



Patient Safety Notification

Tourniquet Issues – Getting it Right



14

The number of incidents relating to tourniquet issues reported on NIMS in a three-month period in 2019



Incidents relating to tourniquet include:

- Tourniquet left in-situ following
- IV cannulation and venepuncture procedures

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Advice for enhancing safe use of tourniquets

While applying a tourniquet for the purposes of intravenous cannulation or phlebotomy is a routine part of medical care, failure to remove the tourniquet in a timely fashion can result in significant consequences. While these incidents are often classified as negligible or minor, they have the potential to cause circulatory, neurological, vascular and muscular damage. The longer a tourniquet is left in place, the greater the chance of the service user sustaining a significant injury. The [Clinical Risk Unit](#) in the [State Claims Agency](#) has noted a number of incidents involving tourniquets and has prepared the following advice.

Risk Considerations

A number of risk factors, which may increase the likelihood of a tourniquet being left in-situ, have been identified in service users:

- Reduced levels of cognition
- Limited sensory awareness
- Compromised peripheral neurovascular sensation
- Illness acuity impairing the service user's awareness / ability to feel the tourniquet

Symptoms and signs can include pain or discomfort, erythema and indentation at the tourniquet site, oedema of the extremity, alteration or loss of sensation, skin tears, pressure ulcers, and haematomas. It is important to highlight that many of these incidents could be averted by following the correct procedures, and giving the task at hand the time and attention to ensure it is completed thoroughly.

References:

1. *Patient Safety Advisory, Forgotten But Not Gone: Tourniquets Left on Patients. Pennsylvania Patient Safety Reporting System 2005*
2. *Guiding Framework for the Education, Training and Competence Validation in Venepuncture and Peripheral Intravenous Cannulation for Nurses and Midwives 2017, Office of the Nursing and Midwifery Services Director, HSE.*
3. *WHO Guidelines on Drawing Blood: Best Practice in Phlebotomy 2010*
4. *Topics in Patient Safety – Top Ten Myths about Patient Safety Information System (SPOT) Safety reports VA National Centre for Patient Safety 2005.*

Advice for Safe Practice

- Integrate tourniquet removal as a step in the **procedure checklist** and sign off after every procedure
- Remove the tourniquet once sufficient blood has been collected or the cannula is in the correct position; release the tourniquet **before** withdrawing the needle or as soon as blood flow is established
- A tourniquet should never be in place for longer than **two minutes** for the purpose of venepuncture or IV cannulation
- Avoid using **unconventional materials** for tourniquets such as gloves
- Enhance tourniquet visibility by using wider, **brightly coloured tourniquets** that are very obvious and also serve as a visual contrast against all skin tones
- Implement environmental controls to **minimise distractions** and interruptions during venepuncture / cannulation procedures
- **Standardise** the venepuncture / cannulation **process** across the organisation and reconcile the tourniquet / equipment used at the end of every procedure
- Tourniquets are a potential source of infection and should be **single use only**