Vacuum Immobilizer (≥ PL2)

Clinical Indications:

1. When guidelines indicate a patient needs to be packaged for transport.
2. The vacuum mattress can be used as a spinal restriction device and/or full body splint.
3. Pelvic fractures.
4. Situations where a patient will be packaged supine for an extended period of time.

Contraindications:

1. None

Notes/Precautions:

1. Vacuum mattress drastically reduces pressure points compared to a ridged backboard.
2. The vacuum mattress is an excellent insulation barrier:
   a. Can help with managing hypothermia for patients in cold weather or with trauma.
   b. On extremely hot days the vacuum mattress can become hot on the patients back. Consider placing a sheet between the patient and the vacuum mattress. Also consider applying cold packs.
3. If the vacuum mattress loses vacuum, impermeable tape can be used as a *quick fix* solution to temporarily repair an abrasion/puncture site.
4. The vacuum mattress has a built-in pelvic binder that can be used in lieu of the pelvic binder. If a patient has a pelvic binder applied prior to being placed in the mattress, do not apply the built-in binder.

Procedure:

1. Prepare equipment.
2. Apply any needed patient care items, splints, c-collar, bandages/dressings, etc.
3. Lay vacuum mattress out next to patient with straps extended.
4. Transfer patient to the vacuum mattress.
   a. Multiple providers placing hands under patient to lift up and then laterally move patient onto the vacuum mattress.
   b. Position patients head even with the top of the vacuum mattress.
5. Secure torso straps first (yellow) followed by the head strap (red) and lower extremity straps (green).
6. Adjust position of pelvic straps, if needed, and secure Pelvic straps.
   a. If Pelvic binding is indicated, ensure the Pelvic straps are on the lower 2/3 of the pelvis and apply enough pressure to sufficiently bind Pelvis to stabilize fracture.
7. **Prior to evacuating air**, place hands under patient into void spaces created by the patient's anatomical position. Common void spaces for a supine patient include: small of back and behind knees.
   a. Leave hands in place until air has been evacuated and the vacuum mattress is ridged
8. **Prior to evacuating air**, if spinal restriction is required have a provider wrap the vacuum mattress head "flaps" around the patient's head.
   a. Hold flaps in place until air has been evacuated and the vacuum mattress is ridged.
9. Ensure air valve is closed (clockwise rotation).
10. Attach hose from vacuum pump, rotating in a clockwise direction (thus continuing to tighten valve) as the nipple is inserted into the air valve.
11. Vacuum air with vacuum pump until vacuum mattress is ridged.
    a. The internal beads will be visible through the vacuum mattress material.
12. Remove vacuum hose nipple from valve by rotating clockwise as the nipple is pulled out of valve.