

Cost efficacy of using Juxta CURES™ and UCS™ debridement cloths

Sue Elvin

Venous leg ulcers make up a large part of a district nurse's caseload, with the application of compression bandaging requiring competent and skilled practitioners. At Central and North West London Foundation Trust (CNWL) Camden Integrated Primary Care (IPC) Service recruiting and retaining community nurses is a challenge, a situation which is shared across all London boroughs. In particular, it is difficult to maintain consistent standards for wound cleansing and compression bandaging, resulting in the responsibility for a large caseload falling to a small number of practitioners. Following a review of innovative products on show at the European Wound Management Association (EWMA) conference in May 2014, an alternative to traditional compression bandaging was identified as a possible solution to this problem; namely, UCS™ for effective debridement and Juxta CURES™ as an alternative to compression bandaging (both medi UK Ltd, Hereford). A total of 26 patients evaluated the products, which were found to be more clinically effective than previous regimens and also resulted in substantial cost savings.

KEYWORDS:

- Venous leg ulcers ■ Adjustable compression system
- Juxta CURES™ ■ UCS™ debridement cloth ■ Cost savings
- Patient concordance

efficacy is dependent on the correct application by a skilled practitioner. Clinicians are not able to apply compression bandaging unless they have received training. Once trained, competency can vary considerably among clinicians and this can impact on the effectiveness of treatment. The majority of venous leg ulcers are managed in a community setting (approximately 80% of cases; Scottish Intercollegiate Guidelines Network [SIGN], 2013), with compression bandaging taking up a good proportion of district nursing time.

From a patient's perspective, multilayer compression bandaging can be bulky and impair mobility, as the movement of the ankle can be restricted. The bandages can also loosen and slip when mild oedema associated with venous insufficiency lessens. This will result in reduced pressure being applied by the bandaging, affecting therapeutic efficacy. These difficulties can result in poor concordance and thus poor healing outcomes (Ashby et al, 2014).

In recent years, a variety of new products that deliver therapeutic compression have become available, without the disadvantages of traditional multilayer bandaging. This article describes the evaluation of Juxta CURES™, an alternative compression system (*Box 1*), that was carried out at the Camden Integrated Primary Care (IPC) Service — part of Central and North West London Foundation Trust — which operates a district nursing service from three health centres in a densely populated area of inner city London.

The service has a high proportion of patients with complex needs and a significant number of patients with chronic venous leg ulcers as part of its caseload.

Venous leg ulcers are chronic open wounds of the lower leg caused by venous insufficiency that take more than six weeks to heal (National Institute for Health and Care Excellence [NICE], 2012). They often recur after initial healing with 26–69% of people experiencing recurrence within 12 months (NICE, 2012). The cycle of ulceration and recurrence, with ulcers taking months to heal only to recur, can have a massive impact on patient quality of life (Walter et al, 1999; Herber et al, 2007). Ulcers are prone to infection

(Goncalves et al, 2004), which can result in symptoms such as malodour and excessive exudate. They can also be painful and impair mobility (Lindholm et al, 1993). They are more common among older people and the general prevalence is estimated to be 1.5 and 3 per 1,000 population (Palfreyman, 2008).

Compression therapy has long been the recommended treatment for venous leg ulcers, with graduated multilayer bandaging from ankle to knee being the gold standard (NICE, 2012). It has been shown that a pressure of 40mmHg at the ankle is the most effective treatment for the healing of venous leg ulcers (O'Meara et al, 2009).

Despite evidence that high compression delivers good results,

Box 1

Juxta CURES™ (medi UK Ltd, Hereford) is an inelastic, instantly adjustable compression device that has a built-in pressure system that can be adjusted to offer measured compression at 20, 30, 40, or 50mmHg. Pressure levels can be instantly checked and adjusted if necessary. It is easy to apply (NICE, 2015) and can be removed and reapplied by the patient with minimal training (Figure 1). Furthermore, studies have found that the use of Juxta CURES results in reduced wound size and improved healing, with a positive impact on quality of life (NICE, 2015).

UCS™ (medi UK Ltd, Hereford) is a disposable, single-use debridement cloth that removes necrotic tissue, fibrin and slough from the wound bed and cleans the leg without inhibiting granulation and without the need to soak the leg in a bucket of water. It cleanses and hydrates the skin with minimal trauma and pain (Downe, 2014; Figure 2).

Camden IPC experiences difficulties in retaining staff who have been sufficiently trained in compression bandaging techniques. The costs associated with working and living in London means that staff turnover is high, and it is impractical to send temporary staff on compression training courses that may last several days. These factors have resulted in a limited number of clinicians at the service being qualified to apply compression bandaging. A knock-on effect is that the few staff qualified to deliver compression bandaging are sustaining back injuries related to the strain of carrying bags of compression equipment around in backpacks on public transport, and from handling large limbs, applying bandaging and washing limbs in heavy buckets of water.

The nurse consultant and district nursing staff were delighted to find an alternative to compression bandaging at the European Wound Management Association (EWMA) conference in May 2014, that could

alleviate some or all of the problems they were experiencing.

Juxta CURES compression system and UCS™ pre-moistened debridement cloths (medi UK Ltd, Hereford) (Table 1) were considered as alternative products for the management of venous leg ulcers by the IPC. Over a six-month period, a review of the clinical evidence showed that the products improved patient concordance, satisfaction with treatment, and increased independence. Furthermore, the ability to quickly train nursing staff, patients and their carers in use of the products and greatly improve cost-effectiveness of venous leg ulcer treatment in terms of both dressings used and nursing time would help to alleviate some of the difficulties previously encountered.

The products were reviewed by a group of clinicians including a team of tissue viability nurse specialists, the nurse consultant, district nurses, district nurse (DN) team leaders, nursing team wound care link nurses, healthcare assistants and community nurses. The proposed evaluation was then discussed at a meeting of the IPC team leaders and the DN Transformation Board. Following a final discussion with the Head of GP and Hospital Support, the trust carried out an evaluation of the two products.

THE CAMDEN IPC EVALUATION OF JUXTA CURES AND UCS

Methods

medi UK clinical staff and account managers trained the district and community nurses from the three participating centres in the use of Juxta CURES, including how to fit, cut to size, and measure the amount of compression delivered. They also demonstrated how to use UCS on wounds and periwound skin.

Patients in the Camden IPC caseload who were housebound and receiving compression therapy for venous leg ulceration were identified by the DN teams, and patients considered suitable for product evaluation were identified. Over a two-week period, a team of six clinical



Figure 1. Ease of application of Juxta CURES.

advisors and account managers from medi UK accompanied the district and community nurses on all compression-related visits to offer advice both to the patient and clinician in the fitting and application of Juxta CURES. The patient and/or carer were shown how to don and doff the compression system, and told how it worked. Patients who consented to try the product were included in the



Figure 2. UCS being used to cleanse a wound.

evaluation and fitted with a Juxta CURES compression device. They were also given written information about the evaluation and about the products used.

The level of pressure required was specified by the clinician and patients/carers were shown how this could be maintained. Juxta CURES was also used with patients who were unable to adjust the device; in these cases it was only assessed and adjusted by the DN team and still showed considerable benefits over conventional bandages. The patients and their carers were encouraged to contact the DNs if there were any concerns about the product in between visits.

During the evaluation, all wounds and limbs were cleaned and prepared for compression therapy using UCS. This eliminated the need for the washing of limbs using buckets.

In week three, two account managers from medi UK were available to accompany the DNs on follow-up visits to provide support with the use of the products. After this time, clinical specialists and medi account managers were on call to deal with any clinician concerns related to the products. The final evaluation was carried out at 26 weeks.

At each visit the district nurse recorded the condition of the skin, the size of the wound, volume of exudate, ankle and calf measurements, patient response, and the level of satisfaction with the product from the point of view of both the patient and the clinician. These clinical results will be reported upon in subsequent articles. The time spent on each visit and the number of visits required each week were also recorded over the 26-week period.

The cost of each patient's previous compression and dressing regimen over a 26-week period was calculated and compared with the cost of using Juxta CURES over the same time. The patient's notes were consulted to see what dressings and

Table 1: Cost of dressings and compression for 26 patients for six months before the trial and for six months on a trial regimen of Juxta CURES

	Previous regimen (multilayer compression)	Trial regimen (Juxta CURES plus UCS wipes)	Total saving
Compression	£20,130.76	£5,580.64	£14,550.12
Dressings	£9,701.12	£4,317.56	£5,383.56

Table 2: Nursing time spent treating patients for six months using multi-layer compression bandaging compared to treating patients using Juxta CURES for six months (n=26)

Nursing time spent on patients (n=26)	Previous regimen (multilayer compression)	Evaluation regimen (Juxta CURES plus UCS wipes)	Time saved using Juxta CURES
Time (minutes per week)	3,316 minutes	1,370 minutes	1,946 minutes
Time (hours per week)	55 hours 16 minutes	22 hours 50 minutes	32 hours 26 minutes
Number of visits per week (n=26)			
	82	54	28

bandaging had been used previously, in addition to frequency of changes, with costs being calculated for a 26-week period using current drug tariff listings.

Nursing time spent on visits with the two different compression regimens was also compared, as well as the number of visits needed.

Results

Thirty patients were fitted with a Juxta CURES compression system, of which 26 had a complete set of data for comparison at the end of the trial.

The cost of using Juxta CURES was calculated for each patient for a 26-week period (six months), taking into account the cost of the initial Juxta CURES system (which is designed to last six months) and the cost of dressings required. This was determined as a cost per visit and a cost per week. The total cost of using compression bandaging over six months for the 26 patients was then compared with the total cost of the Juxta CURES regimen (*Table 1*).

The time taken at each visit was also calculated for every patient and this was compared with the previous wound management and compression bandaging regimen (*Table 2*). The savings in time by using UCS compared to buckets of water were captured in this part of the evaluation.

It was also found that the number of visits needed reduced by two-thirds from May 2014 to January 2015 (414 visits were recorded in May 2014, compared with 138 in January 2015), with a steady reduction being seen month on month.

DISCUSSION

A number of cost savings were realised as an outcome of using UCS and Juxta CURES in a new approach to the delivery of wound care and compression for the treatment of venous leg ulcers in the community. The cost of compression was reduced considerably with 25 of the 26 patients (96%) having reduced costs of treatment when using Juxta CURES versus traditional multilayer bandaging. The overall saving on compression for all 26 patients totalled £14,550.12. The provision of one compression device that lasts for a six-month period has been shown to be cheaper than using compression bandages that require frequent reapplication and disposal over the same timeframe.

A significant reduction in the use of absorbent dressings was also seen in patients using Juxta CURES, resulting in reduced spend. This was attributed to the delivery of consistent, therapeutic pressure by the Juxta CURES compression system. The ability of the patient/carer/clinician to adjust the

compression system and easily check that therapeutic compression was being delivered effectively and consistently meant that exudate volume was reduced, negating the need for highly absorbent dressings.

There was a reduction in the number of visits needed per week for the majority of patients in the evaluation. Of the 26 patients, only six (23%) needed the same number of visits and none required more. Only three patients had visits that were the same length as the previous regimen, and none had visits that were longer. This shows that the application of compression and the cleaning of the leg and debridement of the wound took less time when using Juxta CURES and UCS. The total amount of time saved was 32 hours and 26 minutes. This resulted in additional cost savings to the IPC Service, as well as releasing time to care.

The use of UCS also meant that there was less of a strain on the DNs, as it removed the need to wash the legs in heavy buckets of water. Staff who were not up-to-date and fully trained in graduated compression application were able to visit patients and be comfortable that they could apply effective compression therapy using Juxta CURES. This would widen the pool and skill mix of DNs able to visit patients requiring compression, without concern about the safety of application. Pressure could also be checked by the patient in between nurse visits, and be easily adjusted without the need for a clinician. This encouraged self-care and may also improve compliance, although further studies would be needed to confirm this.

The time saved during the nurses' visits could allow for a more holistic approach to care.

The findings of the evaluation mirror the results of Elson (2012), Bianchi et al (2013) and Harris (2013), which reported a reduction in costs of bandaging, dressings and nursing time when using Juxta CURES versus traditional compression bandaging for the

management of venous leg ulcers, as well as others which were recently outlined in the NICE Meditech innovation briefing (MIB 25) for Juxta CURES (NICE, 2015).

CONCLUSION

The evaluation of Juxta CURES and UCS has provided a simple and cost effective method of cleaning and compressing venous leg ulcers. Staff training required on the use of the products was minimal, enabling more clinicians to deliver treatment. There was also a reduction in the amount spent on dressings and bandaging.

Overall, the evaluation established that Juxta CURES was easier and cheaper to use than the traditional compression previously used at Camden IPS, resulting in significant cost and time savings, while healing wounds and promoting self-care and independence. **JCN**

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KEY POINTS

- The management of venous leg ulcers makes up a large proportion of district nurses' caseload.
- Traditional multilayer compression bandaging can only be applied by trained and competent clinicians.
- Juxta CURES™, an adjustable compression system, delivers therapeutic compression and can be adjusted by clinician, patient or carer to maintain therapeutic compression.
- An evaluation carried out on 26 patients at Camden Integrated Primary Care Services established that Juxta CURES was a clinical and cost effective alternative to traditional multilayer bandaging.