NHS Clinical Evaluation Team
by the NHS, for the NHS

Clinical Review
Single Use Tourniquets

August 2018

Contents

Guidance for use

This clinical evaluation report is aimed primarily at the NHS and all those working to support patient care. If you would like to talk through how this report can be used in your setting, please contact the team by emailing: **clinical.evaluationteam@nhs.net .**

Please note that the product assessment results should only be read and used in conjunction with the full text of this clinical review and that a product's performance threshold is inherently linked to the knowledge of the clinician using it.

1. Introduction

The NHS Clinical Evaluation Team was established in April 2016. The team's remit is to add independent clinical review to 'everyday healthcare consumables' used by the NHS.

Everyday healthcare consumables are products that are found in the majority of wards, clinics, health centres, treatment rooms and district nurses' bags across the NHS. The purpose of this report is:

- To define a list of clinical requirements for an ideal Single Use Tourniquet.
- Evaluate the range of Single Use Tourniquets available to the NHS on the NHS Supply Chain framework against those requirements.
- To provide a clinical statement of desired functions and properties that the clinicians in the NHS require of Single Use Tourniquets including the production of a features and benefits matrix based upon the evaluations undertaken.

It is clear from the evidence that Single Use Tourniquets featured in this report, are everyday healthcare consumables that are found in most clinics or ward settings and would certainly be items included in any stock list to set up a new clinical service. On that basis, the project was approved by the Clinical Reference Board, culminating in the production of this report for their approval in August 2018.

Based on data supplied by NHS Supply Chain, in the NHS nearly every Trust uses Single Use Tourniquets to a greater or lesser extent; across the NHS clinical staff use over 77,000 single use tourniquets daily to facilitate or aid venepuncture and peripheral cannulation. Timely and accurate diagnosis, monitoring and treatment of both primary and secondary care patients are vital. A poorly performing tourniquet can affect efficiency of this within these groups of patients by causing distorted blood test results (Asirvatham et al., 2013) or delayed venous access.

Intelligence about Single Use Tourniquets was gathered from a variety of sources to provide background information on the current evidence available to support the way in which the devices are designed and clinically evaluated.

Following this, clinical engagement sessions were held with the aim of identifying important clinical criteria for Single Use Tourniquets from frontline NHS clinicians. This information was used to develop clinical criteria for Single Use Tourniquets, against which all brands available from the national procurement provider were reviewed.

Findings from these clinical reviews are collated into a product assessment report to allow users to identify products and see how they performed against the agreed clinical criteria.

A more detailed description of the team and our pathway approach can be found in the NHS Clinical Evaluation Team operating manual which can be found on our website at: http://www.supplychain.nhs.uk/CET

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2. Clinical Context

2.1 Clinical Definition and Scope

A tourniquet can be defined as a constricting or compressing device used to control venous return from an extremity for a period of time. Pressure is applied circumferentially upon the skin and underlying tissues of a limb. This pressure is transferred to the walls of vessels, causing them to become temporarily occluded.

The expression ‘single-use’ means that the medical device is intended to be used on an individual patient during a single procedure and then discarded. It is not intended to be reprocessed after use.

From this information and in the context of this report a Single Use Tourniquet is a medical device used to temporarily distend the vein in a limb for the purpose of vessel engorgement. Peripheral cannulation or venepuncture can then be performed more easily than would be achieved without a tourniquet. It is for use in one such procedure on a single patient and then discarded.

Consideration was given to the possible inclusion of multi-patient tourniquet within this report. However, they have been excluded because whilst they have similar function and clinical use to the single use tourniquet which this report focuses on, they do not fulfil our definition of an everyday healthcare consumable. They are not purchased in very high volumes and arguably they are also not a consumable. The increasing volume of Single Use Tourniquets in use suggests that their role in decreasing the risks of cross contamination in clinical settings rings true for healthcare workers. This is especially seen in the acute care setting.

2.2 Clinical Impact

In the event that a single use tourniquet performs poorly, it is likely that the venepuncture or peripheral cannulation will have to be performed again, frustrating the timely delivery of care by clinicians throughout all healthcare sectors, as procedures may have to be carried out more times than would otherwise be necessary. This causes raised anxiety for patients plus increased pain and discomfort due to the cannulation procedures requiring sharp, needle-like devices to pierce the patient's tissue.

Also a poorly performing Single Use Tourniquet could cause distortion to pathology test results due to damage of any blood components taken during a procedure.

2.3 Product Technical Design

The Single Use Tourniquet is intrinsically a band of adequate breadth (typically 2-3cm) that is long enough to extend around the limb upon which a tourniquet effect is required. Some stretch whilst others are more rigid in design.

All have a means of securing them around the limb with adequate tightness to enable a tourniquet effect to be sustained. How this securement is achieved varies between devices with some requiring a simple 'knot' to be fashioned whilst others have a self-adhesive nature (referred to as '**band tourniquet'**). Others have designs similar in function to a trouser belt where a stud is in place and the band has holes which drop over this stud (a **button tourniquet**). Finally there are tourniquets where one end of the band is passed through a narrow aperture in or on the other end of the band. Fastening is achieved by the band being gripped within the narrow aperture (**pull through tourniquet**).

Tourniquets must also be easy and quick to release once tension around the limb is no longer required; it must be possible to do this single-handedly.

3. Pathway Methods

Independently collected, reviewed and collated evidence has been used as a basis to help form initial ideas on product use, performance and requirements. Alongside this, Suppliers submitted information and other data from the national procurement provider (NHS Supply Chain) were also reviewed. These contributed to the development of the initial questions which were used to illicit more detailed information from clinical colleagues from across the country. This information was then used to build our clinical criteria for Adult and Paediatric Single Use Tourniquets which were reviewed and approved by clinical staff. Following this, these criteria were then used to evaluate the existing Single Use Tourniquets (as available via NHS Supply Chain). Further detail about our Clinical Evaluation pathway is available on our website: http://www.supplychain.nhs.uk/CET.

3.1 Intelligence Gathering

In preparation of the criteria, account has been taken of academic and related clinical evidence, known guidance and nationally recognised publications as further described in this Section 3.

3.1.1. Literature search

A literature search has been undertaken to establish what current academic knowledge exists on the products for evaluation. It should be noted that the team have not conducted a comprehensive or systematic review of literature. However, the team have

interrogated the information to look for common themes which supported the development of the clinical criteria.

Initially, an evidence search was performed across the NICE service: https://www.evidence.nhs.uk/Search?q=single+use+tourniquet this returned 112 pieces of evidence however most concerned tourniquet use during surgical or trauma procedures and are not suitable to the focus of this project. The most appropriate return was Standards for Infusion Therapy Fourth edition (Royal College of Nursing, 2016) which highlighted best practice considerations in the use of single use tourniquet.

This publication notes two relevant pieces of information:

- The tourniquet should be made from latex free materials
- The design of the device should allow single-handed use, particularly to release tension as the tourniquet effect is no longer required.

No other useful insight into clinically desirable features for single use tourniquet could be found. There is however widespread commentary to highlight the benefits which a Single Use Tourniquet device should bring by way of reduction in cross contamination (Kane *et al,* 2011); especially in the acute setting. The use of a single-use device is advocated, although it is also widely acknowledged that multi-use devices are favoured in some settings, especially at home.

Search criteria	Databases searched
• Single use tourniquet • single-use tourniquet • tourniquet • infection • infection prevention • infection control • single use • band tourniquet • button tourniquet • pull-through tourniquet • pull through tourniquet	• NICE website Evidence search https://www.evidence.nhs.uk/ • NICE website journals and databases https://www.nice.org.uk/about/what-we-do/evidence-services/journals-and-databases (using Healthcare databases advanced search tool – AMED, EMBASE, HMIC, BNI, Medline, PsycInfo, CINAHL, HEALTH BUSINESS ELITE databases searched)
Date Range	Since 1975
Language	English

Figure 1 Literature and other sources searched – Single Use Tourniquets

3.1.2. National procurement provider specification

The specification as used by the NHS national procurement provider (NHS Supply Chain, 2016) gives little clarity around the clinical criteria required for single use tourniquet. It recognises that there are variations in how the devices are designed to operate and/or function as a tourniquet and attempts to categorise them in accordance with these variations. In essence the categorisation is not clinically meaningful, using manufacturer-led descriptions.

The framework contract is for the supply of single use tourniquet for adult and paediatric use. Products include but are not limited to;

- Band application type tourniquets;
- Single button fastening tourniquets;
- Multiple button fastening tourniquets; and
- Pull through tightening tourniquets.

There is a factual description of requirements such as being latex free in construction and packaging, minimum sizing is stipulated and the fact that products must be of a quick release design which can be operated with one hand. However, no clear evidence of this being tested could be located.

There is no clear statement of what (if any) international or other standards are applicable for this type of device. All devices offered must demonstrate compliance with Medical Device Directive 93/42/EEC. To that end, all suppliers certificate their single use tourniquet as a class 1 device. There is no evidence that the single use tourniquet as provided on the NHS Supply Chain framework have been tested for compliance against the requested requirements. It appears that a supplier just has to confirm that their product is suitable.

However, it is positive to note that all suppliers are notified that they must be able to support Trusts who wish to convert to the use of their products with clinically focussed training in the correct and appropriate use of their device. They must be willing and able to provide samples for evaluation to Trust users and also have a customer complaints response time of no more than five working days. Minimum stock holdings in England are advised to be four weeks.

3.1.3. National and international safety and quality standards

A review has also been taken to determine if any appropriate international and other standards are available for these devices (e.g. from the International Organisation for Standardisation (ISO), European Standards (EN) and/or British Standards Institution (BSI).

The NHS Supply Chain specification states; “All devices are required to be compliant with the Medical Devices Directive 93/42/EEC (as amended). All products must have their CE marking clearly evident on the product and/or packaging”

All devices reviewed as part of this report are compliant with devices being CE marked as Class 1. There were no other relevant standards noted for this group of products.

It is also noted that the Medical Device Directive 93/42/EEC as amended, is currently in transition to the new Medical Device Regulation MDR 2017/745

- All products classified as a Medical Device must have their CE marking clearly evident on the product and/or packaging and meet the requirements set out within the standard(s) related to labelling.

A review of the Medicines & Healthcare products Regulatory Agency (MHRA) alerts has also been performed. The MHRA website (https://www.gov.uk/drug-device-alerts) returned no product alerts relating to this product category against the search terms previously described (figure 1).

3.1.4. Product suppliers and manufacturers

All suppliers listed within the national framework have been invited to submit clinically relevant evidence of their own. Six suppliers provided a range of information from product brochures and other marketing collateral through to technical datasheets and evidence of compliance with standards. Some also provided data from sample clinical evaluations which clinical users had previously completed, albeit this testing was against unknown/unavailable criteria.

The information received was reviewed and considered when designing clinical criteria for use in this report. In general, the information supplied by the suppliers contributed little additional new intelligence to that gathered from the literature search; it did however support the contention that the NHS and commercial views were aligned regarding evidence.

3.1.5. Quality of evidence

Hierarchy of evidence

Levels of evidence sometimes referred to as hierarchy of evidence are assigned to studies based on the methodological quality of their design, validity, and applicability to patient care.

Hierarchy ranking	Description
Level 1	A systematic review of all relevant randomised controlled trials (RCT) or evidence-based clinical practice guidelines based on systematic reviews of RCT evidence
Level 2	Evidence from at least one well designed RCT
Level 3	Evidence from well-designed controlled trials; non-randomised, quasi experimental
Level 4	Well-designed case control & cohort studies
Level 5	Systematic reviews of descriptive and qualitative studies
Level 6	Evidence from a single, descriptive or qualitative study
Level 7	Evidence from the opinion of authorities and/or reports of expert committees

Figure 2 – Hierarchy ranking: Evidence based practice in nursing & healthcare: a guide to best practice" (B.M. Melnyk & E. Fineout-Overholt; 2005; p10)

The full review of evidence shows a real scarcity of high quality information. At best, the majority of evidence is seated at level 7 with the remainder at level 6.

3.2 Best Practice Guidelines

Whilst there was no Level 1 - Evidence-based clinical practice guidelines to be found, either nationally or internationally for the selection of, or use and application of Single Use Tourniquets. It should be noted that in the UK, the RCN standards for infusion therapy (2016) states the ideal tourniquet time should not exceed 60 seconds to avoid blood pooling at the venepuncture site or "haemoconcentration" and prevent false blood chemistry results when taking blood samples.

Furthermore, as stated in the standards single patient use tourniquet should be used where possible, but always with potential microbial cross contamination and that tourniquets should be of a single-handed, quick-release design.

Also, as stated in the standard, Tourniquets are to remain tightened for the shortest possible time to enable the procedure in-hand to be completed and then the restriction released to prevent circulatory impairment (RCN 2016). This is also in accordance with the World Health Organisation "WHO guidelines on drawing blood: best practices in phlebotomy" (WHO, 2010) which state that 2 minutes is the maximum time that a tourniquet should remain in place for and that it should be released before a needle is withdrawn and ideally as soon as blood flow is established.

4. NHS Clinical Engagement

In order to develop a shared vision of what is required from a Single Use Tourniquet several methods of engagement were used. These events were used to formulate thoughts, ideas and needs from different clinicians familiar with these products; identifying their own expectation(s) of the product for their given patient group, and intended patient outcome, being used in a variety of differing clinical environments.

Mapping exercises were undertaken to determine personnel that should be involved and/or consulted regarding these products. This stage of the report focused on clinical staff that are:

a) Recognised as subject experts, and/or

b) Recognised regular users of the devices in their clinical practice.

Various methods of engagement were undertaken to ensure these clinical opinions were robust, and validated by peers from around the country, options of engagement included:

- Regional and national face-to-face events with NHS clinical colleagues
- Focussed visits to NHS clinicians regional and national face-to-face events
- Website subscription
- Attendance at specialist network events
- Attendance at NHS Business Services Authority events
- Web-based surveys and e-engagement tools (e.g. email, WebEx, portal based surveys)

4.1 Clinical Conversations

To build a broad caucus of attendees at our events letters were sent inviting Trusts to nominate clinical colleagues to attend a series of regional group events. These were hosted by NHS organisations throughout England to enable the widest possible access for all invited. This ensured to set aside any pre-existing regional variance.

Details of the information gathered were recorded online or in workbook form from the open events, transcribed and then used together with the evidence gathered at the previous project stage to inform a list of clinical criteria against which the product has been tested.

Examples of the evidence gathering criteria questions posed are:

- How important is it that the use of a Single Use Tourniquet is intuitive?
- How important is the safe removal of a Single Use Tourniquet? e.g. flicking effect, damage to patient skin
- What would make a “perfect” product if you could design your own based on your clinical experience and knowledge? What features would it have?

Discussion and input was captured from these and other questions. NHS clinician colleagues were asked to score the importance of each criteria, with 0 as having no important and 10 as having critical importance.

4.2 Clinical Criteria

The data received from all the NHS clinical conversation events, alongside the data collected from individual experts, was assimilated into a series of clinical criteria.

A clinical criterion is defined for the purposes of this report as a principle or standard by which products may be evaluated. It is a statement which describes the clinician's requirements for the product.

The proposed criteria were validated by workshop attendees and all other clinical experts engaged in the development process. In addition, other clinical experts who are likely to add further useful insight were also included, leading to the finalised clinical criteria listed below and published online at http://www.supplychain.nhs.uk/CET.

4.2.1. Criteria explanation- Inclusion - Single Use Tourniquets (SUT)

To enhance the readers understanding of this report, and to provide value to the results, an explanation for the defined clinical criteria is captured.

CLINICAL CRITERIA	
Packaging	**Rationale**
The product type, re-order detail, lot number and expiry date is simple for staff to identify on the external packaging with clear indications for use.	Ease of product identification, reduces errors in ordering of correct product, and clinical time in identifying correct product for procedure
The external packaging is of a robust construction for storage and simple to access for removal of products. It meets infection prevention and control (IP&C) guidance.	Single use tourniquets are used in high volume, as such clinical areas will require adequate stock of items. These products in some situations will be stacked in storage/treatment/clinic rooms, robustness enables effective storage whilst reducing product damage or risk to clinicians working in the environment
Opening	**Rationale**
Individual SUTs are easily dispensed (or as many as required to perform the task identified)	Ease of product access and dispensation reduces clinical time in accessing product, even dispensing reduces potential waste of excess product being acquired, reducing wastage

CLINICAL CRITERIA	
Clinical Use	**Rationale**
The SUT after use is removed safely; removal must be a single handed procedure resulting in no harm to individuals	Ease of removal reduces risk of injury to patient and or clinician, as SUT may be removed prior to needle extraction this needs to be undertaken with one hand, as the clinicians other hand will be required to stabilise/secure the cannula/needle
The use of the SUT should be intuitive. This should reflect the manufacturers recommended technique for use.	Ease of use of the SUT reduces clinical time for procedure, this may also reduce patient pain/anxiety, and increase patient concordance on health professional advice
The SUT easily gives adequate tourniquet effect	The tourniquet needs to provide sufficient tension to enable reduction in blood flow to increase volume of blood in vessel aiding needle insertion, failure to achieve this will reduce product efficacy
The tourniquet should be fully adjustable for varying sizes of limbs.	Patients vary in size and shape, the location on the body will also vary that the tourniquets are applied too, as such the product needs to be suitable to fit a range of differing limbs and patient groups to be effective
Disposal	**Rationale**
The SUT can be disposed of simply in the clinical environment in accordance with local guidelines.	Ease of product disposal enables the procedure to be concluded most efficiently and reduces the potential for poor waste management/disposal

Figure 3- Defining the clinical criteria for **Single Use Tourniquets**

4.2.2. Criteria explanation- Exclusion (Single Use Tourniquets)

To capture true representation of clinical opinion, this report also aims to capture criteria that were raised, but not included as final criteria when the evaluations took place.

CLINICAL CRITERIA	
Clinical Use	**Rationale**
The risk of a product becoming a ligature	It was felt that all “elasticated” bands allowed for the cutting of a tourniquet, with a lower risk of further harming the patient than more rigid bands, if it had been used as a ligature
Tensile strength of product	SUT need to have sufficient tensile strength to enable effective blood flow reduction to the limb, however actual forces were deemed unnecessary, as feedback from phlebotomists highlighted that no products in their experience broke/snapped on application
Trauma to skin on removal	Whilst most clinicians will recognise the risk of skin trauma on removal of the SUT. Factors affecting this outcome are wide and varied and not all directly related to the product, such considerations as skin integrity, tissue density, limb location, tension of tourniquet, clinician technique provided too many variables to form a considered clinical opinion of the product itself

Figure 4- Defining the clinical criteria for **Single Use Tourniquets**

4.3 Product Evaluation

Evaluation methodologies are defined for each and every clinical criterion. They reflect a simulated clinical environment.

Wherever possible, products were supplied in a ‘ward ready’ unit of issue as would be found by clinical staff on accessing a store area in their clinical environment. Where this has not been possible it was acknowledged as part of the product assessment results matrix.

The tests were formulated to move through the key aspects of product use using the NHS Clinical Evaluation Team product cycle:

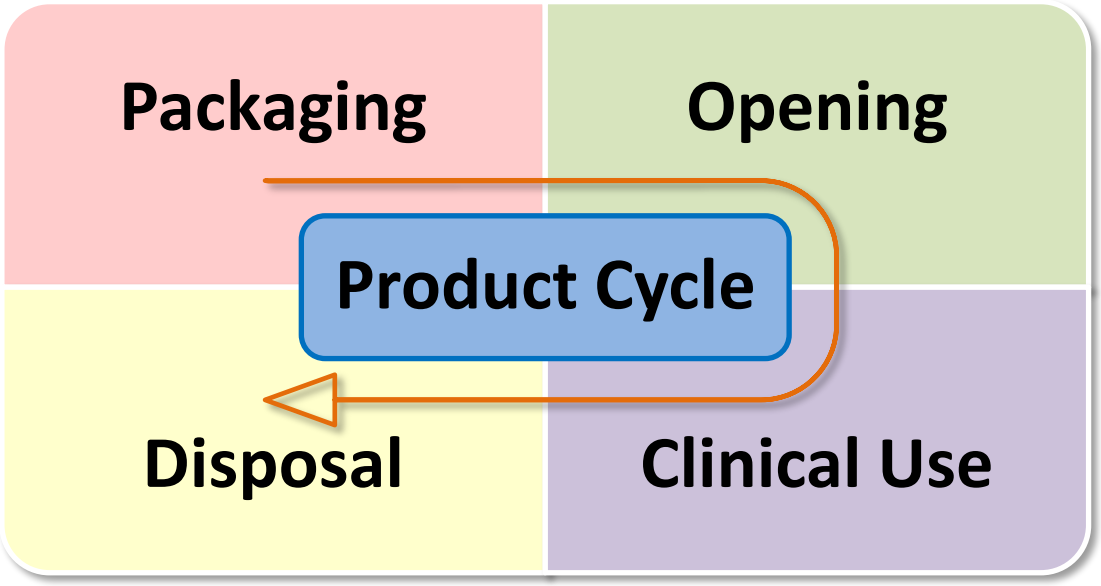

Figure 5 – NHS Clinical Evaluation Team Product Cycle

The evaluation product was ordered and picked from the NHS distribution centres. Products evaluated have been stored post evaluation for a period of three months after publication of this review.

Practicing NHS clinical staff were invited to review the products in accordance with the developed criteria. It was not possible to 'blind' the evaluations; in the sense that the evaluators were aware of the product brand; however, the product to be evaluated was independently picked in accordance with the product selection criteria in Section 2 and prepared for evaluation by colleagues who were not otherwise involved in the process.

Each clinical evaluator entered data independently and without inter-rater comparison into their own workbook. These were then collated, reviewed and summarised by the clinical specialist lead for the project.

As part of the evaluation preparation, each evaluator was given a more detailed and product specific definition for each of the scores

The defined criteria either prompted a 'yes/no' answer, which has been represented with a √ / X, or a score was given between 0 and 3, or 0 and 2 as follows:

Score	Meaning
0	This does not meet the criteria
1	This partially meets the criteria
2	This meets the criteria
3	This exceeds the criteria

Figure 5 – NHS Clinical Evaluation Team scoring methods

These numerical scores across all evaluators were totalled and a mean value determined. This mean value has then been converted into a star rating (see matrix below).

The mean values convert to a star rating in accordance with the following table:

Point scored			Star value	
0	**to**	**0.99**	**0**	**stars**
1	**to**	**1.24**	**1**	**Star**
1.25	**to**	**1.74**	**1.5**	**Stars**
1.75	**to**	**2.24**	**2**	**Stars**
2.25	**to**	**2.74**	**2.5**	**Stars**
2.75	**to**	**3.00**	**3**	**Stars**

Figure 6 – conversion of mean scores to star rating

The above scoring mechanisms will not be followed where the criterion identified by the CET cannot reasonably exceed expectations. For example, if the clinical criterion was whether the removal of an adhesive dressing was atraumatic and with the individual patient reporting no pain or skin damage, then it cannot reasonably be expected that a product could exceed that criteria. Therefore, in such circumstances, the relevant criteria will be based on the scoring regime of:

a. If the criterion is a Yes/No response, the responses will be converted into aggregate percentages and then star ratings as follows:

Percentages (Yes)	Star value
0% to 24.99%	**0 star**
25% to 49.99%	**1 star**
50% to 74.99%	**1.5 stars**
75% to 100%	**2 stars**

Figure 7 – Percentage scores to star rating

b. For other subjective criteria, the responses will be converted into mean scores and then star ratings as follows:

Point scored	Star value
0.00 to 0.99	**0 star**
1.00 to 1.24	**1 star**
1.24 to 1.74	**1.5 stars**
1.75 to 2.00	**2 stars**

Figure 8 – Points scores to star rating

On the basis that clinical evaluators will be providing scores as follows:

- 0 stars – Does not meet the criteria
- 1 star – Partially meets the criteria
- 2 stars – Meets the criteria

All supplemental products used in the evaluation are in use in the NHS and available through the national catalogue (e.g. clinical waste containers, gloves, cannula, phlebotomy needles).

Evaluators were also encouraged to record comments where they felt it necessary to provide rationale for their scoring and answers.

The results obtained have been validated by the NHS Clinical Evaluation Team moderation committee for consistency of scoring and interpretation. These results are presented in the product assessment reports herein.

5. Product Assessment Results

The following product assessment results pages show the tested clinical criteria listed vertically on the left-hand side of the page with the tested device found horizontally across the top of the matrix. The accompanying photographs were taken during evaluation. These photographs are of sample products provided for evaluation. Lot numbers were recorded and samples have been retained in storage following the completion of evaluation.

The products represented are the range of suppliers and brands available through the NHS national procurement provider's framework (June 2017).

Results can be seen within the product matrix, demonstrated by the number of stars awarded and also, in brackets, the actual mean score achieved across all evaluations.

There are two sets of information; the first pages are a series of supplier product pages showing the individual supplier's range and how they performed against the clinical criteria. There then follows comparator pages that allow the reader to review similar products (i.e. so called button tourniquet or band tourniquet) against the clinical criteria. The product pages are designed to allow comparison of products against each criterion and are presented as such.

SINGLE USE TOURNIQUET (SUT)
– Supplier Pages

NHS Clinical Evaluation Team
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	ASEP HEALTHCARE	
		
BRAND	**Tournistrip**	**Tournikidz**
MPC	**5490LHT236/ASEP100**	**TSKKKIDZ 412.75 DP/ASEP100**
TYPE	**Pull through**	**Paediatric**

CLINICAL CRITERIA	Score	Score
The product type, re-order detail, lot number and expiry date is simple for staff to identify on the external packaging with clear indications for use.	★★☆ 2.10	★★½ 2.40
The external packaging is of a robust construction for storage and simple to access for removal of products. It meets infection prevention and control (IP&C) guidance.	★★½ 2.60	★★½ 2.60
Individual SUTs are easily dispensed (or as many as required to perform the task identified)	★★½ 2.50	★★½ 2.40
The SUT after use is removed safely; removal must be a single handed procedure resulting in no harm to individuals	★★★ 3.00	★★★ 3.00
The use of the SUT should be intuitive. This should reflect the manufacturers recommended technique for use.	★★☆ 2.10	★★½ 2.40
The SUT easily gives adequate tourniquet effect	★★★ 3.00	★★★ 3.00
The tourniquet should be fully adjustable for varying sizes of limbs.	★★★ 2.80	★★☆ 2.00
The SUT can be disposed of simply in the clinical environment in accordance with local guidelines.	★★** 2.00	★★** 2.00

** maximum number of 2 stars attainable

SINGLE USE TOURNIQUET (SUT)

– Supplier Pages

NHS Clinical Evaluation Team
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	ISKUS HEALTH			
				
BRAND	**Tournistrip**	**Tournistrip**	**Tournistrip pocket pack**	**Tournistrip**
MPC	**549OLHT236/IH200**	**549OLHT236/IH50**	**549OLHT236/IH20**	**294C/IHPaed100**
TYPE	**Pull through**	**Pull through**	**Pull through**	**Paediatric**

CLINICAL CRITERIA	Score	Score	Score	Score
The product type, re-order detail, lot number and expiry date is simple for staff to identify on the external packaging with clear indications for use.	★★½ 2.60	★★½ 2.60	★★½ 2.50	★★☆ 2.00
The external packaging is of a robust construction for storage and simple to access for removal of products. It meets infection prevention and control (IP&C) guidance.	★★☆ 2.15	★★☆ 2.15	★★☆ 2.15	★★☆ 1.75
Individual SUTs are easily dispensed (or as many as required to perform the task identified)	★★★ 3.00	★★★ 3.00	★★★ 3.00	★★☆ 1.90
The SUT after use is removed safely; removal must be a single handed procedure resulting in no harm to individuals	★★★ 3.00	★★★ 3.00	★★★ 3.00	★★★ 3.00
The use of the SUT should be intuitive. This should reflect the manufacturers recommended technique for use.	★★☆ 2.10	★★☆ 2.10	★★☆ 2.10	★★½ 2.30
The SUT easily gives adequate tourniquet effect	★★★ 3.00	★★★ 3.00	★★★ 3.00	★★★ 3.00
The tourniquet should be fully adjustable for varying sizes of limbs.	★★★ 2.80	★★★ 2.80	★★★ 2.80	★★☆ 2.00
The SUT can be disposed of simply in the clinical environment in accordance with local guidelines.	★★** 2.00	★★** 2.00	★★** 2.00	★★** 2.00

** maximum number of 2 stars attainable

SINGLE USE TOURNIQUET (SUT)

– Supplier Pages

NHS Clinical Evaluation Team
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	MEDICARE PRODUCTS LTD		
			
BRAND	**T-Band**	**T-Band**	**T-Band**
MPC	**BB100**	**SB100**	**TBAN25**
TYPE	**Button type**	**Band**	**Band**

CLINICAL CRITERIA	Score	Score	Score
The product type, re-order detail, lot number and expiry date is simple for staff to identify on the external packaging with clear indications for use.	☆☆☆ 0.90	★½☆ 1.40	☆☆☆ 0.80
The external packaging is of a robust construction for storage and simple to access for removal of products. It meets infection prevention and control (IP&C) guidance.	☆☆☆ 0.84	★½☆ 1.30	★☆☆ 1.10
Individual SUTs are easily dispensed (or as many as required to perform the task identified)	★★★ 3.00	★★☆ 2.00	★★★ 3.00
The SUT after use is removed safely; removal must be a single handed procedure resulting in no harm to individuals	★½☆ 1.61	★★★ 3.00	★★★ 3.00
The use of the SUT should be intuitive. This should reflect the manufacturers recommended technique for use.	★½☆ 1.73	★½☆ 1.40	★½☆ 1.40
The SUT easily gives adequate tourniquet effect	★★★ 2.95	★★½ 2.70	★★½ 2.70
The tourniquet should be fully adjustable for varying sizes of limbs.	★★★ 2.77	★★☆ 2.00	★★☆ 2.00
The SUT can be disposed of simply in the clinical environment in accordance with local guidelines.	★★** 2.00	★★** 2.00	★★** 2.00

** maximum number of 2 stars attainable

SINGLE USE TOURNIQUET (SUT)

– Supplier Pages

NHS Clinical Evaluation Team
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	MEDICINA	
		
BRAND	**Medicina disposable tourniquet**	**paediatric disposable tourniquet**
MPC	**DT02**	**DT03**
TYPE	**Button type**	**Paediatric**

CLINICAL CRITERIA	Score	Score
The product type, re-order detail, lot number and expiry date is simple for staff to identify on the external packaging with clear indications for use.	★★½ 2.30	★★½ 2.30
The external packaging is of a robust construction for storage and simple to access for removal of products. It meets infection prevention and control (IP&C) guidance.	★★☆ 1.61	★★☆ 1.61
Individual SUTs are easily dispensed (or as many as required to perform the task identified)	★★½ 2.50	★★★ 3.00
The SUT after use is removed safely; removal must be a single handed procedure resulting in no harm to individuals	★★½ 2.73	★★★ 3.00
The use of the SUT should be intuitive. This should reflect the manufacturers recommended technique for use.	★★½ 2.31	★★★ 2.80
The SUT easily gives adequate tourniquet effect	★★★ 3.00	★★★ 3.00
The tourniquet should be fully adjustable for varying sizes of limbs.	★★★ 3.00	★★☆ 2.00
The SUT can be disposed of simply in the clinical environment in accordance with local guidelines.	★★** 2.00	★★** 2.00

** maximum number of 2 stars attainable

SINGLE USE TOURNIQUET (SUT)

– Supplier Pages

NHS Clinical Evaluation Team
by the NHS, for the NHS

	MEDLINE
	
BRAND	Medline Tourniquet
MPC	DYNDE75020A
TYPE	Band

CLINICAL CRITERIA	Score
The product type, re-order detail, lot number and expiry date is simple for staff to identify on the external packaging with clear indications for use.	★½☆ 1.50
The external packaging is of a robust construction for storage and simple to access for removal of products. It meets infection prevention and control (IP&C) guidance.	★½☆ 1.60
Individual SUTs are easily dispensed (or as many as required to perform the task identified)	★½☆ 1.50
The SUT after use is removed safely; removal must be a single handed procedure resulting in no harm to individuals	★★★ 3.00
The use of the SUT should be intuitive. This should reflect the manufacturers recommended technique for use.	★½☆ 1.35
The SUT easily gives adequate tourniquet effect	★★½ 2.60
The tourniquet should be fully adjustable for varying sizes of limbs.	★★☆ 2.00
The SUT can be disposed of simply in the clinical environment in accordance with local guidelines.	★★** 2.00

** maximum number of 2 stars attainable

SINGLE USE TOURNIQUET (SUT)

– Supplier Pages

NHS Clinical Evaluation Team
by the NHS, for the NHS

	RICHARDSON HEALTHCARE				
					
BRAND	**V-Loc**	**Tourni-K**	**V-Grip**	**Tourni-Band**	**Veneloc**
MPC	**501110**	**501100**	**501125**	**501150**	**501000**
TYPE	**Button type**	**Pull through**	**Band**	**Band**	**Band with locking clamp**

CLINICAL CRITERIA	Score	Score	Score	Score	Score
The product type, re-order detail, lot number and expiry date is simple for staff to identify on the external packaging with clear indications for use.	★★★ 3.00	★★½ 2.70	★☆☆ 1.20	★★☆ 2.10	★★½ 2.50
The external packaging is of a robust construction for storage and simple to access for removal of products. It meets infection prevention and control (IP&C) guidance.	★½☆ 1.70	★½☆ 1.55	★★☆ 2.00	★★½ 2.60	★★½ 2.30
Individual SUTs are easily dispensed (or as many as required to perform the task identified)	★★★ 3.00	★★★ 3.00	★★½ 2.40	★★★ 3.00	★★★ 3.00
The SUT after use is removed safely; removal must be a single handed procedure resulting in no harm to individuals	★★★ 3.00	★★★ 3.00	★★★ 3.00	★★★ 3.00	★★★ 3.00
The use of the SUT should be intuitive. This should reflect the manufacturers recommended technique for use.	★★½ 2.50	★★☆ 2.10	★½☆ 1.40	★★½ 2.40	★★★ 2.80
The SUT easily gives adequate tourniquet effect	★★★ 3.00	★★★ 3.00	★★½ 2.50	★★★ 3.00	★★★ 3.00
The tourniquet should be fully adjustable for varying sizes of limbs.	★★★ 3.00	★★★ 3.00	★★☆ 2.00	★★★ 3.00	★★☆ 2.00
The SUT can be disposed of simply in the clinical environment in accordance with local guidelines.	★★** 2.00	★★** 2.00	★★** 2.00	★★** 2.00	★★** 2.00

** maximum number of 2 stars attainable

SINGLE USE TOURNIQUET (SUT)

– Supplier Pages

NHS Clinical Evaluation Team
by the NHS, for the NHS

	ROBINSON HEALTHCARE
	
BRAND	**SUT (adult)**
MPC	**8441**
TYPE	**Band**

CLINICAL CRITERIA	Score
The product type, re-order detail, lot number and expiry date is simple for staff to identify on the external packaging with clear indications for use.	★★☆ 2.10
The external packaging is of a robust construction for storage and simple to access for removal of products. It meets infection prevention and control (IP&C) guidance.	★★½ 1.30
Individual SUTs are easily dispensed (or as many as required to perform the task identified)	★★☆ 2.00
The SUT after use is removed safely; removal must be a single handed procedure resulting in no harm to individuals	★★★ 3.00
The use of the SUT should be intuitive. This should reflect the manufacturers recommended technique for use.	★★½ 1.60
The SUT easily gives adequate tourniquet effect	★★½ 2.60
The tourniquet should be fully adjustable for varying sizes of limbs.	★★☆ 2.00
The SUT can be disposed of simply in the clinical environment in accordance with local guidelines.	★★** 2.00

** maximum number of 2 stars attainable

SINGLE USE TOURNIQUET (SUT)
– Supplier Pages

NHS Clinical Evaluation Team
by the NHS, for the NHS

	TIMESCO	
		
BRAND	**Tournibutton**	**Tourniband**
MPC	**D80.200**	**D80.100**
TYPE	**button type**	**Band**
CLINICAL CRITERIA	**Score**	**Score**
The product type, re-order detail, lot number and expiry date is simple for staff to identify on the external packaging with clear indications for use.	★★½ 2.70	★☆☆ 1.20
The external packaging is of a robust construction for storage and simple to access for removal of products. It meets infection prevention and control (IP&C) guidance.	★★☆ 1.80	★★☆ 1.80
Individual SUTs are easily dispensed (or as many as required to perform the task identified)	★★★ 3.00	★★½ 2.35
The SUT after use is removed safely; removal must be a single handed procedure resulting in no harm to individuals	★★☆ 2.00	★★★ 3.00
The use of the SUT should be intuitive. This should reflect the manufacturers recommended technique for use.	★★½ 2.45	★★☆ 2.00
The SUT easily gives adequate tourniquet effect	★★★ 3.00	★★½ 2.60
The tourniquet should be fully adjustable for varying sizes of limbs.	★★★ 3.00	★★☆ 2.00
The SUT can be disposed of simply in the clinical environment in accordance with local guidelines.	★★** 2.00	★★** 2.00

** maximum number of 2 stars attainable

SINGLE USE TOURNIQUET (SUT)

– Supplier Pages

NHS Clinical Evaluation Team
by the NHS, for the NHS

	VYGON				
					
BRAND	**Vene-K**	**V-Green**	**V-Band**	**V-Band**	**Paediatric Vene-K**
MPC	**580501**	**VGH580503**	**VBG580505**	**VGH580504**	**580502**
TYPE	**Button type**	**Pull through**	**Band**	**Band**	**Paediatric**

CLINICAL CRITERIA	Score	Score	Score	Score	Score
The product type, re-order detail, lot number and expiry date is simple for staff to identify on the external packaging with clear indications for use.	★★½ 2.65	★★☆ 2.00	★★☆ 2.10	★★☆ 2.10	★★½ 2.65
The external packaging is of a robust construction for storage and simple to access for removal of products. It meets infection prevention and control (IP&C) guidance.	★★☆ 1.80	★★☆ 1.90	★★☆ 1.80	★★☆ 2.20	★★☆ 1.80
Individual SUTs are easily dispensed (or as many as required to perform the task identified)	★★★ 3.00	★★★ 3.00	★★½ 2.30	★★½ 2.25	★★★ 3.00
The SUT after use is removed safely; removal must be a single handed procedure resulting in no harm to individuals	★★½ 2.73	★★★ 3.00	★★★ 3.00	★★★ 3.00	★★★ 3.00
The use of the SUT should be intuitive. This should reflect the manufacturers recommended technique for use.	★★½ 2.60	★★½ 2.25	★★☆ 1.85	★★☆ 1.90	★★½ 2.60
The SUT easily gives adequate tourniquet effect	★★★ 2.98	★★★ 3.00	★★½ 2.60	★★½ 2.60	★★★ 3.00
The tourniquet should be fully adjustable for varying sizes of limbs.	★★★ 3.00	★★★ 3.00	★★☆ 2.00	★★☆ 2.00	★★☆ 2.00
The SUT can be disposed of simply in the clinical environment in accordance with local guidelines.	★★** 2.00	★★** 2.00	★★** 2.00	★★** 2.00	★★** 2.00

** maximum number of 2 stars attainable

SINGLE USE TOURNIQUET (SUT)

– Band Type (page 1)

NHS Clinical Evaluation Team
by the NHS, for the NHS

	MEDICARE PRODUCTS LTD		RICHARDSON HEALTHCARE		
					
BRAND	**T-Band**	**T-Band**	**V-Grip**	**Tourni-Band**	**Veneloc (Band with locking clamp)**
MPC	**SB100**	**TBAN25**	**501125**	**501150**	**501000**

CLINICAL CRITERIA	Score	Score	Score	Score	Score
Packaging					
The product type, re-order detail, lot number and expiry date is simple for staff to identify on the external packaging with clear indications for use.	★★☆☆ 1.40	☆☆☆ 0.80	★☆☆☆ 1.20	★★☆☆ 2.10	★★★☆ 2.50
The external packaging is of a robust construction for storage and simple to access for removal of products. It meets infection prevention and control (IP&C) guidance.	★★☆☆ 1.30	★☆☆☆ 1.10	★★☆☆ 2.00	★★★☆ 2.60	★★★☆ 2.30
Opening					
Individual SUTs are easily dispensed (or as many as required to perform the task identified)	★★☆☆ 2.00	★★★☆ 3.00	★★★☆ 2.40	★★★☆ 3.00	★★★☆ 3.00
Clinical in Use					
The SUT after use is removed safely; removal must be a single handed procedure resulting in no harm to individuals	★★★☆ 3.00	★★★☆ 3.00	★★★☆ 3.00	★★★☆ 3.00	★★★☆ 3.00
The use of the SUT should be intuitive. This should reflect the manufacturers recommended technique for use.	★★☆☆ 1.40	★★☆☆ 1.40	★★☆☆ 1.40	★★★☆ 2.40	★★★☆ 2.80
The SUT easily gives adequate tourniquet effect	★★★☆ 2.70	★★★☆ 2.70	★★★☆ 2.50	★★★☆ 3.00	★★★☆ 3.00
The tourniquet should be fully adjustable for varying sizes of limbs.	★★☆☆ 2.00	★★☆☆ 2.00	★★☆☆ 2.00	★★★☆ 3.00	★★☆☆ 2.00
Disposal					
The SUT can be disposed of simply in the clinical environment in accordance with local guidelines.	★★** 2.00	★★** 2.00	★★** 2.00	★★** 2.00	★★** 2.00

** maximum number of 2 stars attainable

SINGLE USE TOURNIQUET (SUT)

– Band Type (page 2)

NHS Clinical Evaluation Team
by the NHS, for the NHS

	MEDLINE	ROBINSON HEALTHCARE	TIMESCO	VYGON	
					
BRAND	**Medline Tourniquet**	**SUT (adult)**	**Tourniband**	**V-Band**	**V-Band**
MPC	**DYNDE75020A**	**8441**	**D80.100**	**VBG580505**	**VGH580504**

CLINICAL CRITERIA	Score	Score	Score	Score	Score
Packaging					
The product type, re-order detail, lot number and expiry date is simple for staff to identify on the external packaging with clear indications for use.	★★☆☆ 1.50	★★★☆ 2.10	★☆☆☆ 1.20	★★★☆ 2.10	★★★☆ 2.10
The external packaging is of a robust construction for storage and simple to access for removal of products. It meets infection prevention and control (IP&C) guidance.	★★☆☆ 1.60	★★☆☆ 1.30	★★★☆ 1.80	★★★☆ 1.80	★★★☆ 2.20
Opening					
Individual SUTs are easily dispensed (or as many as required to perform the task identified)	★★☆☆ 1.50	★★★☆ 2.00	★★★½ 2.35	★★★½ 2.30	★★★½ 2.25
Clinical in Use					
The SUT after use is removed safely; removal must be a single handed procedure resulting in no harm to individuals	★★★ 3.00	★★★ 3.00	★★★ 3.00	★★★ 3.00	★★★ 3.00
The use of the SUT should be intuitive. This should reflect the manufacturers recommended technique for use.	★★☆☆ 1.35	★★☆☆ 1.60	★★★☆ 2.00	★★★☆ 1.85	★★★☆ 1.90
The SUT easily gives adequate tourniquet effect	★★★½ 2.60	★★★½ 2.60	★★★½ 2.60	★★★½ 2.60	★★★½ 2.60
The tourniquet should be fully adjustable for varying sizes of limbs.	★★★☆ 2.00	★★★☆ 2.00	★★★☆ 2.00	★★★☆ 2.00	★★★☆ 2.00
Disposal					
The SUT can be disposed of simply in the clinical environment in accordance with local guidelines.	★★** 2.00	★★** 2.00	★★** 2.00	★★** 2.00	★★** 2.00

** maximum number of 2 stars attainable

SINGLE USE TOURNIQUET (SUT)

– Button Type

NHS Clinical Evaluation Team
by the NHS, for the NHS

	MEDICARE PRODUCTS LTD	MEDICINA	RICHARDSON HEALTHCARE	TIMESCO	VYGON
					
BRAND	**T-Band**	**Medicina disposable tourniquet**	**V-Loc**	**Tournibutton**	**Vene-K**
MPC	**BB100**	**DT02**	**501110**	**D80.200**	**580501**

CLINICAL CRITERIA	Score	Score	Score	Score	Score
Packaging					
The product type, re-order detail, lot number and expiry date is simple for staff to identify on the external packaging with clear indications for use.	★☆☆ 0.90	★★½ 2.30	★★★ 3.00	★★½ 2.70	★★★ 2.65
The external packaging is of a robust construction for storage and simple to access for removal of products. It meets infection prevention and control (IP&C) guidance.	★☆☆ 0.84	★½☆ 1.61	★½☆ 1.70	★★☆ 1.80	★★☆ 1.80
Opening					
Individual SUTs are easily dispensed (or as many as required to perform the task identified)	★★★ 3.00	★★½ 2.50	★★★ 3.00	★★★ 3.00	★★★ 3.00
Clinical in Use					
The SUT after use is removed safely; removal must be a single handed procedure resulting in no harm to individuals	★½☆ 1.61	★★½ 2.73	★★★ 3.00	★★☆ 2.00	★★★ 2.73
The use of the SUT should be intuitive. This should reflect the manufacturers recommended technique for use.	★½☆ 1.73	★★½ 2.31	★★½ 2.50	★★½ 2.45	★★★ 2.60
The SUT easily gives adequate tourniquet effect	★★★ 2.95	★★★ 3.00	★★★ 3.00	★★★ 3.00	★★★ 2.98
The tourniquet should be fully adjustable for varying sizes of limbs.	★★★ 2.77	★★★ 3.00	★★★ 3.00	★★★ 3.00	★★★ 3.00
Disposal					
The SUT can be disposed of simply in the clinical environment in accordance with local guidelines.	★★** 2.00	★★** 2.00	★★** 2.00	★★** 2.00	★★** 2.00

** maximum number of 2 stars attainable

	ASEP HEALTHCARE	ISKUS HEALTH			RICHARDSON HEALTHCARE	VYGON
SINGLE USE TOURNIQUET (SUT) **– Pull Through Type** NHS Clinical Evaluation Team by the NHS, for the NHS						
BRAND	**Tournistrip**	**Tournistrip**	**Tournistrip**	**Tournistrip pocket pack**	**Tourni-K**	**V-Green**
MPC	**5490LHT236/ASEP100**	**549OLHT236/IH200**	**549OLHT236/IH50**	**549OLHT236/IH20**	**501100**	**VGH580503**

CLINICAL CRITERIA	Score	Score	Score	Score	Score	Score
Packaging						
The product type, re-order detail, lot number and expiry date is simple for staff to identify on the external packaging with clear indications for use.	★★☆ 2.10	★★½ 2.60	★★½ 2.60	★★½ 2.50	★★½ 2.70	★★☆ 2.00
The external packaging is of a robust construction for storage and simple to access for removal of products. It meets infection prevention and control (IP&C) guidance.	★★½ 2.60	★★☆ 2.15	★★☆ 2.15	★★☆ 2.15	★½☆ 1.55	★★☆ 1.90
Opening						
Individual SUTs are easily dispensed (or as many as required to perform the task identified)	★★½ 2.50	★★★ 3.00	★★★ 3.00	★★★ 3.00	★★★ 3.00	★★★ 3.00
Clinical in Use						
The SUT after use is removed safely; removal must be a single handed procedure resulting in no harm to individuals	★★★ 3.00	★★★ 3.00	★★★ 3.00	★★★ 3.00	★★★ 3.00	★★★ 3.00
The use of the SUT should be intuitive. This should reflect the manufacturers recommended technique for use.	★★☆ 2.10	★★☆ 2.10	★★☆ 2.10	★★☆ 2.10	★★☆ 2.10	★★½ 2.25
The SUT easily gives adequate tourniquet effect	★★★ 3.00	★★★ 3.00	★★★ 3.00	★★★ 3.00	★★★ 3.00	★★★ 3.00
The tourniquet should be fully adjustable for varying sizes of limbs.	★★★ 2.80	★★★ 2.80	★★★ 2.80	★★★ 2.80	★★★ 3.00	★★★ 3.00
Disposal						
The SUT can be disposed of simply in the clinical environment in accordance with local guidelines.	★★** 2.00	★★** 2.00	★★** 2.00	★★** 2.00	★★** 2.00	★★** 2.00

** maximum number of 2 stars attainable

	ASEP HEALTHCARE	ISKUS HEALTH	MEDICINA	VYGON
SINGLE USE TOURNIQUET (SUT) – Paediatric Type NHS Clinical Evaluation Team by the NHS, for the NHS				
BRAND	**Tournikidz**	**Tournistrip**	**paediatric disposable tourniquet**	**Paediatric Vene-K**
MPC	**TSKKKIDZ 412.75 DP/ ASEP100**	**294C/IHPaed100**	**DT03**	**580502**

CLINICAL CRITERIA	Score	Score	Score	Score
Packaging				
The product type, re-order detail, lot number and expiry date is simple for staff to identify on the external packaging with clear indications for use.	★★½ 2.40	★★☆ 2.00	★★½ 2.30	★★½ 2.65
The external packaging is of a robust construction for storage and simple to access for removal of products. It meets infection prevention and control (IP&C) guidance.	★★½ 2.60	★★☆ 1.75	★½☆ 1.61	★★☆ 1.80
Opening				
Individual SUTs are easily dispensed (or as many as required to perform the task identified)	★★½ 2.40	★★☆ 1.90	★★★ 3.00	★★★ 3.00
Clinical in Use				
The SUT after use is removed safely; removal must be a single handed procedure resulting in no harm to individuals	★★★ 3.00	★★★ 3.00	★★★ 3.00	★★★ 3.00
The use of the SUT should be intuitive. This should reflect the manufacturers recommended technique for use.	★★½ 2.40	★★½ 2.30	★★★ 2.80	★★½ 2.60
The SUT easily gives adequate tourniquet effect	★★★ 3.00	★★★ 3.00	★★★ 3.00	★★★ 3.00
The tourniquet should be fully adjustable for varying sizes of limbs.	★★☆ 2.00	★★☆ 2.00	★★☆ 2.00	★★☆ 2.00
Disposal				
The SUT can be disposed of simply in the clinical environment in accordance with local guidelines.	★★** 2.00	★★** 2.00	★★** 2.00	★★** 2.00

** maximum number of 2 stars attainable

6. Using the Product Assessment Results Matrix

The clinical criteria displayed are designed to capture key clinical elements that health professionals may wish to consider when reviewing/selecting products for their own clinical practice. The report is intended as a guidance tool to aid product selection and is not intended to be a universal determination of the clinical effectiveness of any particular product. Each clinical practitioner should therefore make their own assessments taking into account all relevant considerations for their particular situation.

Clinicians may identify the criteria that most represent their clinical environment and patient demographic, and may choose to build their own hierarchy of importance to aid product(s) selection for patient outcome goals using the matrix presented in this report, their own clinical knowledge, as well as any other resources (including publications) to provide informed choice and transparency of their decision for product(s) being used.

7. Further Considerations and Recommendations

7.1 Future recommendations

It is apparent from feedback received from individual clinical colleagues during the compiling of this report, and from the many clinicians who supported evaluations, that the Single Use Tourniquet device can be a useful aid in reducing the environmental bio-burden and as such can provide support to Infection Prevention and Control outcomes in this domain.

There are some simple recommendations that support this and can be linked to our product cycle:

7.1.1. Packaging

- Packaging/cartons must be of a suitable construction and material to allow them to remain robust throughout their lifespan.
- Packaging should dispense product freely without clinicians' hands needing to be inserted inside the packaging.
- Packaging should have clear instructions for use in both words and pictograms.

7.1.2. Opening

- Apertures to packaging should be of suitable size to allow easy access to the devices within, without risk of contaminating the product for future use.

7.1.3. Clinical Use

- The proper and effective use of these devices should be intuitive as the majority of users commented that the multi-use tourniquets they replace are intuitive to use correctly.
- We would welcome the introduction of a means of “lubricating” the surface of the tourniquet (especially so-called band type) to enable them to be released easily and lessen likelihood of skin damage and contaminant aerosoling when the device is released one-handedly.
- We would welcome the introduction of a means of preventing overtightening of the tourniquet device.
- The tourniquet must be produced in such a way as to present a low ligature risk. They should be able to be released in an emergency situation with speed and in such a way as to mitigate further harm to vulnerable patients.

7.2 Barcodes

The CET are aware of the Scan4Safety project and are aligned with the ambitions of the programme, which will deliver significant benefits in terms of patient safety and efficiency, to the NHS. The adoption of standards, driven by Scan4Safety, enables patient, product and location identification and traceability from the supply chain to the patient.

Adoption of these standards has also been shown to improve the quality of care by minimising the risk of human error.

The CET would consider the inclusion of an evaluation criteria relating to the presence of GS1 compliant barcodes in future reports, because following our clinical conversations we have seen clinical staff asking for it to be included.

8. Acknowledgements

On behalf of the Clinical Reference Board and the NHS Clinical Evaluation Team, we would like to acknowledge the support, help and advice given by our colleagues across a range of organisations. We would particularly like to thank the Department of Health and Social Care, NHS Business Services Authority and their Communications team along with publishing partners The APS Group and, most importantly, our NHS colleagues who have supported our work.

The team would also like to acknowledge the inspiration of Mandie Sunderland who saw this opportunity and who, through her personal drive and enthusiasm, has ensured that the clinical voice and the need for quality, safety and value throughout the NHS has been heard.

9. References

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10. Disclaimer

Reports published by the NHS Clinical Evaluation Team represent general guidance and the team's opinions on products are based on the clinical evaluations undertaken, using the information and clinical criteria generated from extensive stakeholder engagement in line with the team's requirements and evaluation pathway. Reports will be reviewed and updated at the team's discretion as deemed appropriate to reflect any changes.

You should make your own assessment and not take or rely on the opinions expressed by the NHS Clinical Evaluation Team, as contained in the reports, as recommendations or advice to buy or not buy (as the case may be) particular products.

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Reports are accurate at the time of publication, any recommendations or best practice guidance should be checked for updates.

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‘Quality, safety and value are at the heart of our work and it’s important that we use our clinical experience to deliver high standards of care while reducing cost and waste in the NHS.’

Mandie Sunderland
Chair, Clinical Reference Board
(Governing body of the NHS Clinical Evaluation Team)