GUIDELINES FOR MOVING A PATIENT WHO REQUIRES SPINAL PROTECTION ON AND OFF THE VACUUM MATTRESS

Aim

These guidelines are intended to be used by staff within Critical Care, when a patient with confirmed or suspected spinal injury is to be transferred to another facility.

The following guideline has been developed by a working group of clinical staff from adult and paediatric critical care, ergonomics and back care teams across all HSCNI Trusts in conjunction with CCaNNI. This guideline should be followed along with the SOP Poster Guideline as well as manufacturer's instructions for use of equipment. Permission granted by Ferno UK Limited and Arjo Huntleigh Ireland to use figures from User's Manual.

Objectives

To give guidance to staff on:

1. Preparation of the vacuum mattress
2. Placement of a patient onto a scoop stretcher
3. Removal of a scoop stretcher and securing the patient in the vacuum mattress
4. Removal of a patient from a vacuum mattress
5. Lateral transfer of a patient who is secured on a scoop stretcher using a lateral transfer device
6. Transfer of a patient on a scoop stretcher using a mobile hoist with a horizontal stretcher frame and dual loop attachment straps

Note:

- All patients requiring spinal protection will have a cervical collar in-situ
- If used, the vacuum mattress should remain on the critical care transport trolley rather than moving it on & off the bed.
- The Scoop slide will be used to move the patient from bed to trolley and back again on arrival at destination.
- The width of the trolley can be increased on both sides if required for larger patients
- Always check the Safe Working Load (SWL) of lifting equipment to ensure that it is suitable for intended use. The SWL of the Ferno EXL is 159kg / 25stone. The SWL of all lifting equipment should be marked clearly on the item.

1. Preparation of the vacuum mattress

- Firstly make sure all trolley harness straps are placed over the edge of the critical care trolley and not underneath the vacuum mattress.
- Remove head rest and lower infusion poles to horizontal position.
- Remove vacuum mattress from bag and position it flat over critical care trolley, ensuring mattress is positioned equally over both sides taking into account patient height and position.

- Check the mattress valve is open and smooth the mattress surface to ensure that there are no lumps or bumps.
- Remove air from mattress using pump provided until the surface is “hard’ before performing a lateral transfer on a scoop stretcher onto the mattress otherwise the content of the mattress can shift. This is not necessary if the patient is placed onto the mattress using a horizontal hoist lift with a scoop stretcher.

2. Placement of a patient onto a scoop stretcher

- Before beginning, ensure the length of the stretcher is adjusted for patients’ height. The manufacturer recommends that the length of the stretcher should be adjusted before uncoupling the halves to ensure equal adjustment. Length adjustment can be determined by positioning the stretcher beside the patient and aligning the headrest area with the patient’s nose. Adjust the foot section to extend a little beyond the bottom of the patient’s feet - this can be achieved by adjusting the telescoping foot section to one of four locking positions.

- Unlock the twin safety locks ‘*coupling’* at each end of the stretcher and separate the stretcher into two halves (2 buttons pressed simultaneously at each end of the scoop).

- The patient now needs to be log rolled to insert the scoop stretcher. This will require a minimum of five staff, four to logroll and at least one to insert the

scoop, however this should be risk assessed for each individual patient taking into account the patient's height, weight, equipment etc. Additional staff may be required.

- Log roll the patient to one side and insert one half of the scoop ensuring head support is in correct position.
- Log roll the patient to the other side and insert second half of scoop. Note: A log roll of 10-20° laterally should be sufficient to insert the 2nd half of the scoop - performing a higher roll will make it more difficult to engage the twin safety locks.

- While the patient is still in side lying position, align the right and left halves of the head and foot couplings and push them together until the twin safety locks engage - an audible click is heard.
- Take care to avoid pinching or pulling of the patient's skin, hair, or clothing while working the stretcher halves into place. Place spinal head pad in.
- Return the patient to supine position.
- To check that the twin safety locks are both engaged, pull the coupling halves away from each other without pressing on the lock levers. The couplings will remain securely joined if the locks are fully engaged.
- Additional spinal blocks can be used at this stage to secure the patient's head into position if required.
- Secure the patient onto the scoop stretcher using the 4 scoop stretcher restraints provided. Unbuckle the restraint into two pieces. Press the spring latch of the speed clip against a speed clip pin until the clip snaps into place around the pin. Repeat to fasten the other half of the restraint to the matching pin on the opposite side of the stretcher. Buckle the 2 sections of the restraint and adjust tension to secure patient.

3. Lateral transfer of a patient who is secured on a scoop stretcher using a lateral transfer device

- Identify the number of handlers required – commonly 4 and an additional person at the patient's head.
- Adjust height of bed to appropriate working height for lateral transfer between trolley and bed and vice versa – the trolley is fixed height.
- The person at the head will give the command to turn the patient (secured to the scoop stretcher) away from the receiving surface for insertion of the transfer board and slide sheet.
- Ensure any gap between the surfaces has been 'bridged'. A third of the board should be placed under the patient, a third across the gap and a third on the receiving surface. Return the patient to supine position.
- **Bring the trolley and bed together and ensure that all brakes are applied.** Placement of a second slide sheet on the receiving surface will facilitate repositioning of the patient following transfer if required.
- The lead handler will give clear instructions such as "ready, steady, slide" On "slide" all handlers transfer their body weight in the direction they are to move, ie pull or push.
- The move should be smooth and controlled not jerky and/or fast.
- If necessary, repeat the move until the patient is across onto the receiving surface.
- Adjust the patient if required and ensure head is in correct position.
- Remove the transfer board and slide sheets then follow instructions for removal of a scoop stretcher (see section 4)

4. Removal of a scoop stretcher and securing the patient in the vacuum mattress

- Once the patient is properly positioned on the vacuum mattress on the trolley the scoop stretcher can be removed. It should not be necessary to roll the patient for this but spinal alignment must be maintained.
- This will require one person managing the cervical spine and at least one person securing the trunk. A third person will be required to unlock the twin safety locks at each end of the stretcher and slide each half, one half at a time out from under the patient.


- Release air valve on vacuum mattress until mattress is pliable.
- Wrap the mattress around the patient and secure the 5 sets of colour-coded straps loosely across patient.
- When positioning the mattress around the patient ensure desired access to intravenous and arterial lines. Avoid 'kinking' of drains etc
- Remove air from mattress using pump provided until the surface is "hard'
- Adjust tension on the colour coded mattress straps
- Secure patient / mattress to trolley using the black trolley straps



5. Removal of a patient from a vacuum mattress

- Release the black trolley straps and the colour coded mattress straps.
- The person at the head end of the bed / trolley will apply manual spinal protection whether or not a cervical collar is in-situ before undoing all the mattress straps.
- Release air valve on vacuum mattress until mattress is pliable.
- Fold the sides of the mattress down around the sides of the trolley.

- Remove air again from mattress using pump provided until the surface is “hard’ This is necessary to ensure the scoop can be inserted.
- Log roll the patient to insert the scoop stretcher (see section 2). Secure the patient onto the scoop stretcher using the 4 scoop stretcher straps provided.
- Transfer the patient onto a bed using either a lateral transfer device or mobile hoist with horizontal attachment and dual loop straps.

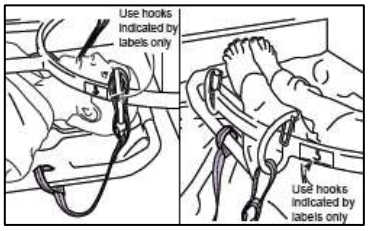



6. Transfer of a patient on a scoop stretcher using a mobile hoist with horizontal stretcher frame and dual loop attachment straps.

- Check the safe working load (SWL)of all lifting equipment before use. The dual-loop attachment straps have a lifting capacity of 160kg / 25stone. Do not exceed the SWL.
- Always inspect the dual-loop attachment straps prior to each use to ensure that they are in good working order. Never use a strap if damaged or badly worn. Attach the stretcher frame to the hoist. To prevent the hoist from tipping the legs of the hoist must be open at all times.
- Position patient onto scoop and secure (see section 2)
- Attach the 4 dual loop straps to the scoop stretcher as shown in figure 1. Through the frame and never to the pins which are only used to attach the patient to scoop straps see picture below
- Bring hoist to bed side, paying particular attention to the clearance needed for hoist legs.
- Bring the stretcher frame over the patient and align the stretcher frame’s suspension point labels with the installed attachment straps.

- Lower the stretcher sufficiently to connect the attachment straps onto the hooks
- Attach all the straps to the stretcher frame. Choose the loop to use (long or short) at head section and at foot section depending on patient's morphology. Most of the time using short loop at head section and long loop at foot section is appropriate.
- Warning: Before raising the patient, always make sure the Ferno scoop stretcher is not caught on any obstructions.
- Raise the patient sufficiently to clear the surface. At least one member of staff will be required to monitor airway and intravenous lines etc, while other staff remove one surface and replace with the other. Due to hoist legs, this will need to be a lateral move.
- Lower the patient onto the new surface then unhook the straps from the stretcher frame.
- Move the hoist away
- Remove scoop (see section 3)

Warning: The *DUAL-LOOP ATTACHMENT STRAPS* **must never be attached** to the pins located within the handholds, when using a Ferno Scoop EXL Stretcher with pins. Failure to follow these instructions may result in patients falling, causing injuries.



Install the *DUAL-LOOP ATTACHMENT STRAPS* only in the handholds indicated by the green circles.