

The 21st Century Approach for Cost Effective Healing of Venous Leg Ulcers

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Introduction

Approximately 1% of the population will suffer from leg ulceration at some point in their lives (Callam, 1992) with venous ulcers being the most common type. Approximately 51% of these patients are non-compliant with multi-layer compression bandaging (Miller et al., 2011) with pain and wound size being identified as significant predictors. Many patients do not present with text book legs and have unusual limb shapes along with altered skin consistency which can fundamentally alter the effectiveness and safety of compression (World Union of Wound Healing Societies, 2008).

- Reasons for non-compliance with standard compression bandaging include:
- Skin irritation caused by inflammation or itch
 - Bandage slippage
 - Malodour
 - Lack of opportunity to maintain hygiene
 - In ability to wear normal footwear

Juxta CURES™ is a new and innovative compression device that has been designed to apply consistent, measurable compression to the lower leg to aid the healing of venous ulcers, whilst overcoming all the issues identified above. It is cut and shaped to fit the individual leg and is applied over the dressing of choice. It has a Built in Pressure System™ (BPS) that can be used to confirm exactly how much pressure is being applied to the leg.



Method

A multi-centre product evaluation was conducted to compare the costs of treating venous ulcers with compression bandaging versus this new technology. Each clinician recorded six months data of standard compression therapy and six months of this new approach to compression therapy including:

- number of nurse visits
- patient quality of life
- type and number of wound dressings used
- compression bandaging type and number used

Where the patient had not used the compression garment for six months an estimate was made. This data was used to calculate and compare the costs of the two treatment options.

Results - Efficacy of treatments

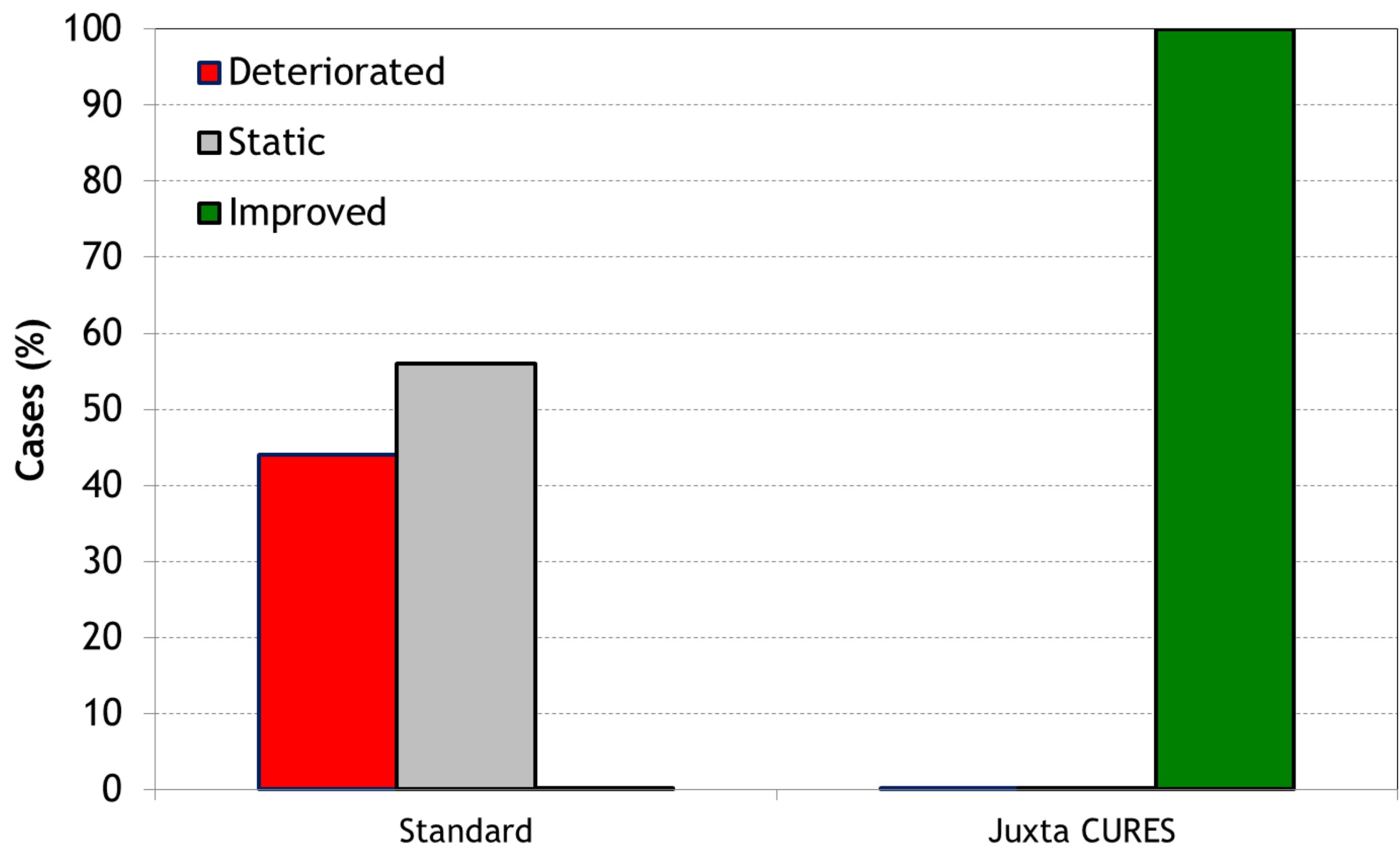


Fig. 1 Response (% cases) to the standard compression bandaging and Juxta CURES compression treatment for seventeen patients monitored at health care centres in the UK.

The average length of time that the ulcers were present was 7 years, however data was only collected for the six months prior to testing the new compression technology. During those six months the ulcers of all seventeen patients failed to improve. These wounds either remained static or deteriorated.

After six months of treatment with Juxta CURES all seventeen patients showed improvement in the conditions of their leg ulcers. In addition, patients and clinicians were unanimous in their positive feedback and comments included:

- "Allowed me to take control of my life"*
- "This treatment freed up the medical profession as my clinic appointments have reduced from an hour twice a week to 20 minutes once a week"*
- "Its unique clinical advantage" has to be that it can very quickly and easily be transformed from an "off the shelf" product into a bespoke compression garment".*

Results - Cost comparisons

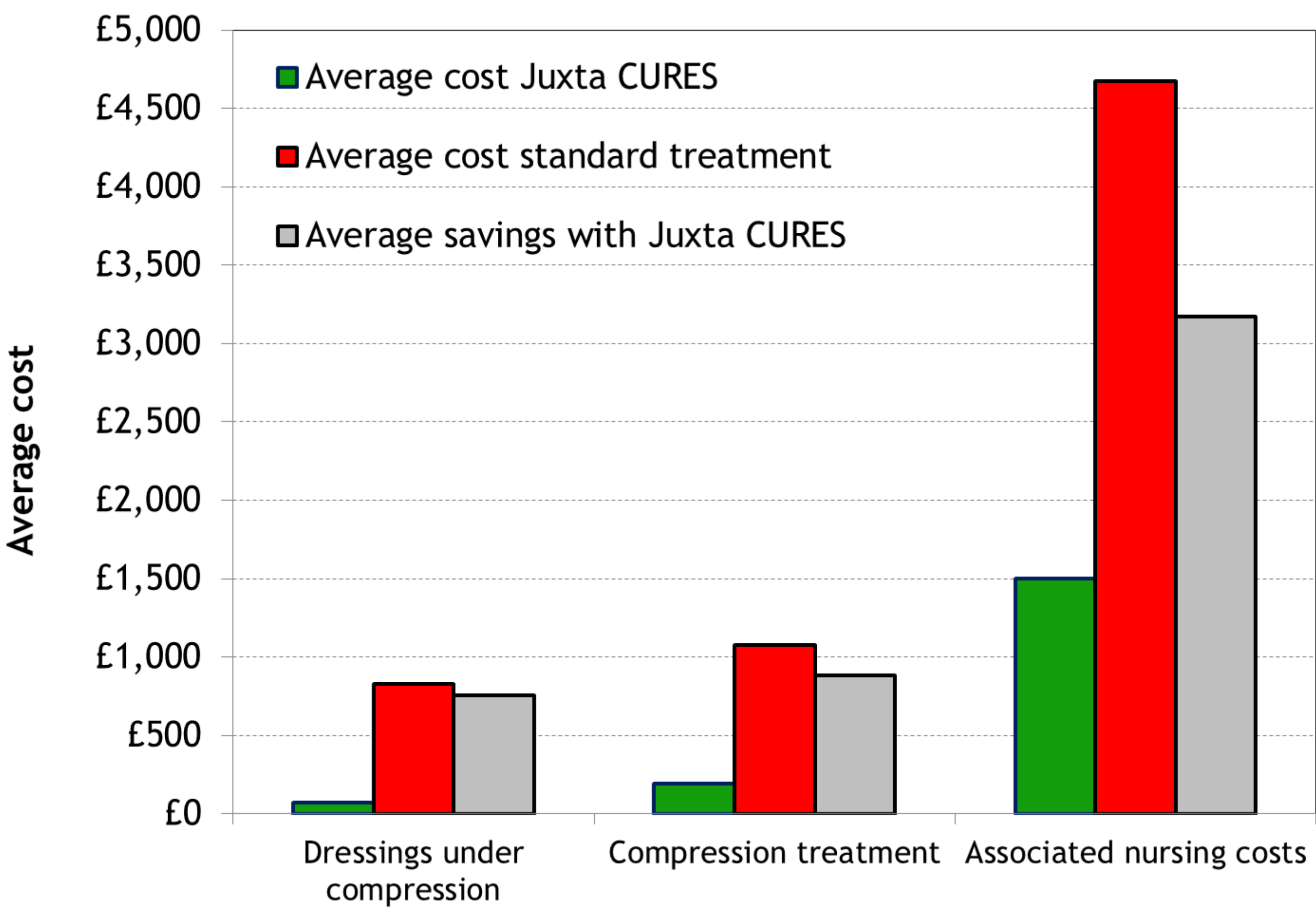


Fig. 2 Average costs and cost savings associated with leg ulcer treatment using standard compression bandaging and Juxta CURES compression treatment for seventeen patients monitored at health care centres in the UK.

Table 1. Average (with statistical comparisons), median, minimum and maximum costs associated with leg ulcer care of seventeen patients monitored at health care centres in the UK.

Treatments	Costs associated with care of 17 leg ulcer patients			
	Average	Median	Min	Max
Dressings under compression				
Standard compression treatment	£826 a	£583	£101	£2,304
Juxta CURES treatment	£72 b	£43	£3	£282
Compression treatment				
Standard compression treatment	£1,073 a	£585	£185	£5,856
Juxta CURES treatment	£193 b	£149	£149	£300
Associated nursing costs				
Standard compression treatment	£4,671 a	£3,900	£1,900	£9,700
Juxta CURES treatment	£1,497 b	£1,300	£400	£2,900

Levels not connected by the same letter are significantly different (Tukey-Kramer HSD; JMP 10.0.0 SAS Institute Inc.)
Comparisons were made between each treatment set, i.e., standard treatment vs. Juxta CURES.

Conclusion

This new technology proved cost-effective when compared to the standard compression bandaging because it improved the leg ulcer conditions at a significantly lower cost. This led to improved clinical productivity meeting the QIPP agenda by utilizing resources effectively (The Health and Social Care Bill, Equity and Excellence, Liberating the NHS Operating Framework, 2011/12).