wireless Unit, Antenna, Wall Bracket, 1 x Pager, Sensor Matt. and Power Pack</p> <p>Hire cost Inclusive of Mat Daily Hire: \$13.00 Monthly Hire: \$295.00 Purchase Price: \$1,999.00</p> <p>*Once a hire system is in place, sites will be able to order new hires through our online system, along with monitoring and ending hires.</p> <p>Rental service will include delivery and collection of the alarm servicing and fault resolution, cleaning, and ready-to-use units.</p> <p>Maintenance frequency will depend on the length of the hire, for long-term (monthly) rentals we will implement a regular schedule every 6 months</p>			
<p>Posey</p> <p>A variety of options including:</p>	<p>Keepsafe Essential</p> <ul style="list-style-type: none"> • can be used on a bed, chair or toilet. • Adjustable cord (79cm - 152cm) 		<p>Active Mobility Systems Active Mobility Systems Unit 8, 110-120 Silverwater Rd SILVERWATER NSW 2128</p>	

Brand	Description	Images	Supplier details	Instructional Video Links
<p>KeepSafe® Essential alarm</p> <p>KeepSafe® Deluxe alarm</p> <p>Sitter Elite® alarm</p>	<p>with locking clip</p> <ul style="list-style-type: none"> • Five alarm tones • Pre-recorded voice message • Adjustable volume • Battery operated with four AAA batteries (included) • AC Power adaptor - sold separately • Cost: \$307 <p>Keepsafe Deluxe</p> <ul style="list-style-type: none"> • is a sensor mat system that is compatible with all Posey, bed, chair, floor and PIR sensors • Cost: \$370 plus mats <p>Sitter Elite</p> <ul style="list-style-type: none"> • is a sensor mat system with additional features including voice message recording for patient specific messages, a 'hold' function which allows the patient to be repositioned without the unit alarming and easy to read LED display for darker conditions • Cost: Approximately \$689 + mats- Chair pads \$193 Bed Sensor \$245 • Warranty for replacement of sensor mats is 30 days. Mats can be used beyond warranty if functional. Mats should be regularly monitored and stored, cleaned and maintained in accordance with manufacturer's 	  	<p>Phone: 02 9649 2111 Fax: 02 9649 8506 Freecall: 1800 543 837 Website: http://www.posey.com/products/fall-s-management/fall-alarms</p>	<p>http://seslnweb/Falls_Prevention/devices.asp</p>

Brand	Description	Images	Supplier details	Instructional Video Links
	<p>guidelines.</p> <ul style="list-style-type: none"> Mats can be multi- patient use if cleaning meets manufacturer’s instructions 			
<p>Cura1</p> <p>Pull string bed monitor</p> <p>Cura 1</p> <p>Cordless Falls Monitor Unit</p>	<ul style="list-style-type: none"> Pull string activates alarm Alarm memory and auto re-arm Battery operated Adjustable alarm volume Cost: \$158.40 Works with all Cordless Bed/Chair Pads and Floor Mats and can monitor up to two pads or mats simultaneously Battery operated or optional external plug pack Alarm memory and auto re-arm Can be connected to a nurse call system Alerts for lost nurse call connection, lost AC power supply and low battery Cost: Floor Mat- \$352 Transmitter- \$129.60 Bed Pad- \$137.60 Chair pad- \$104 Bed monitor- \$158.40 1 year warranty for replacement mats 		<p>Aidacare Building 3A 1 Moorebank Avenue MOOREBANK NSW 2170 Phone: (02) 8706 2300 Fax: (02) 9618 5111 Email: online@aidacare.com.au Website: https://www.aidacare.com.au/aidacare/products/bedroom/falls-prevention--alarms/cura-alarms-patient-activated-monitors/</p>	<p>http://seslnweb/Falls_Prevention/devices.asp</p> <p>http://seslnweb/Falls_Prevention/devices.asp</p>