



Hoist Identification Tool (HIT)



Redefining patient handling

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Introduction

The hoist identification tool (HIT) is designed to assist those people in the health and social care sectors who have the responsibility for undertaking or contributing to generic manual handling risk assessments and ensuring that suitable and sufficient equipment is available to meet assessed needs relating to any particular ward, department, unit or facility. This could include back care advisors, ward/department/directorate managers and owners and managers of nursing and residential facilities. The tool can be used to demonstrate to line managers and budget holders that an adequate assessment process has taken place, and also to support a business case for manual handling equipment provision.

The booklet sets out the basis for this hoist identification tool and gives worked examples of how to use the tool to assist in passive and active overhead hoist needs identification and selection. By following the guidance for generic risk assessment and the protocols in the examples (pages 6 to 12), the assessor can establish the number of each type of hoist that is required in total for the designated area. In existing work areas it is likely that some equipment may already be in place. Assuming that the equipment is in reasonable condition as assessed in compliance with the “The Lifting Operations and Lifting Equipment Regulations, 1998” then the guide can assist in indicating any additional needs over and above the existing provision. The tool can also be used to assist in identifying the number and type of hoists likely to be required in a new or proposed facility.

The tool is aimed at assisting in generic assessment and equipment audit and is not manufacturer specific. It is not intended to be used when undertaking person-specific manual handling risk assessments.

This booklet also contains information about the Oxford range of hoists and slings, and their application, in relation to FIM (functional independence measure) scoring.

FIM Score Explained

Before using the hoist identification tool, it is important to understand how FIM scoring works. FIM (Functional Independence Measure) is a widely used tool, particularly within the field of rehabilitation and involves the classification of a person's mobility according to 7 levels of function, from independence to total assistance. (Granger CV, Hamilton BB, Linacare JM, Heinemann AW, Wright BD, Performance profiles of the functional independence measure. Am J Phys Med Rehabil 1993; 72:84-9).

<p>Independent</p> <p>Another person is not required for the activity (NO HELPER).</p>	<p>7. Complete Independence All of the tasks described as making up the activity are typically performed safely, without modification, assistive devices or aids, and within a reasonable time.</p> <p>6. Modified Independence Activity requires one or more than one of the following: an assistive device, more than reasonable time, or safety (risk) considerations.</p>
<p>Dependent</p> <p>Another person is required for either supervision or physical assistance in order for the activity to be performed (REQUIRES HELPER).</p>	<p>5. Supervision or set-up Person requires no more help than standby, cueing or coaxing without physical contact, or helper sets up needed items or applies orthoses.</p> <p>4. Minimal Assistance With physical contact, the person requires no more help than touching and person expends 75% or more of the effort.</p> <p>3. Moderate Assistance Person requires more help than touching alone or expends half (50%) or more (up to 75%) of the effort.</p>
<p>Complete Dependence</p> <p>The person expends less than half (50%) of the effort. Maximal or total assistance is required, or the activity is not performed.</p>	<p>2. Maximal Assistance Subject expends less than 50% of the effort, but at least 25%.</p> <p>1. Total Assistance Subject expends less than 25% of the effort.</p>

By looking at the broad categories 'dependent' (FIM scores 3, 4 and 5) and 'complete dependence' (FIM scores 1 and 2), the FIM can assist in equipment needs identification (remembering that this tool is not designed for person-specific risk assessment).



Important Information Before Using the Tool

The range of equipment appropriate to a particular ward, department or care facility should be identified as part of an adequate generic manual handling risk assessment carried out in compliance with the Manual Handling Operations Regulations 1992 (as amended) and any local manual handling policy. The table below indicates the type of equipment that may be appropriate in respect of each broad functional independence category of patient/person in order to ensure that safer handling practice can be facilitated. A person-specific risk assessment must be carried out in respect of those who require any assistance with movement/mobility.

Functional Independence Measure (FIM) (see page 4 for description of levels of function)	Passive Hoist (mobile or overhead)	Active Hoist
Independent 7. Complete independence 6. Modified independence	Unlikely to be required except in retrieval after a fall/collapse	Unlikely to be required
Dependent 5. Supervision or setup 4. Minimal contact assistance 3. Moderate assistance	May be required	Must be available
Complete Dependence 2. Maximal assistance 1. Total assistance	Must be available	Unlikely to be required

Generic Manual Handling Risk Assessment Guidance

The checklist below and examples on the following pages can be used to identify hoist requirements as part of the generic risk assessment process to ensure that the number and range of hoists are suitable and sufficient for the work area, taking into account any relevant factors including:

- 1. Number of patients/people in total**
- 2. Functional Independence (see page 5)**
Consider the number of patients within each classification
- 3. Weight/BMI of patients**
Care should be taken not to exceed the load limits of the hoist equipment
- 4. Number of staff/teams**
Each team should be able to access an appropriate hoist at any time during their period of care
- 5. Daily routine**
Are there particular times of day when all patients are moved within a particular time frame e.g. for communal meals?
- 6. Possibility of barrier nursing/care**
Is it feasible that one or more patients in a facility or unit may require barrier nursing, thus tying up one hoist?
- 7. Design constraints in hoist-use areas**
Are all bed, bathroom and toilet areas accessible by standard footprint hoists?

Please note that staff in ALL areas must have immediate access to at least one suitable mobile passive hoist for use in the event of an emergency such as the retrieval of a fallen person.

At least one passive mobile hoist suitable for a very heavy person should also be accessible within the facility/hospital, and all staff should be aware of the system for accessing the hoist as required. For example in the event of an unplanned admission of a very heavy patient into Accident and Emergency. Such matters should be covered within the organisation's Manual Handling Policy and Arrangements, which should include a sub-section on the management of bariatric persons.

Passive Hoist Identification

Example 1

Using example 1 below and the information on pages 4 to 6, the number of passive hoists required for the area being assessed can be calculated.

Step 1	Total number of beds.	18
Step 2	Number of nursing teams at busiest period.	3
Step 3	Divide number of beds by number of teams to calculate your key number.	$18/3 = 6$
Step 4	Your key number is now 6. Use multiples of your key number (result from Step 3) to complete column 1 in the table below.	
Step 5	Now consider the average number of people in the area being considered who have a FIM score of 1 or 2. For example, about 50% would be 9 people.	9
Step 6	Compare the number arrived at in Step 5 to the ranges of figures in Column 1 below. In this case number 9 falls within range 7-12.	

By following across row 2 we can see that in example 1 the minimum number of passive hoists required in the area would be 2, plus 1 if there is a risk that one hoist will be tied up in a barrier nursing situation, plus an increased capacity hoist if there is a possibility that a person will be very heavy.

	Column 1	Column 2	Column 3	Column 4
Row number	Number of people/patients with FIM 1 or 2	Minimum number of passive hoists (see table below to consider specific hoist type requirements)	If there is a possibility that patients will require barrier nursing, add one hoist**	If there is a possibility that a person/patient will be very heavy also add one increased capacity hoist***
1	1 - 6*	1 or 2	1	1
2	7 - 12	2	1	1
3	13 - 18	3	1	1

Different types of wards/environments may have very different percentages of people in each category, and mobility may vary. Always consider very carefully the particular issues that may be relevant in the particular area in which the tool is being applied.

* If this number exceeds 3 then a minimum of 2 hoists is recommended.

** In smaller wards/units it may be more appropriate to share the additional hoist subject to adequate risk assessment.

*** In smaller wards/units it may be more appropriate to share access to an increased capacity hoist subject to adequate risk assessment.

Example 1

The particular type(s) of passive hoist required will depend on a number of factors. Assessors should consider their requirements, based on their generic risk assessment, considering the usual factors including:

- Load (likely capability and anthropometrics of patients/people)
- Individual (skill, training, experience)
- Task (type, timing etc)
- Environment (location, space, surface etc)
- Budget (cost of transfer)

Example 2

Step 1	Total number of beds.	36
Step 2	Number of nursing teams at busiest period.	4
Step 3	Divide number of beds by number of teams to calculate your key number.	$36/4 = 9$
Step 4	Use multiples of your key number (9) and complete column 1 below.	
Step 5	Now consider the average number of people in the area being considered who have a FIM score of 1 or 2. For instance, two thirds (66%) would be 24 people.	24
Step 6	Compare the number arrived at in Step 5 to the ranges of figures in each row of column 1. In this example, if you have 24 people that have a FIM score of 1 or 2 then follow row 3 across to read the results.	

	Column 1	Column 2	Column 3	Column 4
Row number	Number of people/patients with FIM 1 or 2	Minimum number of passive hoists (see table below to consider specific hoist type requirements)	If there is a possibility that patients will require barrier nursing, add one hoist**	If there is a possibility that a person/patient will be very heavy also add one increased capacity hoist***
1	1 - 9*	1 or 2	1	1
2	10 - 18	2	1	1
3	19 - 27	3	1	1
4	28 - 36	4	1	1

* If this number exceeds 3 then a minimum of 2 hoists is recommended.

** In smaller wards/units it may be more appropriate to share the additional hoist subject to adequate risk assessment.

*** In smaller wards/units it may be more appropriate to share access to an increased capacity hoist subject to adequate risk assessment.

Template for your own calculation

Passive hoists

Ward/department/facility

Step 1	Total number of beds.	<input style="width: 80%; height: 20px;" type="text"/>
Step 2	Number of nursing teams at busiest period.	<input style="width: 80%; height: 20px;" type="text"/>
Step 3	Divide number of beds by number of teams to calculate your key number.	<input style="width: 80%; height: 20px;" type="text"/> / =
Step 4	Use multiples of your key number to complete column 1.	
Step 5	Consider the typical number of people/patients with a FIM score of 1 or 2.	<input style="width: 80%; height: 20px;" type="text"/>
Step 6	Compare the number arrived at in Step 5 to the ranges of numbers you have recorded in column 1 and follow the relevant row across to find the minimum number of hoists required.	

	Column 1	Column 2	Column 3	Column 4
Row number	Number of people/patients with FIM 1 or 2	Minimum number of passive hoists (see table below to consider specific hoist type requirements)	If there is a possibility that patients will require barrier nursing, add one hoist**	If there is a possibility that a person/patient will be very heavy also add one increased capacity hoist***
1	<input style="width: 80%; height: 20px;" type="text"/> *	1 or 2	1	1
2	<input style="width: 80%; height: 20px;" type="text"/>	2	1	1
3	<input style="width: 80%; height: 20px;" type="text"/>	3	1	1
4	<input style="width: 80%; height: 20px;" type="text"/>	4	1	1

* If this number exceeds 3 then a minimum of 2 hoists is recommended.
 ** In smaller wards/units it may be more appropriate to share the additional hoist subject to adequate risk assessment.
 *** In smaller wards/units it may be more appropriate to share access to an increased capacity hoist subject to adequate risk assessment.

Active Hoist Identification

Example 1

In just the same way as passive hoist requirements can be calculated, using the tool in relation to FIM scores 1 and 2, active hoist requirements can be identified by considering the number of people in the work area with a FIM score in the 'dependent' category of 3, 4 or 5.

Step 1	Total number of beds.	20
Step 2	Number of nursing teams at busiest period.	2
Step 3	Divide number of beds by number of teams to calculate your key number.	20/2 = 10
Step 4	Use multiples of your key number (10) and complete column 1 below.	
Step 5	Now consider the average number of people in the area being considered who have a FIM score of 3, 4 or 5. For instance, 25% would be 5 people.	5
Step 6	Compare the number arrived at in Step 5 to the ranges of figures in each row of column 1. In this case, if you have 5 people that have a FIM score of 3, 4 or 5, then follow the relevant row across to read the results.	

	Column 1	Column 2	Column 3	Column 4
Row number	Number of people/patients with FIM 3, 4 or 5	Minimum number of active hoists (see table below to consider specific hoist type requirements)	If there is a possibility that patients will require barrier nursing, add one hoist**	If there is a possibility that a person/patient will be very heavy also add one increased capacity hoist***
1	1 - 10*	1 or 2	1	1
2	11 - 20	2	1	1

Please note in relation to Column 4 that the maximum safe working load of an active hoist is likely to be considerably less than some mobile and overhead hoists. Please check the manufacturer's safe working load guidelines.

* If this number exceeds 3 then a minimum of 2 hoists is recommended.

** In smaller wards/units it may be more appropriate to share the additional hoist subject to adequate risk assessment.

*** In smaller wards/units it may be more appropriate to share access to an increased capacity hoist subject to adequate risk assessment.

Template for your own calculation

Active hoists

Ward/department/facility

Step 1	Total number of beds.	<input style="width: 90%;" type="text"/>
Step 2	Number of nursing teams at busiest period.	<input style="width: 90%;" type="text"/>
Step 3	Divide number of beds by number of teams to calculate your key number.	<input style="width: 90%;" type="text"/> / =
Step 4	Using multiples of your key number, complete column 1 below in the same way as the previous examples.	
Step 5	Consider the typical number of people/patients with a FIM score of 3, 4 or 5.	<input style="width: 90%;" type="text"/>
Step 6	Compare the number arrived at in Step 5 to the ranges of figures in column 1. Follow the relevant row across to read the results.	

	Column 1	Column 2	Column 3	Column 4
Row number	Number of people/patients with FIM 3, 4 or 5	Minimum number of passive hoists (see table below to consider specific hoist type requirements)	If there is a possibility that patients will require barrier nursing, add one hoist**	If there is a possibility that a person/patient will be very heavy also add one increased capacity hoist***
1	<input style="width: 90%;" type="text"/> *	1 or 2	1	1
2	<input style="width: 90%;" type="text"/>	2	1	1
3	<input style="width: 90%;" type="text"/>	3	1	1
4	<input style="width: 90%;" type="text"/>	4	1	1

* If this number exceeds 3 then a minimum of 2 hoists is recommended.

** In smaller wards/units it may be more appropriate to share the additional hoist subject to adequate risk assessment.

*** In smaller wards/units it may be more appropriate to share access to an increased capacity hoist subject to adequate risk assessment.

Oxford Professional Series and Overhead Hoists

For more detailed information, please refer to the product brochures or www.joerns.co.uk website.

Oxford Passive Hoists:



Advance

- Suitable for people with a FIM score of 1 or 2 (and for fallen people in other categories)
- Will lift people of weights up to 155kgs/342lbs
- Has an excellent lifting range either from the floor or onto most padded mattresses
- Has an ergonomically designed handle for the handler
- Has a simple mechanical lever to separate legs of hoist
- Has an exceptionally wide leg span to fit around recliners and other large chairs, facilitated also by the unique 'swan neck' leg shape
- Has a unique push foot pad to initiate forward movement on difficult floor surfaces
- Has the capability to perform all functional transfers
- Has very good manoeuvrability in small spaces
- Can fold down simply without tools for easy storage or transportation
- Can be wheeled short distances in its folded down position
- Shape of the base allows the operator to get close to the load
- Has a large range of slings available to match both person and task
- The product is light weight compared to other similar sized lifts



Presence

- Suitable for people with a FIM score of 1 or 2 (and for fallen people in other categories)
- Will lift people of up to 227kgs/500lbs
- Has an outstanding lifting range from the floor to a very high bed or trolley
- Can be used with either a 4-point positioning cradle or 6-point spreader bar
- Powered positioning cradle and weigh scale option
- Has an ergonomically designed handle for the handler
- Has electrically operated leg separator
- Has unique push foot pad to initiate forward movement
- Is light and easy to move for a large hoist
- Has very wide leg span to go round any wide chair or commode, helped also by the unique 'swan neck' shape
- Shape of base allows operator to get close to the load
- Has a large range of slings available to match both person and task



Stature

- Suitable for people with a FIM score of 1 or 2 (and for fallen people in other categories)
- Vertical lifting capacity capable of lifting persons up to 227kgs/500lbs
- Has excellent lifting range from the floor to a very high bed or trolley
- Can be used with either a 4-point positioning cradle or 6-point spreader bar
- Powered positioning cradle option
- Has an ergonomically designed handle for the operator
- Has electrically operated leg separator
- Has unique push foot pad to initiate forward movement
- Has a stretcher attachment for moving a person in a lying position
- Shape of base allows the operator to get close to the load
- Has specially designed sling for both comfort and varying amounts of support
- Weigh scale option



Voyager Portable (overhead)

- Suitable for people with a FIM score of 1 or 2
- Will lift people up to 200kgs (441lbs)
- Ergonomically designed, easy to operate dual (hoist and handset) controls
- Portable version suitable for emergency, temporary or long term use
- 5-minute installation, lightweight components
- Rechargeable, interchangeable (easily removable) battery
- Ideal for point to point transfers in restricted spaces
- Multi-post options allow flexibility in nearly all room layouts
- Soft start/stop for enhanced person-comfort



Voyager Fixed (overhead)

- Suitable for people with a FIM score of 1 or 2
- Available in a choice of 3 models dependent on requirements
- Voyager 420 unit will lift people up to 190kgs (420lbs)
- Voyager 550 unit will lift people up to 250kgs (550lbs)
- Voyager 800 unit will lift people up to 360kgs (800lbs)
- Simple to use handset with return to charge function
- Integrated charger allows quick and safe installation
- Ideal for point to point transfers in restricted spaces
- Soft start/stop for enhanced person-comfort
- Optional powered traverse to reduce handler effort



Oxford Active Hoists:



Arise

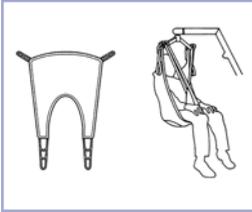
- Suitable for people with a FIM score of 3 to 5
- Will assist to stand people of weights up to 170kgs/375lbs
- Has comfortable handles for person to grasp at an optimum angle
- Has adjustable knee pad for varying heights of person
- Has removable foot rest for standing or walking function
- Has electrically operated leg separator
- Has large ergonomically designed handle for handler
- Has a comfortable adjustable standing sling available in 3 sizes
- Has a transport facility if required with a specially designed sling in 3 sizes
- All Arise slings are very simple to fit



Ascend

- Suitable for people with a FIM score of 3 to 5
- Compact design with short legs for easy manoeuvrability in small and confined spaces
- Will assist to stand people of weights up to 170kgs/375lbs
- Has adjustable knee pad for varying heights of person
- Has removable foot rest for standing or walking function
- Has electrically operated leg separator
- Has large ergonomically designed handle for handler
- Has a comfortable adjustable standing sling available in 3 sizes
- Has a transport facility if required with a specially designed sling available in 3 sizes
- All Ascend slings are very simple to fit

Oxford Slings



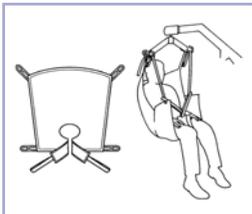
Quickfit/Universal Sling (Spreader Bar: 6 Point)

This sling is an easy-to-fit, general-purpose sling designed to suit 85% of patients. It is simple to use and is available in sizes XS to XL.

Considerations:

- Can be used with leg bands under both legs, under each leg individually, under each leg individually with straps crossed.
- Clients may be able to put it on themselves.
- There is reasonable access for toileting and washing.
- Almost impossible to fall out if leg straps are in crossed position.
- No user co-operation is required.
- It is more difficult to remove clothing for toileting.

FIM Scores: 1 and 2 and any other person from the floor



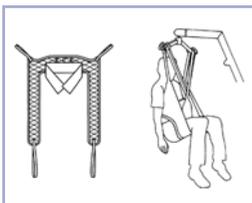
Quickfit Deluxe Sling (Spreader Bar: 6 Point)

This sling is a development of the Quickfit design and is suitable for 95% of patients. It can be used for amputees following assessment, and is available in sizes XS to XL.

Considerations:

- Can be used in the same way as a Quick fit sling (see above).
- Can provide greater support and comfort for the client's legs and hips.

FIM Scores: 1 and 2 and any other person from the floor



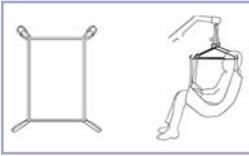
Access/Toileting Sling (Spreader Bar: 6 Point)

This sling is designed specifically to facilitate the toileting procedure by allowing the removal of clothing. It is NOT a general-purpose sling and will suit only 25% of patients. Patients must be in a sitting position to use this sling.

Considerations:

- Can be put on in most positions.
- Clients may be able to put it on themselves.
- It has good access for toileting or washing.
- Narrower leg pieces may be less comfortable.
- The sling requires co-operation from the client.

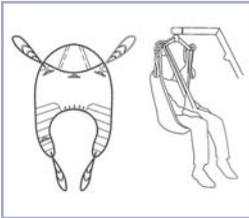
FIM Scores: 2 or 3 following careful assessment



Long Seat Sling (Spreader Bar: 6 Point)

This sling can only be put on or removed in a lying position and is most commonly used with an amputee. This sling also needs to be used in conjunction with side suspenders.

FIM Scores: 1 or 2 following careful assessment



Full Back Sling (Spreader Bar: 6 Point)

This is a more specialised sling. It incorporates integral boned head support and padded leg pieces and is available in sizes XS to XL. The correct size will fit snugly and give full protection for patients who go into extension or have involuntary movements or behavioural problems.

Considerations:

- Can be used in the same way as a Quick fit sling (see opposite)
- Gives added support for a client who does not have head/neck control

FIM Scores: 1 and 2 and any other person from the floor



Comfort Sling (Cradle: 4 Point)

This is a more specialised sling. It allows correct positioning to be made via the 4-point cradle and uses the Securi3 sling connection system ensuring no inadvertent detachment of the sling from the cradle. It incorporates a removable comfort pad for head support and fits snugly to give full protection for patients who go into extension or have involuntary movements or behavioural problems. It is available in all sizes from XS to XL.

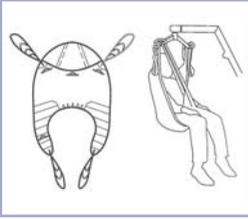
FIM Scores: 1 and 2 and any other person from the floor



Standing Harness (Spreader Bar: 6 Point)

The Standing Harness is a versatile sling with a wide range of uses. This includes assisting with standing and walking or visiting the toilet. The Standing Harness supports the patient around the upper body as well as under the arms. The Standing Harness is not a general-purpose sling and requires the patient to be able to partially weight bear.

FIM Scores: 2 or 3 following careful assessment



Silkfit Sling (Spreader Bar: 6 Point)

The Silkfit Sling is a flexible contoured, easy to fit sling designed to fit 85-90% of clients. This sling is especially suited to patients in moulded type wheelchair systems where fitting of the sling can prove difficult. It has integrated, boned head support and leg padding as standard. Available in four sizes - paediatric, small, medium and large.

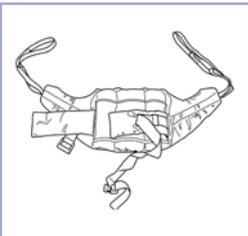
FIM Scores: 1 and 2 and any other person from the floor



Transport Sling (Standaid)

The transport sling is suitable for those patients with a degree of weight bearing ability. It is easy to fit, allowing quick and effective transfers. Available in three sizes - small, medium and large.

FIM Scores: 2, 3 and 4



Standing Sling (Standaid)

The standing sling is suitable for those patients who have a greater degree of weight bearing ability. It allows excellent access for toileting and is easy to fit, providing quick and effective transfers. The adjustable waist strap and the non-slip back pad ensures the sling does not ride up during the transfer. This sling can be unsafe however, when used with the wrong patient, so a careful risk assessment is advised. Available in three sizes - small, medium and large.

FIM Scores: 3 and 4

In addition to the extensive range of slings available, Oxford also has a number of sling accessories including:-

- Sling Extension Straps
- Head Supports
- Slide Sheets

Oxford Spreader Bar/Cradle Options:

Having the option of numerous cradles or a spreader bar provides the handler greater choice in selecting the most appropriate sling and cradle for the task. It allows the handler to choose exactly the correct sling for the person and task in question.



6 Point Spreader Bar

The 6-point spreader bar uses slings with webbing loops, which allows accurate positioning adjustments to be made by selecting the different coloured loops.



4 Point Positioning Cradle

The 4-point positioning cradle provides adjustment by rotating the cradle handle either down or up to obtain an upright or reclined position. This simple movement allows positioning without additional adjusting of the sling.

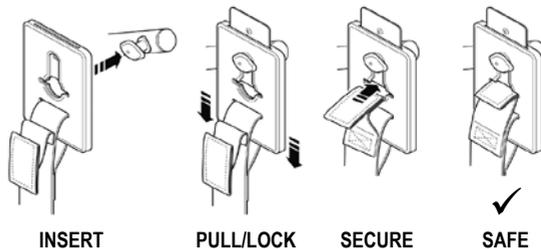
The 4-point positioning cradle also uses the Securi3 safety clip system to attach the sling to the cradle. This type of clip ensures NO inadvertent detachment occurs.

The 4-point cradle is available on the Advance, Presence and Stature lifts. Both manual and powered cradles are available.



Securi3 Sling Attachment System (4-point cradle)

The 3 key stages assures the patient and carer of safety and comfort throughout the transfer.



Note: The Comfort sling utilises the Securi3 clip system and this was especially designed to ensure NO inadvertent detachment occurs.

CE



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