

Wound care service development over a five-year-period of national change: role of partnership working and education delivery

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This article outlines the development of a community tissue viability service over the same five-year-period in which a number of national issues with wound care were identified through research. These included a lack of evidence-based practice, a changing community workforce and an unwarranted variation in care attributed to a lack of education and training among generalist practitioners. The author describes how a proactive approach was taken to local service development to address these issues, and how partnership working with both colleagues and industry enabled improved wound care education delivery and uptake among a generalist community workforce. These measures resulted in a reduced spend on wound care dressings year on year, despite a predicted trend for increasing costs nationally.

KEYWORDS:

■ Community wound care ■ Generalist practitioners
■ ONPOS ■ Link nurse ■ Education and training ■ Partnership

The last five years have seen a number of changes in national healthcare delivery in England that have undoubtedly impacted upon the way in which wound care is delivered. *Five Year Forward View* (NHS England, 2014) saw the shift of healthcare services, including wound care, into the community setting. Subsequently, Guest et al (2015) determined that approximately 2.2 million wounds were managed annually by the NHS at an estimated cost of £4.5–5.1 billion, with the majority of these costs incurred in the community as a consequence of nursing visits (Guest et al, 2015) (Table 1).

Guest et al (2015) also highlighted unwarranted variation in wound care practice in the UK. For example, approximately 30% of wounds in the study year lacked a differential diagnosis, and only 16% of patients with a leg or foot ulcer had a Doppler ultrasound, despite this being a recommendation for best practice in national guidelines (Scottish Intercollegiate Guidelines Network[SIGN], 2010; Guest et al, 2015). Guest et al (2015) attributed this to the practical difficulties experienced by non-specialist healthcare professionals in the community. They concluded that there was a need for specialist referral to obtain a differential diagnosis and management plan, and that training of non-specialist clinicians in the fundamentals of wound management, including product selection, was vital to improve patient outcomes and reduce costs (Guest et al, 2015).

Gray et al (2018) identified similar marked variations in wound care delivered in the

community in their survey across eight community services in five Northern England trusts. The authors found that there was under use of evidence-based practices, such as Doppler ultrasound and compression use, and overuse of practices unsupported by evidence such as inappropriate use of antimicrobial dressings. Gray et al (2018) suggested that strategies were needed to identify, assess and disinvest from products and practices supported by little or no evidence and enhance the uptake of those that were (Gray et al, 2018). Both Guest et al (2015) and Gray et al (2018) therefore identified the need for education and training and a consistent approach to care delivery in both local and national settings.

A more recent publication by Guest et al (2020) showed that five years on from the original study (Guest et al, 2015) the NHS was encountering more wounds, rising costs and delivering more

Table 1: The burden of wounds over a five-year period.

	2012/13 ¹	2017/18 ²
Wound prevalence annually	2.2 million	3.8 million
Annual cost	4.5–5.1 million	8.3 million
% of cost incurred in the community	66.3 million	81 million
Total number of community nurse visits (millions)	10.9 million	54.4 million
Total number of practice nurse visits (millions)	18.6 million	28.1 million
Total number of healthcare assistant visits (millions)	Not stated	53.6 million
Guest et al, 2015 ¹ ; Guest et al, 2020 ²		

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community-based treatments (Table 1). Furthermore, the community workforce had changed with more healthcare assistants involved in wound care delivery as the highly trained nurse workforce declined. The unwarranted variation in care originally highlighted by Guest et al (2015) was still observed with 25% of wounds lacking a differential diagnosis, and only 15% of patients with a leg or foot ulcer having a Doppler ankle brachial pressure index (ABPI) measurement recorded in their notes. This is in part explained by the recent description of wound care services as having increased time pressures and diminishing resources, which could considerably impede care delivery (Gray et al, 2019).

To deliver a consistently high standard of wound care under these circumstances, the issues of education and training of the community workforce to deliver evidence-based care and eliminate unwarranted variation in practice clearly needs to be addressed on both a local and national level. The National Wound Care Strategy Programme (NWCSP) was launched in 2018 by NHS England and NHS Improvement in order to develop a national strategy that focuses on improving care relating to pressure ulcers, lower limb ulcers and surgical wounds in England (NHS England, 2021). On a local level, services can be developed or redesigned to address the problems highlighted by research.

This paper describes the experience of a community-based tissue viability service (TVS) which was established in 2015 and developed over the same five-year period during which research evidence of issues affecting wound care services nationally were emerging, and highlighted the problems which needed to be addressed nationally to enable efficient wound care delivery (Gray et al, 2018; Guest et al, 2015; 2020). Some of these issues were encountered locally and were considered in the development of the service to ensure that it was fit for purpose into the future.

NORFOLK COMMUNITY HEALTH AND CARE NHS TRUST (NCH&C) TISSUE VIABILITY SERVICE

Norfolk Community Health and Care NHS Trust (NCH&C) currently provides community-based services across Norfolk. The TVS provides complex wound care for a large population of approximately 808,424 patients and is led by two full-time equivalent (FTE) tissue viability nurse specialists (TVNS).

‘While tissue viability roles may vary from trust to trust, they all have in common that they encompass more than the clinical management of complex wounds.’

Background to the tissue viability service

In 2015, the author took on a new TVNS role to establish and develop a service to manage people with complex wounds in the community and on discharge from the acute setting. The new role complimented an existing but unfilled TVNS post, which was subsequently filled by a new clinician within weeks.

The author’s original position, which was commissioned by West Norfolk clinical commissioning group (CCG), is now commissioned by Norfolk and Waveney CCG, which was formed in 2020 from the merger of four CCGs in Norfolk (North Norfolk, Norwich, South Norfolk, and West Norfolk) with Great Yarmouth and Waveney CCG. As a consequence of this historical commissioning, the author’s role continues to provide a TVS to West Norfolk. Currently, in West Norfolk, there are four community nurse bases, seven nursing homes and 12 link nurses. The other TVNS role is commissioned by NCH&C Trust, and together the two nurses lead the TVS. Across Norfolk there are 16 community teams who use the service.

Service development: identifying good practice and areas for improvement

While tissue viability roles may vary from trust to trust, they all have in common that they encompass more than the clinical management of complex wounds (Holloway et al, 2019). The TVNS role also includes support of innovation, strategic development, business planning, and teaching and education. Team management, audit and data analysis and creation of clinical policy and procedure are all essential skills, in addition to collaborating with stakeholders to ensure evidence-based practice is at the heart of service provision (Holloway et al, 2019).

As part of establishing the service in 2015, all aspects of wound care were examined by the TVNS (including procurement, formulary, and clinical practice) and an action plan developed to identify areas of good practice and where improvements could be made. This approach was subsequently recommended in The *Leading Change, Adding Value* framework (NHS England, 2018) in order to drive efficiency and eliminate unwarranted variation in practice within budget (NHS England, 2018).

The TVNS compared existing practices and procedures to best practice and national guidelines at that time to highlight areas where practice needed updating and thus education and training were required. Initial meetings were held with the community nursing teams to enable them to raise any issues, and the TVNS shadowed and observed clinical practice in the community to further pinpoint areas of good practice and those needing improvement. This approach also enabled the building of relationships between the new in-post TVNS and community teams. Clinical audit was performed in line with the trust’s existing audit plan, while policy reviews were undertaken in order of review date, with updates made where required.

These actions are all fundamental to the TVNS role and the ongoing

development of a TVS and continue to be done on an ongoing basis.

Formulary and dressing use review

Community nurses have reported feeling reassured that using a formulary helps them to make correct patient management choices, especially if accompanied by clinical guidelines and pathways, while specialist nurses have reported that using a formulary helps to reduce incorrect product selection and standardises product use across a service (Gray et al, 2019).

The author reviewed the existing tissue viability formulary, which was found to be fit for purpose, with wound dressings available in all of the main dressing categories (e.g. foams, antimicrobials, films, silicones, and superabsorbents). An online non-prescription ordering service (ONPOS; Coloplast) was already in use by the trust to procure wound dressings listed on formulary, with good compliance. Using the service enabled dressings to be ordered from the formulary without the need for a prescription. ONPOS has been available for more than a decade and is currently used by over 80 organisations in the UK. These trusts have reported multiple benefits from using ONPOS, including improved formulary compliance of between >85–100% (Knight, 2010; Grothier, 2013; Griffin, 2015; Markey and Barrett, 2017; Dowley and Tomes, 2018; Warner, 2021).

As part of the partnership commitment to users of ONPOS, Coloplast provides ongoing support which includes the generation of monthly reports that provide real-time data analysis of dressing usage and spend. Monthly data analysis meetings were therefore carried out with the Coloplast territory manager. The real-time data generated by ONPOS allowed patterns in product use and spend to be analysed, and any unexpected trends to be investigated further, such as inappropriate product use, which could then be addressed through local education and training.

For example, in 2017, monthly

ONPOS reports highlighted a large spend on hydrofiber dressings. On further investigation, the dressings were being used as fillers under a secondary wound dressing in deep wounds. This was despite Biatain® Silicone (Coloplast) being listed on the formulary since 2015 and indicated for use on wounds up to

'Other trusts have also reported savings generated from correction of inappropriate product use, initially highlighted by irregular spend on dressings by ONPOS reports.'

2cm deep. Driven by this information, an educational event was held to introduce Biatain Silicone with 3DFit® Technology that emphasised that no filler was needed in wounds up to 2cm deep. This education reinforced the correct use of the formulary dressings, simplified care and led to a reduction in spend on hydrofiber dressings resulting in savings of £25,094 (from a spend of £165,199 between April 2017–18, to £140,105 between April 2020 and March 2021). A large reduction in the number of foam dressings used from 2015 was also observed (Figure 1).

Similarly, Warner (2021) reported that ONPOS data highlighted inappropriate alginate spend on surgical wards in an acute trust. Further investigation revealed that the dressings were being used as

unnecessary cavity fillers in some wounds, incurring unnecessary costs. Warner (2021) also reported that a reduction in the use of cheaper foam dressings that needed frequent changes with more expensive dressings that had a longer wear time resulted in savings. Similarly, more expensive silicone foam dressings were found to prevent the skin stripping on removal that had occurred with a cheaper foam, demonstrating that dressings with a higher unit cost can result in cost savings and improve patient experience (Warner, 2021).

Other trusts have also reported savings generated from correction of inappropriate product use, initially highlighted as irregular spend on dressings in the monthly ONPOS report. Dowley and Tomes (2018) and Jones (2020) reported that ONPOS real-time data highlighted large silver dressing spend in their trusts, which were a consequence of dressing misuse. With education and training on appropriate practice, Jones (2020) reported that silver spend was reduced by £6K per month.

Community healthcare staff

Evaluation of the community workforce identified that healthcare staff responsible for delivering wound care across the trust had differing levels of qualification, knowledge and skills in wound management. Gray et al (2019) reported that clinician respondents to a survey about factors influencing community wound care practice all felt that wound care knowledge across acute, primary



Figure 1. Reduced volume of foam dressings ordered.

care and nursing home services was poor, leading to increased workloads for specialists. As a consequence of the varying wound care knowledge and skills in Norfolk, it was decided to go 'back to basics' and create an educational benchmark for all staff delivering wound care. Currently, approximately 45% of all community nursing teams in Norfolk West are band 3–4, and therefore require ongoing support and skills development.

Delivery of education and training

A key part of the TVNS role is teaching and delivery of education and training, however, with only two TVNS disseminating information across a trust, implementing change can be challenging, if not impossible (Everitt, 2008). One solution is the use of a link nurse group, which consists of members of staff with an interest in tissue viability who attend regular meetings, develop their knowledge and skills, and then cascade information and education on tissue viability back to general staff in their area of work (Everitt, 2008; Renwick, 2020). With only two FTE TVNS for the large patient population of Norfolk, it was decided to take this approach.

Link nurse forum

The first link nurse forum was developed by both TVNS and held at the community hospital, as this was a central location in the county. Both TVNS collaborated to develop joint educational initiatives to provide wound care education relevant to all care settings and knowledge and skill levels to promote evidence-based care delivery. Clinical team leads were asked to nominate a registered nurse and a healthcare assistant to become tissue viability link nurses, with the expectation of recruiting 25–30 link nurses to attend the meetings and disseminate wound care knowledge in their workplace.

The first link nurse meeting was held over half a day in June 2015 in the hospital. It provided a general introduction to the link nurse role and also gave an update of the work being undertaken by the TVNS. Subsequent link nurse meetings

were also held over half a day in the hospital with content determined and delivered by the TVNS. Companies with products on the formulary were also invited to attend relevant events to provide updates when appropriate, enabling the basics underpinning the wound care formulary to be refreshed as required.

'The collaborative working with Coloplast to deliver education allowed a breadth and variety of sessions which otherwise would not have been possible due to limited resource.'

Information on fundamental topics such as wound assessment were delivered at the early meetings, later followed by events based around policies that were being reviewed and published at the time. For example, pressure ulcer policy was overhauled by the TVNS in early 2016, in order to meet both local and national agendas. The trust had implemented the *Stop the Pressure* programme following its development by NHS Midlands and East in 2012 and continued to follow the strategies set by the initiative (www.stopthepressure.co.uk). Education was delivered to run alongside the publication of the pressure ulcer policy. Pressure ulcer workshops facilitated by the TVNS were arranged for staff to book onto and attend. The agenda went through the fundamentals of pressure ulcer development, including categorisation, prevention strategies, supporting documentation and operationalising the new policy. This has been a rolling programme and continues to be implemented.

Initially the TVNS tried to manage the educational events in-house. However, with increasing workloads and declining participants, with anywhere between 2–15 clinicians typically attending, it was recognised that the link nurse meeting format was no longer working. Reduced attendance was largely attributed to over-running caseloads leading to a delay in

arrival or total absence. This was also noted by Gray et al (2019), who stated workforce pressures often led to poor attendance or cancellation of in-house educational events for community practitioners.

Coloplast had previously delivered some well-evaluated education sessions during the link nurse events, so the TVNS decided to build upon this success and develop the working partnership further. The TVNS approached the Coloplast territory manager to discuss options for the link nurse events and Coloplast offered to work in partnership to take a new approach. It was decided to hold a whole link nurse day every quarter, off site, to enable attendees to obtain study leave and protected learning time for the day. The TVNS designed the first agenda, while Coloplast provided administrative support, such as sourcing a venue, managing bookings, and sponsoring the event.

Events and protected learning time

The first TVN link nurse programme was held in partnership with Coloplast in 2018. The programme consisted of live seminar events, presented by Wound Care Connections and Coloplast TVNA. Content was determined by the TVNS in order to mirror current national initiatives such as NWCSF, *Stop the Pressure* and *Legs Matter*, to provide education requested by the link nurses or updates on new policy, pathways, and products on formulary (Table 2). With 'protected learning' time and a more formal approach to education and training, better turnout was achieved, with each event attended by approximately 40 link nurses from across the trust. The events provided excellent opportunities for both the TVNS and link nurses to network and share experiences and ideas, while a variety of speakers with experience of working in other parts of the country offered insight into national agendas. This created a sense of validation when attendees realised that similar challenges were being faced elsewhere and that national initiatives were being developed and implemented to support wound care practice.

Table 2: Link nurse events

2018	CQUIN wound assessment/ <i>Stop the Pressure</i> campaign
May 2019	3D Fit® Technology/skin tears
June 2019	aSSKINg for nursing home/care homes (60)
July 2019	aSSKINg for nursing home/care home (West Norfolk) (65)
Oct 2019	Mock coroner's court documentation
March 2020	CQUIN (leg ulcer and pressure ulcer indicators)
July 2020	(Virtual) – Pressure ulcers/ <i>Stop the Pressure</i> day
November 2020	(Virtual) – Pressure ulcers/ <i>Stop the Pressure</i> day

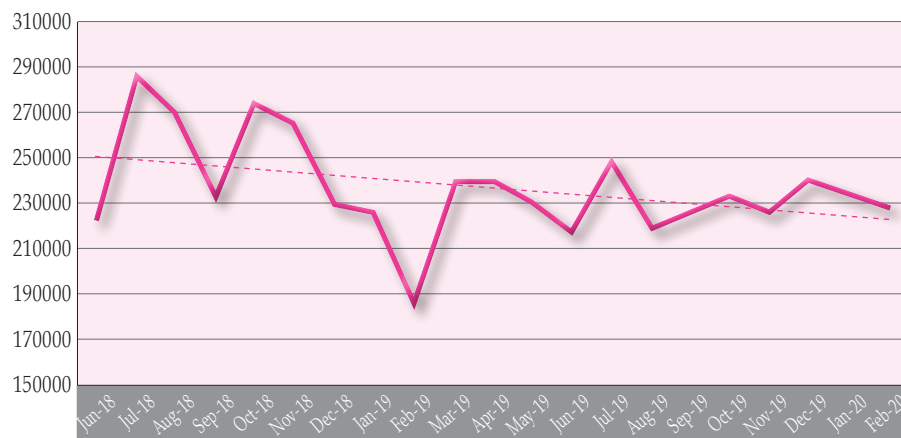


Figure 2.
Annual total spend.

The collaborative working with Coloplast to deliver education allowed a breadth and variety of sessions which otherwise would not have been possible due to limited resource. The partnership approach significantly relieved pressure on the TVNS, saving time on the administrative tasks associated with organising the events. The time saved enabled the TVNS to deliver further training, including a comprehensive in-house leg ulcer training programme.

HEAL

As the Covid-19 pandemic unfolded in 2020, the events were adapted to be held digitally with good attendance, preventing disruption to education delivery.

In addition to the events, further educational support is available through partnership working. The Healthcare Excellence through Access and Learning (HEAL) educational initiative from Coloplast enables staff to access educational materials, including local policies and guidelines, as

well as national guidelines and a library of wound literature through ONPOS via 'non-ordering access'. The availability of a platform for staff to access educational and training materials for different levels of knowledge means that best practice recommendations and resources are readily available to inform practice.

The HEAL programme includes a number of medical educational courses that cover a variety of wound care topics. Each course has been developed in close collaboration with international wound care experts, and the content is peer-reviewed and endorsed by the European Wound Management Association (EWMA).

COST SAVINGS

Analysis of data relating to product spend and usage has enabled areas of potential inappropriate practice to be identified and education and training delivered to improve it. Consequently, there has been a decrease in product spend over a five-year period (*Figure 2*), against a prediction of year-on-year increasing

costs (Guest et al, 2017). Similar savings have also been reported by numerous other community trusts using ONPOS for dressing procurement (Grothier, 2013; Griffin, 2015; Markey and Barrett, 2017; Dowley and Tomes, 2018; Jones, 2019).

DISCUSSION

A new TVS was established in 2015 to service a large population of people with complex wounds in a community setting. The service was led by two FTE TVNS and so collaborative working was needed to ensure the TVS was in alignment with national and trust agendas to deliver a high standard of wound care to patients with limited resources.

The TVNS reviewed the approach to wound care delivery and made improvements to align with trust values and national agendas to deliver high quality, evidence-based care. Key to this was the ongoing review of clinical practice and delivery of education and training. The workforce had varying levels of skill, and since the development of the TVS to the present day, staff demographics have changed in accordance with the changes noted by Guest et al (2020) that more HCAs are delivering care — 45% of wound care is delivered in West Norfolk by grade 3–4 healthcare assistants. This presents a challenge to TVNS to deliver ongoing education and training.

Establishing a link nurse network greatly helped with the delivery of education and training, and partnership working with Coloplast helped the TVNS to role out a comprehensive and relevant educational programme that was relevant to address both local and national issues. Working in collaboration helped to free up further time to provide more education where needed. Taking an adaptable approach to service delivery is essential, and more recently, virtual education events have been used so that the Covid epidemic did not significantly impact on the learning of clinicians still delivering wound care.

Remember...

When making a decision about which dressing to use, the cheapest dressing is not necessarily the most cost-effective. It may need more frequent changes, incurring costs associated with the number of dressings and nursing time needed.

However, provision of education does not guarantee translation into practice. Fortunately, benefits of the approaches taken were observed; documentation standards improved and more detail was recorded in patients records, and lateral thinking became evident. Clinical principles discussed in some of the sessions, e.g. cavity wound management, were seen to support clinical decision-making with regards to dressing plans and improved use of terminology in patient records.

The successful use of data collection and analysis to inform change was demonstrated through the use of ONPOS. Access to real-time data on dressing use and spend allowed areas of unwarranted variation to be identified, and education delivered on appropriate use, leading to savings on dressing expenditure. Similar outcomes have been reported in other community settings where ONPOS is in use (Grothier, 2013; Griffin, 2015; Markey and Barrett, 2017; Dowley and Tomes, 2018). In Norfolk, wound dressing spend decreased year on year, despite costs increasing year on year nationally (Guest et al, 2020).

The next step would be for the TVS to collect data to measure the impact of education delivery on practice.

CONCLUSION

This article describes how a community TVS developed over a five-year period, taking a proactive rather than reactive approach to service improvement. Through regular and consistent review of practice, including dressing use through real-time data analysis, areas for improvement were identified and

education and training delivered to improve care delivery.

Key to the success of developing the service was working in collaboration with link nurses and industry to deliver evidence-based wound care education to upskill the community workforce. **JCN**

REFERENCES

- Dowley V, Tomes J (2018) *Implementation and use of ONPOS to drive efficiency and cost savings in an average sized CCG*. Available online: www.woundcare-today.com/journals/issue/wound-care-today/article/onpos-implementation-drive-efficiency-and-cost-savings/
- Everitt D (2008) Benefits of implementing a link nurse group across both an acute and a primary care trust. *J Wound Care* 17(4): 164–5
- Gray TA, Rhodes S, Atkinson RA, et al (2018) Opportunities for better value wound care: a multiservice, cross-sectional survey of complex wounds and their care in a UK community population. *BMJ Open* 8: e019440
- Gray TA, Wilson P, Dumville JC, Cullum NA (2019) What factors influence community wound care in the UK? A focus group study using the Theoretical Domains Framework. *BMJ Open* 9: e024859
- Griffin J (2015) Driving efficiencies in wound care expenditure through service redesign utilizing an online non-prescription ordering service. *Wounds UK* 11(3): 1–6
- Grothier L (2013) Reflections on the implementation of a web-based non-prescription ordering system. *Wounds UK* 9(2): 51–5
- Guest JF, Ayoub N, McIlwraith T, et al (2015) Health economic burden that wounds impose on the National Health Service in the UK. *BMJ Open* 5: e009283
- Guest JF, Vowden K, Vowden P (2017) The health economic burden that acute and chronic wounds impose on an average clinical commissioning group/health board in the UK. *J Wound Care* 26(6): 292–303
- Guest JF, Fuller GW, Vowden P (2020) Cohort study evaluating the burden of wounds to the UK's National Health Service in 2017/2018: update from 2012/2013. *BMJ Open* 10: e045253
- Holloway S, Ousey K, Moore Z, et al (2019) Revisiting the role and responsibilities of the tissue viability nurse. *Wounds UK* 15(5): 16–23
- Jones L (2020) *Using an online non-prescription ordering service to drive efficiency and reduce unwarranted variation in wound care product use and spend*. Wound Care Today. Available online: www.woundcare-today.com/journals/issue/wound-care-today/article/wct-using-online-non-prescription-ordering-service-drive-efficiency-and-reduce-unwarranted-variation-wound-care-product-use-and-spend
- Knight S (2010) Introducing a new method of providing wound care products. *Wounds UK* 6(2): 66–73
- Markey P, Barrett S (2017) The benefits of using an online ordering service to improve efficiency in wound care services. *Br J Healthcare Manage* 23(11): 1–7
- NHS England (2014) *Five Year Forward View*. NHS England, London. Available online: www.england.nhs.uk/wp-content/uploads/2014/10/5yfv-web.pdf
- NHS England (2018) *Leading Change, Adding Value: A framework for nursing, midwifery and care staff*. Available online: www.england.nhs.uk/wp-content/uploads/2018/05/lcav-e-learning-tool-v1.pdf
- NHS England (2021) *National Wound Care Strategy Programme*. Available online: www.ahsnnetwork.com/about-academic-health-science-networks/national-programmes-priorities/national-wound-care-strategy-programme
- Renwick C (2020) Development of the Wound Resource Education Nurse (WREN) programme. *Br J Nurs* 29(15): S18–23
- Scottish Intercollegiate Guidelines Network (2010) *SIGN Guideline 120: Management of chronic venous leg ulcers*. SIGN, Edinburgh. Available online: www.sign.ac.uk/pdf/sign120.pdf
- Warner V (2021) *The use of an online non-prescription ordering service (ONPOS) to drive efficiency, waste reduction and cost savings in wound dressing procurement in an acute NHS Foundation Trust*. Wound Care Today. Available online: www.woundcare-today.com/journals/issue/wound-care-today/article/the-use-of-an-online-non-prescription-ordering-service-onpos-to-drive-efficiency-waste-reduction-and-cost-savings-in-wound-dressing-procurement-in-an-acute-nhs-foundation-trust