Using an online non-prescription ordering service to drive efficiency and reduce unwarranted variation in wound care product use and spend

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Currently, within the NHS there is a need to improve efficiency to maximise quality of care, patient experience and outcomes, within the constraints of a limited budget. At the Royal Wolverhampton NHS Trust, the cost of wound care was increasing year on year, and in order to drive efficiency, procurement of dressings was switched from supply chain to ONPOS. Over a 12-month period, the use of ONPOS has resulted in 100% formulary compliance for adult community services. The number of brands of products used by the service has almost been halved, and the number of individual dressing units purchased has reduced by 36,000. Finally, cost savings are predicted for the adult community service in 19/20, after a five-year growth in costs year on year.

KEYWORDS:
- Online non-prescription ordering service [ONPOS]
- Unwarranted variation
- Wound care products
- Real-time data
- Improved efficiency

The need for improved efficiency throughout the NHS to meet monetary and resource challenges now and in the future is well recognised and reported (Markey and Barrett, 2017). *Five Year Forward View* (NHS England, 2014) saw a shift in the delivery of care into the community, putting the community nursing workforce at the centre of managing a growing population of older patients. By 2039, there will be 3.5 million people aged 85 years, and many aged over 100 years (Office of National Statistics, 2017). It is also estimated that nearly three million people are living with three or more long-term conditions, including cardiovascular disease and diabetes (Department of Health [DH], 2012). This equates to more people requiring complex care.

However, limited growth in funding, an increase in demand, and a predicted shortfall in the number of healthcare professionals available to deliver care will all pressurise community services that are already struggling to cope with demand.

This presents the question, now and in the future, of how to drive up quality of care despite constraints on funding and fewer available clinicians to deliver it (Dowsett et al, 2014). One answer is for health systems to identify more efficient ways of managing the increased workload (Markey and Barrett, 2017). Indeed, *Five Year Forward View* identified funding and efficiency as a possible gap, and highlighted that without improvement, a shortage of resource would hinder care delivery.

Leading Change, Adding Value (NHS England, 2018), is a framework that was developed to put an emphasis on the quantifying and measuring of out comes in nursing practice in the UK, in alignment with *Five Year Forward View* (NHS England, 2014). The framework aims to support nurses in demonstrating where high standards of care are achieved, or highlighting where improvements can be made in order to eliminate unwarranted variation in practice (NHS England, 2018). Unwarranted variation can occur in different ways: between geographical areas, specialities and population groups (NHS England, 2019). In order to address unwarranted variation, it needs to be identified and changed. This means identifying differences in service provision. NHS England (2019) highlighted the benefits of collecting data and real-time monthly reports that allow staff to view at a glance what a service is doing, identifying what is being done well and what needs improvement.

Within wound care, a study by Guest et al (2015) highlighted that variations in care were contributing to the cost of chronic wounds in the UK. The study concluded that 'clinical and economic benefits could accrue from improved systems of care and an increased awareness of the impact that wounds impose on patients and the NHS'.

In 2012/13, 2.2 million wounds were managed by the NHS at an estimated cost of £4.5–5.1 billion, equal to that of obesity. Two thirds of this cost were incurred in the

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community, and included 18.6 million practice nurse visits, 10.9 million community nurse visits, 7.7 million GP visits, 3.4 million hospital outpatient visits, 97.1 million drug prescriptions and 262.2 million dressings (Guest et al, 2015).

Further analysis revealed that the average clinical commissioning group (CCG) with a catchment population of 250,000 adults managed 11,200 wounds in 2012/13, rising to 15,300 wounds in 2015/16. This equates to the prevalence of wounds growing by 11% annually (Guest et al, 2017). Wound care spend must therefore be controlled to halt this predicted growth, even before savings can be made.

These findings and other evidence point to marked unwarranted variation in UK wound care services, underuse of evidence-based practices and overuse of ineffective practices (Guest et al, 2015; Gray et al, 2018). This offers major opportunities to improve the quality of chronic wound care through innovative solutions that will improve wound healing, prevent harm, increase productivity of staff, and produce financial savings (Adderley, 2018) in line with the requirements of the recent *NHS Long Term Plan* (NHS England, 2019).

The National Wound Care Strategy Programme (NWCSP) has been developed to address the issue of sub-optimal wound care. Currently, wound care in the UK is delivered by a variety of healthcare professionals with a variety of qualifications. This, combined with product choice, budgetary restraints, and limited evidence to support treatment choices, has resulted in unwarranted variation across the UK. This clearly identifies the need for clinically and cost-effective care delivery if increasing demand and reduced funding are to be balanced without reducing the quality of care provided (Markey and Barrett, 2017; Gray et al, 2018).

In some cases, large improvements in the value of health care can be made easily by smarter procurement of services and products (Alderwick et al, 2015), and the implementation of evidence-based guidelines (Ubbink et al, 2014).

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AN ONLINE NON-PRESCRIPTION ORDERING SERVICE

ONPOS, an online non-prescription ordering service for wound management dressings, has been available from Coloplast for more than a decade and is currently used by over 40 trusts in the UK, processing over 300 orders per day (Grothier, 2013). Using the service means that dressings can be ordered from an agreed formulary without the need for a prescription. As part of their commitment to partnership working, Coloplast provides ONPOS software installation and training support.

Coloplast also provides ongoing support in the form of monthly real-time data reports on dressing usage and spend, enabling patterns in clinical practice to be analysed and any unusual activity to be investigated further. Inappropriate product use could then be resolved through the delivery of education and training to inform correct use.

The use of ONPOS has been shown in several trusts to provide a number of benefits to improve the efficiency of wound dressing use and spend in the community, namely:

- Savings against projected growth; North Tyneside CCG reported a total saving of 22% against projected growth within six months of implementation (Milne, 2018), while Dowley and Tomes (2018) reported a 10% decrease in spend
- Reduction in avoidable product wastage (Grothier, 2011; Griffin, 2015; Markey and Barrett, 2017; Milne, 2018; Dowley and Tomes, 2018)
- Increased awareness of dressing cost (Imbirski, 2013; Markey and Barrett, 2017; Dowley and Tomes, 2018)
- Increased formulary compliance ranging from >85% to 99% (Knight, 2010; Grothier, 2011; Griffin, 2015; Markey and Barrett, 2017; Dowley and Tomes, 2018)
- Reduced time spent on prescribing and chasing prescriptions (Griffin, 2015; Markey and Barrett, 2017; Milne, 2018; Dowley and Tomes, 2018)
- Access to real-time data, enabling the identification of areas of unwarranted variation, allowing improved efficiency and areas where a high standard of care is delivered (Grothier, 2013; Griffin, 2015; Markey and Barrett, 2017; Dowley and Tomes, 2018)
- Improved patient experience by ensuring that they have the right product at the right time (Griffin, 2015; Markey and Barrett, 2017; Dowley and Tomes, 2018)
- Promotion of joint working resulting in continuity of care (Grothier, 2013; Griffin, 2015; Markey and Barrett, 2017; Milne, 2018; Dowley and Tomes, 2018).

This paper will now focus on the experience of the Royal Wolverhampton NHS Trust tissue viability service in implementing ONPOS, and will highlight the impact that being able to access real-time data had on reducing unwarranted variation. The data allowed identification of good resource use and areas where product use and spend required further analysis. Detailed analysis in these areas allowed the delivery of bespoke education and training to ensure products were used correctly and according to guidelines. Throughout the process, the trust received ongoing training, education and support from Coloplast in the use of ONPOS and data analysis to optimise dressing use and spend.

ROYAL WOLVERHAMPTON NHS TRUST

The Royal Wolverhampton NHS Trust is an integrated trust and one of the largest providers of acute and community care in the West Midlands. The tissue viability service gives specialist advice, support, education and training to adult community services, which consists of three district nursing bases, one clinic and one foot-health service, and provides wound care for a population of approximately 252,000 adults. As it is an integrated trust, wound care provision to nursing homes and general practices in the trust is under the control of the CCG.

The tissue viability service, headed by the tissue viability lead nurse, is responsible for the delivery of clinically and cost-effective care, ensuring it is evidence-based and high quality, and that patients have a positive experience.

Community health services have reported a steady increase in demand for wound management services nationally, which has led to an associated increase in product spend (National Prescription Centre, 2012; Guest et al, 2015; 2017). This was also experienced at Wolverhampton where the service had seen a rise in wound dressing expenditure year on year for a prolonged period.

The team had produced a number of wound care pathways, but procurement could not supply a user friendly method of analysing the impact of the pathways, using NHS supply chain data.

As a result, the service needed to identify ways to increase efficiency, to halt and ideally reduce the rising costs of dressings. This was not about selecting the cheapest products available, but working in a more efficient and cost-effective way.

At the time of this efficiency drive, adult community services used supply chain to order wound care dressings. The service had previously moved from FP10 to supply chain in an attempt to control costs, however, spend on wound care products had continued to increase. Although supply chain did provide data on product spend, there was a two-week lag, so areas of inappropriate spend could only be identified after the event. This system also relied on someone interpreting the data provided, which added to workload.

A non-prescription ordering system had previously been considered but had been declined by the CCG. However, after further analysis of the benefits of using a non-prescription service — namely, being able to track spend and identify patterns in wound dressing use in clinical practice — procurement gave the go ahead to use ONPOS. The availability of data via real-time monthly reports that allowed analysis of product use and spend was seen as essential information to drive efficiency in line with the *Leading Change, Adding Value Framework* (NHS England, 2018). The ongoing support provided by Coloplast in generating and analysing monthly reports on dressing use and spend, with monthly meetings to discuss any areas of concern, was considered to be a valuable additional resource that would help the service to gain the most benefit from using ONPOS.

'The use of ONPOS had a positive impact on formulary compliance, improving it to 100% as there was no other way to procure dressings; they could not be ordered directly from Supply Chain via the admin team as had occurred in some instances previously. This improvement with formulary compliance was in line with several other trusts in the UK, which had reported this benefit when using ONPOS.'

IMPLEMENTING ONPOS

ONPOS was implemented in September 2018. A day was spent by the Coloplast ONPOS admin support team, putting the wound care dressings listed on the formulary into the ONPOS system.

As the trust was already using supply chain, the transition to ONPOS was then quick and easy. The infrastructure was already in place, with each base and clinic having admin staff (also referred to as 'pickers and packers') who had previously ordered dressings using supply chain. A meeting was held for the admin staff so that Coloplast could deliver training on how to use the ONPOS software. It was decided who could authorise orders via ONPOS. The admin staff then simply logged onto the ONPOS system instead of Supply Chain to order dressings, with order fulfilment proceeding in the same way as before.

BENEFITS OF USING ONPOS

100% formulary compliance

Wound dressings included on the formulary were pre-selected following evaluation of existing evidence that proves them to be clinically and cost-effective. Evidence has shown that preselecting the dressings available greatly reduces nurse time spent on decision-making, while promoting continuity of care (Markey and Barrett, 2017).

Gray et al (2018) reported that clinicians found a closely monitored restricted formulary helped with the selection of appropriate products, with a community nurse stating that: 'you can go for something that costs so much, and something that wouldn't be right… but having that formulary means that we know what we can choose' (Gray et al, 2019).

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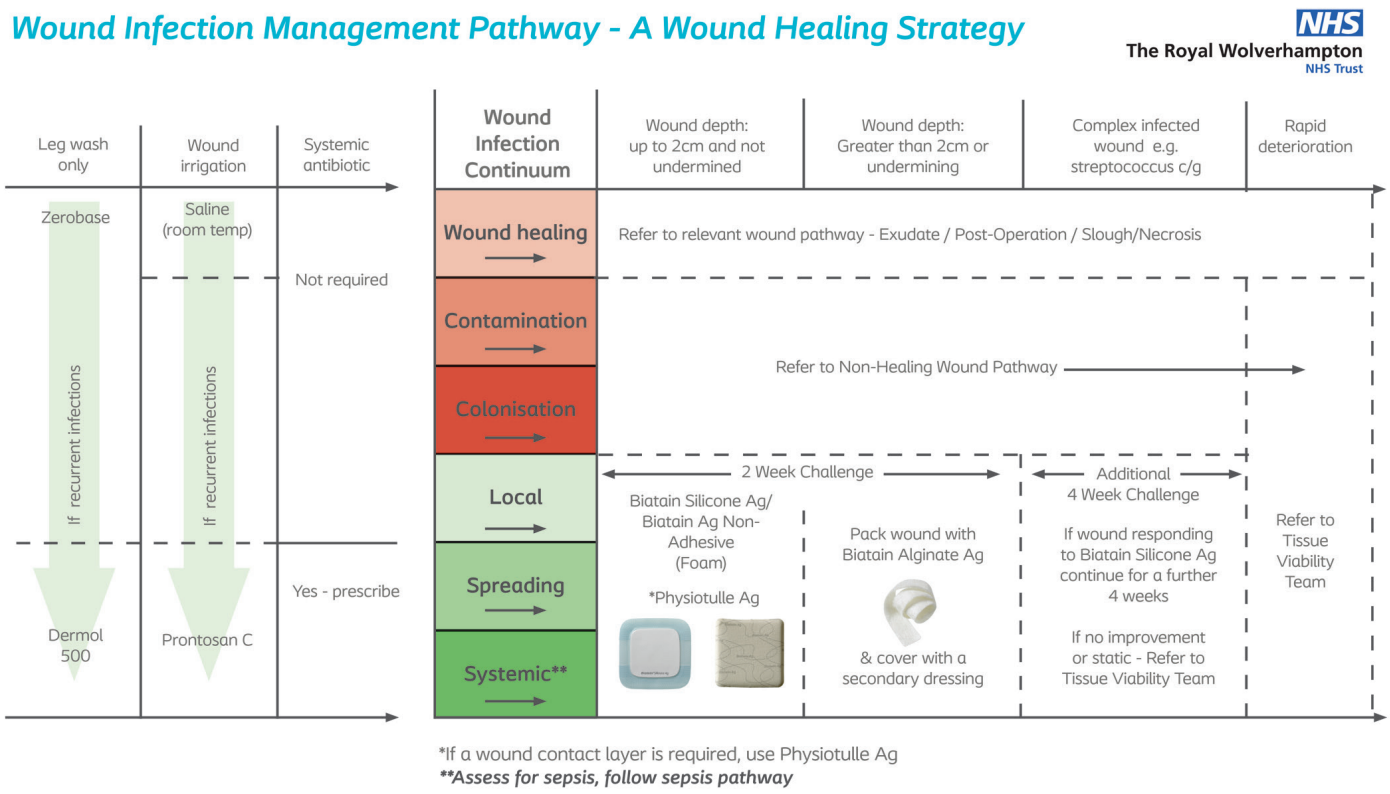

Notes
- Necrotising fasciitis requires urgent surgical intervention - urgent admission or internal referral (It is rare, but life threatening)
- Sensitivity to silver - Refer to Non-Healing Wound Pathway
- For periwound protection follow moisture associated skin damage pathway
- Patients living with lymphoedema - 2 or more episodes of cellulitis in 12 months, prescirbe prophylactic anitbiotic post acute treatment - reduce if no episodes in 1 year

Figure 1.
Wound infection pathway.

formulary compliance was in line with several other trusts in the UK, which had reported this benefit when using ONPOS (Knight, 2010; Grothier, 2013; Griffin, 2015; Markey and Barrett, 2017; Dowley and Tomes, 2018).

However, it is also recognised that formulary compliance does not mean that the dressings listed are being used correctly, and access to the real-time monthly reports generated by ONPOS helped to identify areas for concern in dressing usage and spend.

REAL-TIME DATA

Identification of problem areas

Monthly reports are produced by ONPOS that give a very clear view of dressing spend and use across one or more locations by gathering and analysing spend and usage of product. A monthly face-to-face meeting with Coloplast to review the data allowed the tissue viability service to identify any causes for concern and provide focused training to correct inappropriate dressing use/spend, allowing implementation of strategies to work smarter and reduce unwarranted variation in care provision (Markey and Barrett, 2017; Dowley and Tomes, 2018).

The access to live data and the ability to respond to the findings has been reported to realise instant savings when changing products to more cost-effective alternatives, with no adverse effect on clinical outcomes (Dowley and Tomes, 2018).

Following the implementation of ONPOS in September 2018 in Wolverhampton, three months of real-time data were collected and areas of concern highlighted.

Silver spend

Inappropriate spend on silver dressings was highlighted by Dowley and Tomes (2018) when ONPOS was implemented in Brighton and Hove NHS Trust. Similarly, the three months of data collected in Royal Wolverhampton highlighted a high spend on silver fillers. When practice was looked at, numerous products were being used as fillers unnecessarily. An education event was subsequently held on the appropriate use of silver dressings and fillers.

A pathway for wound infection management was also developed for trust services and formulary products were allocated to stages on the wound infection continuum, to further provide guidance on appropriate silver dressing use (*Figure 1*).

Following this combined approach, the spend on silver fillers dropped from £8–9K per month to £2–3K per month as a result of education and better product usage. The reduced spend from 17/18 pre-ONPOS to spend post ONPOS use in 2019/20 can be seen in *Figure 2*.

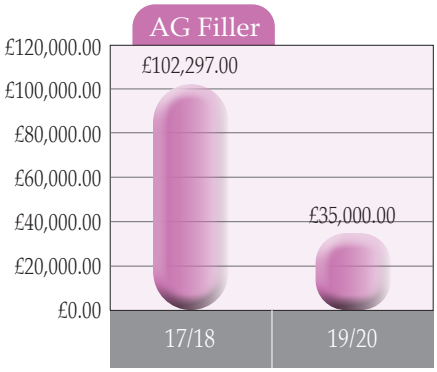

Figure 2.
Reduced spend on silver fillers for 19/20 (based on first five months of 2019) compared to pre-ONPOS spend.

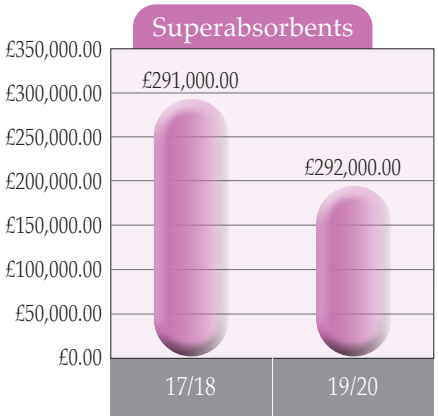

Figure 3.
Reduced spend on superabsorbent wound dressings following implementation of ONPOS.

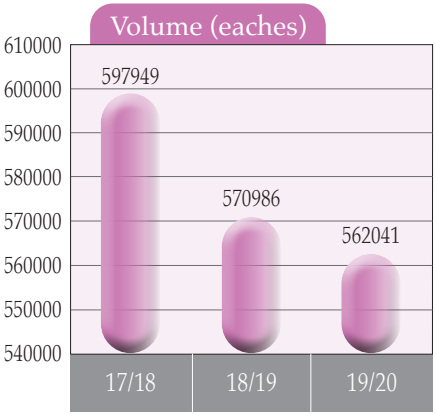

Figure 4.
The volume of dressings purchased was reduced following the installation of ONPOS in 2019/20.

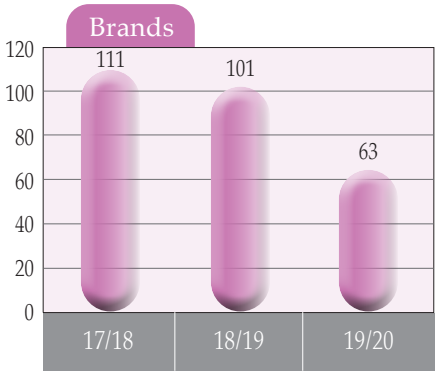

Figure 5.
The number of wound care brands included in the wound care formulary was almost halved following the use of ONPOS.

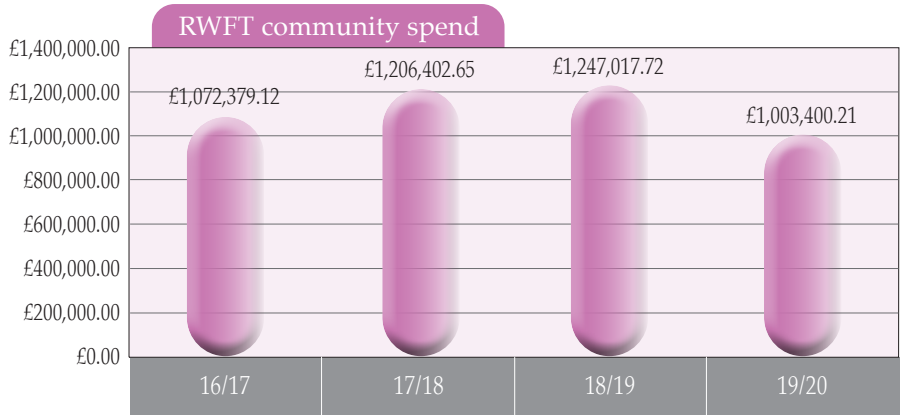

Figure 6.
Predicted savings in wound care product spend in the community in 2019/20, following installation of ONPOS.

Superabsorbent spend

Similarly, visibility of data highlighted a high spend of superabsorbent dressings over a three-month period. Further investigation revealed clinicians reported not having many heavily exuding wounds on their caseloads, yet product usage and spend on superabsorbent products demonstrated by real-time data analysis highlighted a disconnect between clinical practice and procurement. Again, by delivering targeted education in the appropriate use of superabsorbent products, spend was reduced (*Figure 3*).

Cost savings

In the 18 months since its implementation, the use of ONPOS has resulted in significant cost savings.

Data analysis and increased efficiency has reduced the number of dressings ordered by 36,000 individual dressings (*Figure 4*), while the number of brands used has almost halved (*Figure 5*).

Within 12 months of implementation in September 2018, the year on year increase in spend that was seen before ONPOS use was slowed, with a small increase seen for 18/19, and a projected decrease in spend for 19/20 based on figures obtained in the first 19 weeks of the financial year (*Figure 6*). This is a result of improved efficiency and reduced unwarranted variation in clinical practice across adult community services.

CONCLUSION

In the current NHS, there is a need to improve efficiency to maximise restricted budgets while meeting rising demands for services, without compromising quality of care, patient experience and outcomes.

At the Royal Wolverhampton NHS Trust,the cost of wound care dressings was increasing year on year, and in order to drive efficiency, the procurement of dressings was switched from Supply Chain to an online non-prescription ordering service (ONPOS).

ONPOS was adopted in September 2018 and since this time the benefits have been to achieve 100% compliance with the formulary, identification of inappropriate product usage, e.g. silver and superabsorbent dressings, and following education in appropriate use, a reduction in spend for these dressings. In the year since ONPOS was installed, the number of dressing brands has been halved, and the number of individual dressing units ordered has decreased by 36,000. Finally,

cost savings are predicted for the adult community service in 19/20, after a steady growth in costs year on year before ONPOS was implemented. JCN

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KEY POINTS

- Wound care costs are predicted to rise 11% year on year (Guest et al, 2017).
- This means measures must be taken to prevent this increase in costs, even before savings can be made.
- One way to do this is to reduce unwarranted variation, which in the UK results in the under-use of evidence-based practices and the over-use of ineffective ones (Guest et al, 2015; Gray et al, 2018).
- There is therefore the opportunity to improve the quality of wound care to improve outcomes, increase staff productivity and produce financial savings (Adderley, 2018).
- At the Royal Wolverhampton NHS Trust, the tissue viability team provides wound care services to a population of approximately 252,000.
- The cost of dressings was rising year on year, and in order to drive efficiency, procurement was switched from supply chain to an online non-prescription ordering service (ONPOS).
- ONPOS was adopted in September 2018 and in the following 12 months, there was 100% compliance with formulary, the number of wound care dressing brands was almost halved, and the number of individual dressing units purchased was reduced by 36,000. Finally, cost savings for the year 2019/20 were predicted, after a five-year growth in spend year on year.