Pelvic binder – FAQ

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Reference: NBTP Consensus Statement Pelvic Binders

Pelvic Binder

The circumferential compression obtained from a pelvic binder provides early stabilization for the hemodynamically unstable patient who has suspected or confirmed unstable pelvic fracture. Stabilization of pelvis reduces pelvic volume which tamponades bleeding. It also reduces fracture movement, which reduces pain and helps reduce the risk of shearing major blood vessels during transport.

What are the indications for pelvic binder?

Hemodynamically unstable patients with a suspected or confirmed pelvic fracture.

When is a pelvic binder contraindicated?

The pelvic binder is contraindicated when there is an impaled object that would be covered by it. In cases where the patient may have both fractured femur(s) and pelvic instability, the immobilization of the pelvis should be completed before immobilization of the femur(s), keeping in mind that traction splints interfere with use of the pelvic binder – using standard immobilization of lower extremities is recommended in these cases.

What are the implications for using a pelvic binder on a patient who is visibly pregnant?

As long as the landmarks for application can be identified, it is safe to use the pelvic binder.

What equipment is available to bind the pelvis?

Ambulance New Brunswick and most NB Emergency Departments use the T-Pod Responder device. If T-pod is not immediately available, a simple sheet can be used to bind the pelvis but must be applied by two people and securely fastened.

Who can apply T-Pod or Sheet?

Paramedics have received education and have T-Pod on all ANB trucks as of June 2016 and may apply the device to any qualifying prehospital patient. Nurses have been provided education and practice with T-Pod through the NB Trauma Program. If further education is required please contact your NBTP Trauma Nurse at your respective site. For nurses, a physician must order the application of T-Pod or pelvic sheet. Ensure the order is written and name of physician ordering is documented.

When should a foley catheter be inserted?

The potential need for foley catheter insertion does not influence the paramedic decision to apply a pelvic binder for qualifying prehospital patients. When patients require application of a pelvic binder in the emergency department, a foley catheter should be inserted prior to application. Prior to insertion, assessment for blood at urinary meatus or other signs of urethral or bladder injury must be communicated to the attending physician. If foley catheter is contraindicated due to blood at meatus or due to urethral or bladder injury, the pelvic binder should be applied and the ED physician should request an immediate consult to local Urology. If Urology is not available locally, consultation with the Trauma Control Physician via the Toll Free Trauma Referral System is recommended.

What are the key nursing responsibilities if a patient arrived in the Emergency Department with a pelvic binder that has been placed by paramedics?

1. Ensure date and time of application of binder, documented on binder or sheet and initialed by paramedic.
2. Ask the paramedic if there were any underlying injuries noted beneath binder prior to application.
3. If applied over clothing, ask paramedic if pockets were checked and emptied prior to application of binder.

What are the key nursing responsibilities when a patient arrives from another Emergency Department or site/nursing unit with a T-Pod or Sheet binder in place?

1. Ensure date and time of application is documented on binder including initials.
2. Ask transfer personnel if binder has been in place greater than 12 hours. If it has, confirm if and when the binder has been released to check skin integrity. If the binder has been placed for more than 12 hours and no check of skin integrity has been completed, consultation with orthopedic surgery is recommended. If orthopedic surgery is not available, consultation with the Trauma Control Physician via the Toll Free Trauma Referral System is recommended.

Should a T-Pod or Sheet binder be released immediately on arrival to an ED/nursing unit for the purposes of reassessing pelvic stability?

No. The pelvic binder should only be released if an orthopedic surgeon is immediately present and requests reassessment of the pelvis. Temporary release of binder is also warranted, under the direct supervision of a physician, to ensure adequate external bleeding control from a wound under the pelvic binder. In either case, document on the binder the time/date/initials of when the binder was released. Also document on patient record including how long in minutes the release occurred and the patient response to the temporary release.

What should a nurse do if a physician removes a pelvic binder from patient stating "binder not required"?

Nurses must document event including physician name, date, and time he/she removed binder. A reassessment of patient which includes complete set of vital signs, any wounds, or skin breakdowns under the binder, and if (patient is alert) patient's response to removal of binder.

How do I apply a T-Pod Binder?

There are educational resources available online at http://www.pyng.com/products/t-podresponder/

How do I apply a Pelvic Sheet?

See attached sheet- Placement of sheet binder.

Is the T-pod safe in x-ray machines, i.e. CT scan, MRI?

Yes, T-Pod is completely radiolucent.

What do I do if patient is too large for a T-Pod?

For bariatric patients, two T-Pod devices can be joined together to create an extra-large binder. Two T-Pods can be affixed together by using one of the Velcro backed power unit to secure the two units together and using the other Velcro backed power unit to tighten the binder.

What do I use for the pediatric/small adult population?

The T-Pod binder should be cut to fit patient with the appropriate midline gap of (6-8 inches) 15-20 cm.

What do I do for the Paediatric or small adult population that weigh less than 23 kg (50 lbs.)?

Patients weighing less than 23 kg (50 lbs.) should have a sheet applied instead of T-Pod.

When should I document in patient record on T-Pod or Sheet Binder?

Documentation in the patient record on T-Pod or Sheet Binder should occur when binder is applied and should include:

- Who applied binder, date and time.
- Any release of binder for assessment of skin integrity and length of time released.
- Removal of binder – by whom, date, time, and skin integrity, post removal.
- Documentation of neurovascular status of lower limbs prior to application and after binder is in place and at regular intervals if binder is in place more than 12 hours.

How often should the binder be released to check skin integrity?

The binder should be released every 12 hours to check for skin breakdown, under the direct supervision of the attending physician.

How long will pelvic binder be in place?

The pelvic binder will remain in place until it has been determined that the pelvis is not the source of bleeding and fracture is stable or until patient is taken to the operating room or to interventional radiology for either definitive repair or application of an external fixator. In some cases, the pelvic binder may be left on in a sending facility, pending transfer to a centre where definitive repair will be completed.

Who are the Orthopedic Surgeons that specialize in repair of complex pelvic fractures?

Dr. James Wagg (SJRH) and Dr. Louis LeBlond (TMH) are currently the only two Orthopedic surgeons who have fellowship training to repair complex pelvic fractures. However, all orthopedic surgeons are capable of assessing, guiding initial management and assisting with stabilization in the acute care phase. The NB Trauma Program maintains up-to-date coverage availability for the definitive repair of complex pelvis fractures, allowing Trauma Control Physicians to make sure that transfers are organized to the best possible destination when required.

When is transfer for definitive repair of complex pelvic fractures required?

It depends! Patient with ongoing hemodynamic instability (those who have hypotension and/or need blood products to support a safe blood pressure) as a result of an unstable pelvic fracture do require emergent transfer to a centre capable of either embolizing the bleeding blood vessels and/or completing the definitive orthopedic repair. In some cases, Trauma Control Physicians may consult with local general surgeons, if damage control surgery is felt to be important prior to transfer.

However, complex pelvic fracture patients who are hemodynamically stable do not need immediate transfer for definitive repair. If their injury is isolated to the pelvis, their transfer can be arranged for the following day or several days later. An early call to the Toll Free Trauma Referral System during the Emergency Department phase of care is always encouraged to discuss the plan for transfer with the Trauma Control Physician.