



Queensland
Trauma Education

PRE-HOSPITAL RETRIEVAL

Preparation and packaging

Procedural skill

Facilitator resource kit

CSDS



Clinical Skills Development Service



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The resources developed for Queensland Trauma Education are designed for use in any Queensland Health facility that cares for patients who have been injured as a result of trauma. Each resource can be modified by the facilitator and scaled to the learners needs as well as the environment in which the education is being delivered, from tertiary to rural and remote facilities.

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Queensland Trauma Education

Pre-Hospital and Retrieval – Preparation and packaging: Procedural skill – Facilitator resource kit

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About this training resource kit

This resource kit provides background knowledge in the preparation for transfer by a retrieval team.

National Safety and Quality Health Service (NSQHS) Standards



Target audience

Emergency department medical and nursing clinicians

Duration

30 minutes

Group size

Suited to small group participation

Learning objectives

By the end of this session the participant will be able to:

- Understand the key components of a transfer checklist
- Perform a standard assessment to ensure safe transfer

Facilitation guide

1. Facilitator to use checklist template to discuss assessment of patient readiness for transfer.
2. Facilitator to observe participant perform checks on manikin and demonstrate understanding of important safety processes prior to transfer.

Supporting resources (in Printable resources)

- Checklist for adult patient waiting for retrieval or urgent transfer NSW – Emergency Care Institute - ACI.
- Preparation for retrieval – Trauma Victoria

Procedural skill

Resources required

Equipment	<ul style="list-style-type: none">• Manikin• Additional equipment- ETT, ICC, UWSD, PIVC x 2, IDC, pelvic binder, cervical collar, ventilator, oxygen cylinder, suction• Chart- clinical documentation, medication chart, fluid chart, ICC drainage chart
Delivery tool	Facilitator-led pause and discuss procedural skill

Case 1

A 27-year-old male is the driver involved in a high speed RTC. He is brought to the local ED by ambulance paramedics. On arrival he has a GCS 10 (E3V2M5), unequal pupils (R 3mm L 1mm and both sluggish), but no other focal neurological deficits. His vital signs are HR 110, BP 110/70mmHg, sats 97% 15L NRB. At the hospital he is intubated, has a R ICC placed for a pneumothorax seen on his CXR. He had a pelvic binder and cervical collar placed by the paramedics.

He has been referred to the nearby tertiary hospital for further assessment and management as there is no CT available at the local hospital.

Procedural skill

Discuss and perform the procedural checks for ensuring the patient is safe and ready for transfer when the retrieval team arrives.

Checklist

1. Airway and C spine- secure ETT and record insertion depth, secure orogastric tube separately, review imaging for ETT placement. Maintain spinal precautions but ensure anterior neck is reviewed for injury under cervical collar.
2. Breathing- aim for oxygenation and ventilation targets, secure ICC and change drain to retrieval compatible, review imaging of ICC placement.
3. Circulation- ensure 2 x patent PIVC present, appropriate lines for volume replacement, record IV fluids given including blood and blood products, utilise serial blood gasses and haemodynamic parameters to assess for ongoing shock state, ensure monitoring lines (arterial/CVP) are correctly attached and zeroed.
4. Documentation- copies of all clinical notes, charts, and forms. Identify NOK details, limits of care documentation and referral letter.
5. Other

Other

1. Maintain body temperature
2. Insert IDC
3. Check position of pelvic binder/splints if used
4. Empty all drainage bags, document ICC drainage volume
5. Review recent laboratory results and correct abnormalities
6. Review all limbs for wound care, compartment syndrome and pressure area concerns
7. Ensure family/NOK are updated
8. Collect patient belongings for transfer

Question and answer guide

Facilitator to lead session with reference to checklist items. Participant to demonstrate using the manikin. May use questions as required or allow participant to demonstrate checks and frame questions to group.

In this patient, what checks will occur to ensure the airway is safely maintained during transfer?

1. ETT position, confirm size, depth, and securement device, ETCO₂ waveform.
2. Ensure oro or nasogastric is placed.

(Prior to leaving referral facility- CXR can be used to confirm depth of ETT and orogastric tube)

Are there precautions for the spine during transfer?

This patient has an 'uncleared' spine and so full spinal precautions should be used until assessment can be made in conjunction with imaging studies. A cervical collar should be used as a visual reminder for the teams caring for this patient. Full spinal precautions will be continued, including the possible use of vacuum mat for transfer which the retrieval team will bring with them.

What steps are undertaken to ensure 'B' for breathing and ventilation is assessed in preparation for transfer?

1. Clinical assessment- equal breath sounds, expansion and ETCO₂ waveform. ICC function- swing +/- bubbling/draining and well secured.
2. Radiological assessment- ICC well positioned, pneumothorax re-expansion.
3. Laboratory assessment- recent VBG/ABG.
4. The retrieval team will ensure during pre-flight checks that adequate oxygen available for the ventilator function, suction, and equipment available for chest decompression if required before or after leaving the referral facility.

Outline the circulation assessment considerations prior to transfer.

1. Peripheral perfusion, laboratory parameters and cardiovascular monitoring should be checked prior to transfer.
2. Adequate IV access to deliver sedation, fluids and medications during transfer and ensure safely secured.
3. Adequate supplies of medications, drug infusions, fluid and blood products needed for transfer.

What other check are undertaken prior to transfer?

1. Splints and binders well placed and nil complications (pressure areas, tourniquet effect)
2. Monitoring connected and zeroed
3. Supportive cares- eyes taped, IDC, warming
4. Documentation
5. NOK updated

Acronyms and abbreviations

Term	Definition
NOK	Next of kin
ICC	Intercostal catheter
IDC	Indwelling catheter
ETT	Endotracheal tube
ED	Emergency department
GCS	Glasgow Coma Scale
PIVC	Peripheral intravenous catheter
UWSD	Underwater seal drainage

References

1. Queensland Health, Royal Flying Doctor Service (Queensland Section). *Primary Clinical Care Manual* (11th ed.). https://www.health.qld.gov.au/_data/assets/pdf_file/0016/1215025/1.Patient-assessment-and-transport.pdf
2. Langford, S. (2015). *Transporting your patient* (2nd ed.). Royal Flying Doctor Service of Australia Western Operations. Available at: < <https://bit.ly/3D8DoHE> > [Accessed 26 July 2022].

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