

Developing and implementing a wound care app to support best practice for community nursing

KEY WORDS

- ▶ Evidence-based practice
- ▶ Digital enabler
- ▶ Mobile app
- ▶ Mobile working
- ▶ Reducing variation in outcomes
- ▶ Wound Care Buddy App
- ▶ Wound care formulary
- ▶ Wound care guidelines

This article describes the development of a wound care mobile App to support district and community nurses in delivering standardised wound care to patients. The article outlines the current challenges in wound care delivery, describes how the digital solution concept was developed, and explains how the wound care mobile App was implemented successfully by the Tissue Viability Team at Hounslow and Richmond Community Healthcare (HRCH) NHS Trust.

The health economic burden of managing wounds in the UK is substantial. A pivotal study by Guest et al (2015) aimed to estimate the prevalence of wounds treated in the UK and to calculate their associated costs. The authors analysed patient records in The Health Improvement Network (THIN) database, for treatment for wounds in the NHS during 2012/2013. The study estimated that 2.2 million wounds were managed in the NHS that year and the cost of managing these wounds and associated comorbidities was calculated as £5.3 billion per annum. The study also found that around 30% of wounds did not have a differential diagnosis, which the authors attributed to the difficulty that non-specialist healthcare professionals in the community experience when it comes to diagnosing wounds. The authors described the need for improved systems of wound care and greater awareness of the impact that wounds impose on patients and the NHS.

The Commissioning for Quality and Innovation (CQUIN) scheme is a payments framework for providers to deliver clinical quality improvements and drive transformational change. April 2017 saw the introduction by NHS England of a CQUIN for wound assessment for community providers for the first time. The aim of the CQUIN indicator for wound care is to increase the number of full wound assessments for all patients with wounds that are not healed after four weeks so that effective treatment is put into place to avoid delays in healing (NHS England, 2016). Delays in wound healing through suboptimal diagnosis and variations in care

may lead to poor outcomes for patients and greater expense for the NHS (Vowden and Vowden, 2016).

A community-focused multiservice survey reported a wide variation in the treatment of complex wounds across different NHS Trusts, with surprisingly high levels of wound care practices that are not supported by evidence (Gray et al, 2018). The authors highlighted significant scope for better value care in both the assessment and treatment of complex wounds. They recommended identifying and disinvesting from products and practice that have little or no evidence and instead emphasising the better use of well-evidenced practice.

A recent study found that community nurses experience difficulties with implementing evidence-based practice and using clinical decision-making tools in their wound care practice (Grothier, 2018). Interviews with some of the nurses in the study revealed that they found time to be a major barrier to accessing and implementing evidence-based practice. The implications of this study are that strategies are needed to overcome healthcare professionals' time pressures to enable them to practise evidence-based wound care.

These studies indicate that new ways of accessing evidence-based information may benefit the healthcare professionals providing wound care.

DEVELOPMENT OF THE WOUND CARE BUDDY APP

Achala Patel, the managing director of Entec Health Limited, has experience of working with UK wound care professionals and has witnessed the challenges

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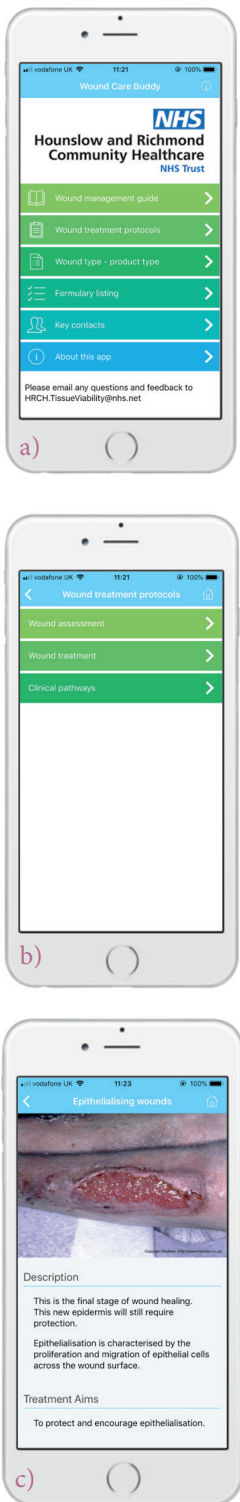


Figure 1. HRCH NHS Trust Wound Care Buddy App screens: home menu (a); wound treatment protocols (b); wound type — epithelialising wounds (c)

they face trying to manage their busy caseloads alongside the need for documenting care, decision making and continuing professional development. She has listened to patients with leg and foot ulcers describe their experiences of unclear treatment aims, delays with referrals to specialists and a lack of continuity of care as a result of different healthcare professionals being involved in their care. She recognised that nurses and other healthcare professionals would benefit from a digital tool that gave them instant access to wound care best practice guidance at the point of care. Wound care service providers in the UK have already established a common practice of developing and sharing wound care guidelines, protocols and formulary listing to support their clinicians. However, in most cases, this information takes the form of printed booklets, intranet or website content. This means the information is not always available at the point of care or is often out of date. This unmet need led her to direct Entec Health to invest in developing a mobile phone App to try and provide healthcare professionals with evidence-based care at the point of care. The wound care mobile phone app concept, known as the Wound Care Buddy App (© Entec Health Limited), was developed and proposed by Entec Health and validated with leading experts and practitioners from the wound care field in the NHS throughout the development process. This has helped to ensure that the solution meets the “real world” needs of the service managers and clinicians.

The Wound Care Buddy App (the App) enables healthcare organisations to publish their wound management guidelines, protocols, pathways and formulary listing information using Entec Health’s secure, cloud-based digital platform. Healthcare professionals can then use the App on a mobile device (iOS/Android) to easily access their organisation’s wound management guidelines and wound formulary product listing at the point of care. The App displays the organisation’s current information on wound assessment, wound treatment protocols and approved wound dressings and treatment products by wound type and category. The App aims to support healthcare professionals to provide standardised care and ensure they are using evidence-based practice for every patient.

The other ambition of the Wound Care Buddy App for Entec Health is to help the NHS and other providers to take advantage of the digital tool as a

widely available and affordable digital enabler. The Wound Care Buddy App solution includes Web-based content management platform so that every provider can purchase the solution and generate their own tailored content using the universally relevant framework for presenting wound care best practice guidance. The aim is to avoid every NHS Trust and provider re-inventing the wheel for a fundamental and common unmet need in healthcare management.

HOW THE WOUND CARE BUDDY APP WORKS

The Wound Care Buddy App’s home menu presents wound management guidelines, treatment protocols and formulary information in a clear, logical manner. This standard framework can be used by every wound care service provider organisation. Users can tap through the layers of information quickly to get practical information on wound assessment, wound treatment and clinical pathways. This gives users fast and easy access to the right information at the right time to support safe, effective care. The Wound Care Buddy App formulary listing information is organised into key product categories and key dressings (Figure 1).

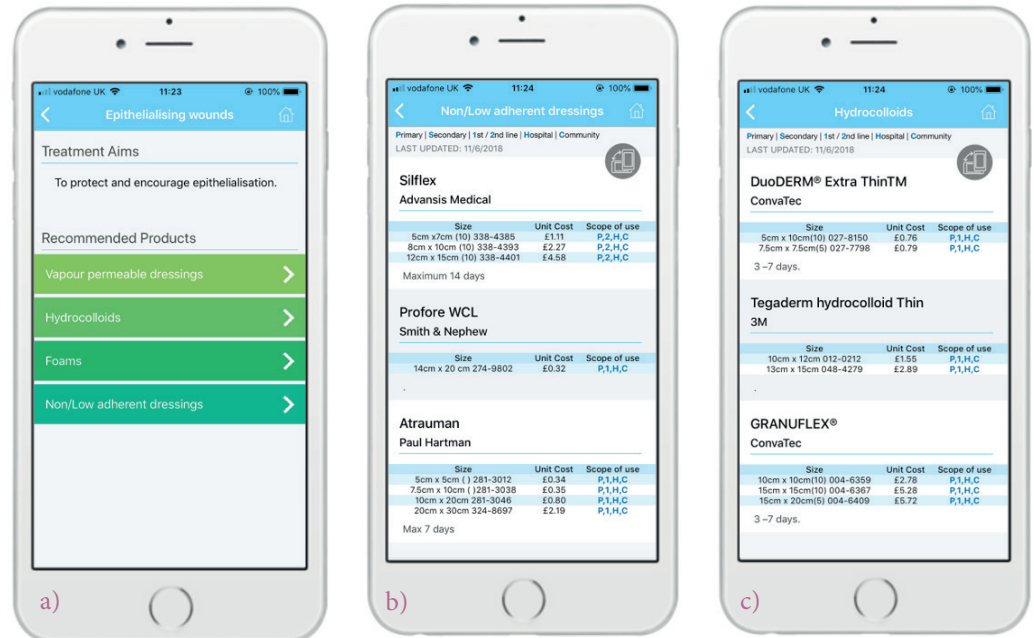
For a given wound type, users can confirm clinical goals and the recommended formulary products. The products are listed showing sizes available, unit cost and an indication of the dressings’ intended use as a primary/secondary dressing and first/second line choices. This aims to help users to rapidly review the recommended wound dressings and treatment choices by wound type to guide appropriate treatment at the point of care (Figure 2). Users can access a link to a Support email, end-user licence agreement and privacy policy via ‘About this App’.

IMPLEMENTATION OF THE APP AT THE HRCH NHS TRUST

In 2017, the Tissue Viability Team at the HRCH NHS Trust began collaborating with Entec Health to implement the new App for the community service. The Trust had begun the process of becoming paperless and was looking to find solutions to allow staff to access clinical information they needed in a quick, simple and digital way.

The Trust had committed to mobile working for the staff and had equipped their clinicians with

Figure 2. HRCH NHS Trust Wound Care Buddy App screens: epithelialising wound treatment aims and recommended products (a); non/low adherent dressings on formulary (b); hydrocolloids on formulary (c)



iOS phones for communications and electronic documentation. The technology used for the Wound Care Buddy means that all staff have the latest national and local policies, procedures and formulary choices at their ‘fingertips’ in a neat and ordered way making the information easy to understand and apply. Nurses no longer have to hold on to guideline documents, helping to avoid print costs, bulky folders and out of date content.

The experiences of the Tissue Viability Team and District Nurses

To implement the App, the HRCH Tissue Viability Service Manager assigned a Tissue Viability Nurse as a clinical lead and the team administrator as a key supporting resource. The service manager and two champions worked closely with Entec Health to create an implementation project plan. The plan covered content creation, testing, sign off, launch communications and follow on briefings. The first stage involved developing and executing a content editing plan using existing, pre-approved content from current wound care guidelines, protocols and formulary. The App content was added directly into the Wound Care Buddy App’s content management Web-based platform, using the easy software interface. Once the content was ready and signed off for the Wound Care Buddy App to go live, the HCRH Tissue Viability Team activated a launch

communication plan which included a launch email and roll-out meetings with ten District Nursing Teams, including the night nursing service, across seven bases. A poster was created and used around the District Nurses’ bases to raise awareness of the HRCH Wound Care Buddy App and encourage adoption by the District Nurses (Figure 3).

The HRCH IT lead liaised with the Entec Health project lead to set-up automatic distribution of the Wound Care Buddy App to staff iPhones, using a Mobile Device Management platform already in use by the Trust. Staff were able to then register on the App using their NHS email and create their own secure password.

The Tissue Viability team, comprising five members, work together to manage the content of the App, ensuring that it is up to date and relevant on a regular basis.

The Tissue Viability Team quickly saw the advantages of the App as staff members soon began to comment that ‘the treatment protocols have aided and benefitted their clinical decision making.’ In addition, District Nurses have reported that they are feeling more confident to act independently and equipped with the right information to assess a wound and choose appropriate treatment when with the patient. In a small focus group held in October 2018, users confirmed that the App helped them to follow HRCH wound care guidance without the need

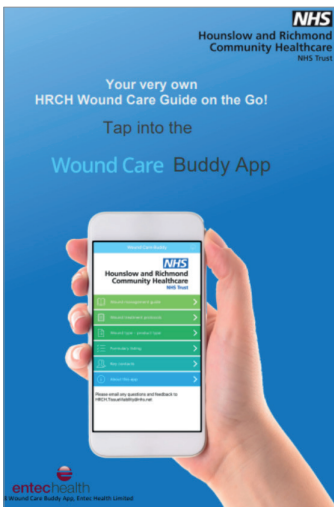


Figure 3. The poster used around the District Nurses’ bases to raise awareness of the Wound Care Buddy App

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to seek further input from their TVN colleagues. This in turn has helped to release specialist time and whilst the Tissue Viability Team are still receiving a high number of referrals, they are more appropriate complex referrals.

Improving skills and confidence

Each District Nursing team is made up of several nurses with varying degrees of skills and knowledge. Whilst the App supports all nurses regardless of knowledge and skills, the section containing wound assessment guides, wound treatment guides and the Trust clinical pathways are particularly helpful for less experienced staff who are still in the process of building up experience and developing their skills. The App not only supports District Nurses with their clinical decision making but with practical matters such as documentation, for example when completing the electronic wound assessment templates on the patient’s records. A comprehensive assessment, in turn, ensures accurate treatment planning thus improving patient care. HRCH has adopted a policy to introduce the App to new starters as part of their induction plan to help with rapid assimilation of Trust policy.

Enabling infection management

The infection management section is extremely useful in informing clinical decisions about when

it could be appropriate to treat a patient with antibiotics. All clinicians, including Community and District Nurses, need to be aware of the issue of antibiotic resistance which is one of the most significant threats to patients worldwide due to their overuse and inappropriate prescribing (World Health Organization, 2016).

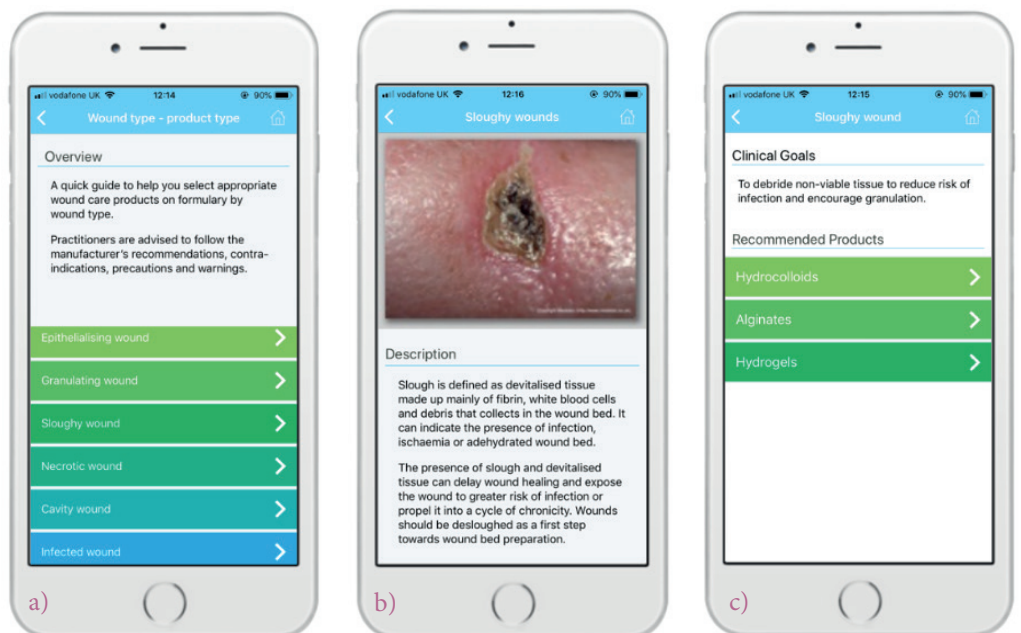
Up-to-date wound care formulary

Another section which is high in user demand includes the Trust formulary. This section is accessed by many users on a daily basis. Printed wound care formularies can become quickly out of date and, in the past, changes were often slow to filter through to the whole team. By contrast, changes to the Wound Care Buddy Formulary are easy to make on the Web-based content platform and instantly available to all Community and District Nurses, whether prescribers or not.

Wound type—product type

Another important and popular section is ‘wound type-product type’. A nurse can look up the type of wound to find the recommended product to use, based on evidence-based practice and the Trust’s Formulary (Figure 4). There is a comments section by each product and HRCH includes guidance on length of time a dressing can be left in place and, importantly, any contraindications. Having an easily

Figure 4. HRCH NHS Trust Wound Care Buddy App screens: wound type–product type (a); sloughy wounds description (b); sloughy wounds – recommended products



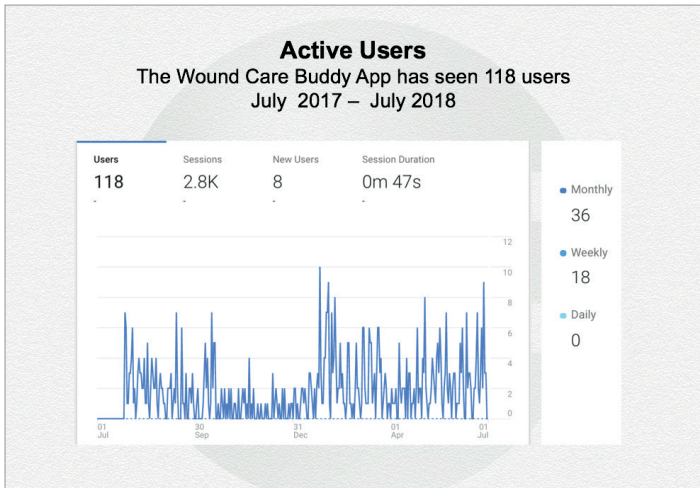


Figure 5. Analytics reveal that the App has 118 active users, with an average of 36 active users each month. There have been 2,800 active sessions, each lasting an average of 47 seconds

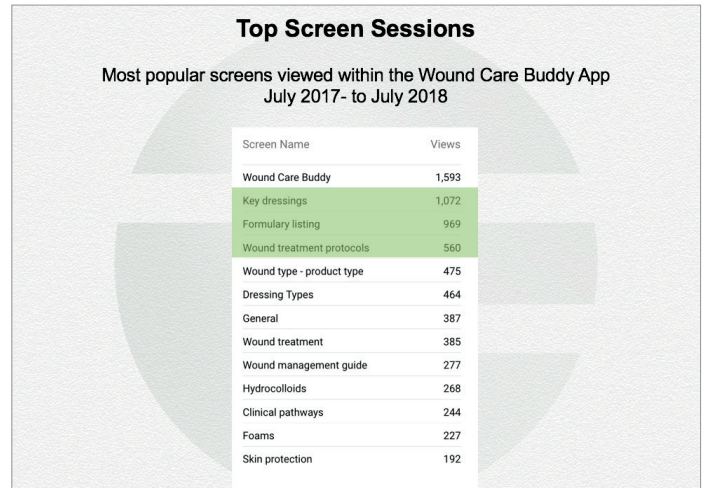


Figure 6. The most popular screens viewed in the App

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accessible formulary supports cost-effective use of dressings and enables continuity of care. HRCH is deploying the App to ensure that treatment is based and informed by the same protocols and products, regardless of the prescriber.

ANALYSIS OF APP USE AT THE NHS TRUST

In the 12 months since the use of the App was implemented at HRCH in July 2017, there have been 118 active users, representing 100% adoption by the user group, with an average of 36 active users each month. The App has had over 2,800 active sessions, with each lasting an average of 47 seconds (Figure 5). This indicates that healthcare professionals are able to find the information they need very quickly. The most popular screens viewed in the App are key dressings, formulary listing and wound treatment protocols (Figure 6).

POTENTIAL LIMITATIONS AND FUTURE DEVELOPMENTS

There are, as with any innovation, barriers to overcome. The healthcare services are relying increasingly on digital information; however positive this may be, change can be difficult for some to accept and the App does require staff to embrace the use of smartphones and mobile working.

There is significant scope for adding further enhancements to the App. HRCH NHS Trust has

an ongoing collaboration with Entec Health and are putting forward ideas for new developments.

CONCLUSIONS

The pressures and time constraints on both the Specialist Services and Community Nurses has increased dramatically over the last few years. The Trust has a high proportion of over 80-year olds and caseloads are constantly increasing in numbers. The complexity of care required as people live longer with multiple comorbidities means nurses have to provide more complex care in patient's homes. Whilst technology can never replace the many skills and knowledge of Specialist Nurses and District Nurses, it can support and inform our clinical decisions to ensure the best possible patient outcomes with the resources available. Nurses can use the App on a mobile device at the point of care, giving them quick access to their organisation's wound management guidelines and wound formulary product-listing information. This also releases capacity for the Specialist Nurses to support the Teams with the most complex patients and complex wounds.

At a time when the NHS has significant cost pressures, which will only grow, it is important to adopt digital tools that can enable cost-effective wound care practice, continuity of health care and a positive patient experience through evidenced-based practice.

