Innovation Brief

Orthotics, Podiatry and Immobilisation Framework - Abdominal Aortic Junctional Tourniquet-Stabilised

Summary

Disruptive Innovation

This briefing introduces a disruptive innovation newly available via NHS Supply Chain: The Abdominal Aortic Junctional Tourniquet - Stabilised (AAJT-S). Reviewed by clinical specialists and supported by key stakeholders, this device offers a novel approach to managing junctional and pelvic bleeding in major trauma cases

Introduction

This document is intended to inform clinical stakeholders and procurement teams about innovative products that have undergone a clinical review and are now accessible through NHS Supply Chain.

Products featured in this brief may be classified as:

- Transformative Innovations
  - An existing technology that is applied the first time or applied in a novel way. An example would be an existing device being applied to a new speciality.
- Disruptive Innovations
  - A disruptive innovation is novel.
  - It should offer improvements compared to the existing provision of care.
  - The proposed format should not exist elsewhere (either within or beyond the health and care sector).

Note: While robust evidence or validated savings may not yet be available, early data and clinical insights support the potential for patient and system-level improvements.

Departments / stakeholders for engagement

- NHS procurement teams
- Major trauma centres / units
- Ambulance services / trauma teams
- Helicopter emergency medical services (HEMS) / Air ambulance / Military medical units
- Emergency departments

Opportunity

The AAJT-S presents an opportunity to enhance trauma care by:

- Offering an alternative / additional treatment for major bleeding.
- Enabling early intervention by paramedics and trauma teams.
- Complementing existing protocols (for example pelvic binder and tranexamic acid (TXA) administration) prior to specialist hospital care.

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Product Overview

The Abdominal Aortic Junctional Tourniquet - Stabilised (AAJT-S) is the world's only multi-functional tourniquet capable of:

- Controlling junctional and pelvic bleeding in the axilla, abdomen, and inguinal regions.
- Stabilising pelvic fractures.
- Acting as a non-invasive alternative to Zone 3 REBOA.

Clinical relevance

- The leading cause of death in pelvic injury is bleeding due to the difficulty in controlling junctional bleeding.
- The AAJT-S achieves haemorrhage control by compressing the aorta near its bifurcation, or the major arteries (axillary, femoral).
- Animal studies support safe application for up to 60 minutes.
- Human studies confirm effective femoral artery occlusion at 300 mmHg inflation pressure.

Additional benefits

- Can be used during or post-cardiac resuscitation to focus blood supply.
- Prevents blood pressure drops during patient movement (for example downstairs or in lifts).
- Only device besides the REBOA procedure capable of stopping pelvic blood flow.
- Low training threshold enables use by a wide range of clinicians across varied environments.

Caution

Removal protocols need to be agreed with key stakeholders for the different use situations before implementation.

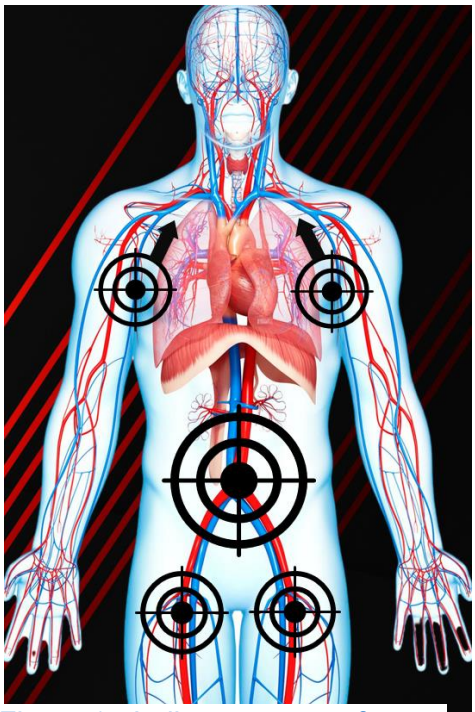

Figure 1 - Indicates areas of application.

Supply details

NPC - ESC85008 MPC - 63000 Route - eDirect
Supplier - Fenton Pharmaceuticals Ltd
Brand - Compression Works Unit of Issue - Each
Class 1 Medical Device - No Shelf Life - Single Use

Supporting evidence / notes

The AAJT-S was submitted to the NHS Innovation Service in 2025.
The current pathway for pelvic injury with supporting information can be found at:
https://www.rcemlearning.co.uk/reference/pelvic-injuriesv2/#1669399706852-6839d2cc-eb61
The Immediate management is prioritised as

- Control of haemorrhage.
- Use of pelvic binder.
- REBOA.

Contact Details

Marc Naughton - Clinical Specialist, Orthotics
marc.naughton2@supplychain.nhs.uk

Julie Garrett - Category Manager, Orthotics
julie.garrett2@supplychain.nhs.uk

Care Pathway Team - first point of contact
cpt.vbhenquiries@supplychain.nhs.uk

Jemma Spence - Category Buyer, Orthotics
jemma.spence@supplychain.nhs.uk