

Reaching out for a higher level of knowledge and treatment of wounds: how to get there?



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To gain knowledge and have a high quality of practical skills in wound care is a challenge. The experience in clinical practice is that the basic nurses have a lack of self-confidence when performing wound care, as well as a lack of skills. These challenges have grown bigger over a number of years, and action is needed. To deal with the challenges, Odense University Hospital, Denmark, has developed a blended learning concept in wound care. The concept contains an e-learning module combined with a 2-day study visit in a department of wound healing. A third part of blended learning is four to six meetings with different themes. The meetings contain workshops and walk through different cases. This paper aims to present an overview of the wound care challenges in clinical practice, as well as possible solutions to those challenges.

Over the years, the world has seen an increase in the older population, and this also affects the number of patients with complex health needs, comorbidities and complex wounds. The implications for the healthcare services are numerous, particularly due to a shift from acute to chronic illness, which accompanies old age (Levine, 2020).

Prevalence surveys in Denmark indicate the presence of three to four people with one or more wounds per 1,000 population (Gotttrup et al, 2013; Jorgensen et al, 2013). Most of the chronic wounds are treated in non-acute healthcare settings, such as nursing clinics/homes or home care. But a number of people with wounds also require treatment at hospital. These populations often comprise chronically ill patients with complex wounds, who encounter worsening of the wounds as the consequence of insufficient wound care. One study indicates that between 27% and 50% of hospital beds are occupied by patients requiring some kind of wound care management (Posnett et al, 2009).

Odense University Hospital (OUH) is one of four university hospitals in Denmark and houses 41 departments and 1,046 beds. OUH is one of the largest healthcare education and training centres in Southern Denmark and consists of two hospital units: one in the city of Odense, and one in the town of Svendborg,

situated approximately 30 miles south of Odense.

The Department of Plastic Surgery, within which you have the University Center of Wound Healing, has organised courses in basic wound care since 2014. A total of 18 courses over 6 years have been completed, with an average of 15 participants per course.

OUH appointed a wound care specialist nurse in 2014, whose task it was, and still is, to reduce the in-house incidence of pressure ulcers (Fremmelevholm, 2019). Every department at the hospital has to appoint a nurse or a nurse assistant, who is dedicated to the work with pressure ulcer prevention, and for most departments, also dedicated to wound care in general. The specialist wound care nurse holds meetings every 3 months with the aforementioned dedicated clinicians to promote networking, sharing ideas and to increase general knowledge of wound care and pressure ulcers, wound dressings and to present new evidence-based knowledge. The dedicated clinicians are then in charge of teaching and handing down knowledge in their own departments.

Knowledge of and practical skills in treatment of wounds does not seem to be a priority in basic nurse practice, despite different initiatives to optimise the knowledge of wound care in the entire hospital.

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Box 1. Case scenario.

The nurse sees a large dressing on the medial side of the patient's left leg. The dressing does not appear to have been changed recently. There was no information about a wound in the patient report. The nurse must take care of the situation, but does not feel very confident about it. Maybe it would be safer to call the wound care specialist nurse?

Unfortunately, this story is just one of many, and as a wound care specialist nurse working in a large hospital, it is worrying that many basic care nurses do not see treatment of wounds as a part of their basic nursing duties. This paper aims to present an overview of the challenges in clinical practice, as well as possible solutions to those challenges.

Optimising wound care over a more broad range could probably lead to faster healing and perhaps increase the general quality of care at the authors' hospital.

Challenges in clinical practice

The Department of Geriatric Medicine in Svendborg is also experiencing these challenges in clinical practice. The two dedicated wound care nurses, uncovered an uncertainty in wound care practice among their colleagues, especially when the appointed wound care nurse had a day off. A platform where their colleagues could get support in wound care was needed [Box 1]. In addition, the two dedicated wound care nurses experienced that uncomplicated wound care was very time consuming for them as dedicated wound care nurses. The lack of knowledge among basic nurses could, in worst-case scenarios, have a negative impact on patient safety, causing delayed wound healing, prolonged admission and unnecessary patient distress (Posnett et al, 2009).

The challenges are also described in the literature. A study by Blackburn et al (2019) summarises the same challenges as seen in Svendborg. Tissue viability nurses (TVNs) were interviewed about their field of work to understand the current practice of wound care. In the study, the TVNs explained that their practical skills in wound care were optimised by actual 'hands-on' experience, and by means of directly monitoring their more experienced colleagues. With regards to dressings, it was the TVNs' experience that basic nurses are more interested in dressings, rather than learning the aetiology of the wounds. Among the basic nurses, the TVNs also discovered a lack of knowledge and understanding about wound care.

Furthermore, the basic nurses showed a lack of confidence in practicing wound care. The lack of confidence is described as if the basic nurses rely on the TVNs to make decisions for them about wound care and choice of dressing, instead of

using their own knowledge to underpin decision making. The basic nurses call the TVN if the wound suddenly looks different. Obviously, it is easier to call a TVN than to make assessments and decisions themselves.

TVNs want basic nurses to take more responsibility in wound care and they fear that their role as a TVN is actually limiting the skill acquisition among basic nurses, who automatically rely on the TVN in every situation involving wound care (Blackburn et al, 2019).

The study describes the challenges in clinical practice, which most likely are similar to other organisations with a high prevalence of people with wounds. The basic nurses seem to require more knowledge and need to feel more confident in wound care management.

It is challenging to implement evidence-based wound care into basic nursing practice, with the problems mainly centring on the lack of knowledge of wound care and lack of wound assessment in clinical practice (Huff, 2011; Ayello and Baranoski, 2014).

What to do?

In clinical practice, it raises the following questions:

- When the courses in basic wound care are not enough, how do we manage these challenges in clinical practice?
- How can we increase the knowledge of wound care among the nurses and, in addition, increase the practical abilities in wound care?
- How can initiatives to improve wound care even further, be made available in clinical practice?

The efficacy of the different forms of teaching wound care is not present in the literature. Studies found that even though education in evidence-based clinical wound care resulted in improvements and increasing confidence in one's own abilities, it diminished over time (Adams and Whittingham, 2016).

In 2018, the Department of Geriatric Medicine in Svendborg was introduced to an e-learning programme containing basic wound care. The programme comprised of 10 separate modules about the wound healing process, compression, wound treatment products and different types of wounds. It also contained a module with documentation of wound care and a module about telemedicine. Each module takes about a half an hour to an hour to complete.

A benefit of using e-learning is linked to the fact that the concept is widely available to all

Box 2. The different approaches in blended learning.

- E-learning about basic wound care
- Study visit in the Department of Wound Healing
- 4–6 focus meeting per year with different themes
- Supervision to the dedicated wound care nurses in their own department

nurses, both the dedicated wound care nurses and the basic nurses in the organisation.

Adams and Whittingham (2016) evaluated students' learning outcomes, after completing an online wound care module. They found the module were successful in empowering students to provide evidence-based wound care. The students also described their learning as transformative, which referred to a process of critical reflection in connection with wound care. However, whether or not the wound care module was improving clinical practice, would call for further research, maybe by observation of clinical practice.

A systematic review conducted by Roleau et al (2019) looked at the effects of e-learning on nursing care among nurses. Disappointingly, they found that the effects of e-learning mainly was reported in terms of nurse reactions, knowledge and skills, and not how the learning could be transformed into change in wound care practice and the effects on patient outcome.

At OUH, the authors have developed a blended learning concept with the purpose to change the practice and to affect the quality of wound care at our hospital [Box 2]. The blended learning concept can contribute to more bedside training in the departments, which can positively affect the clinical practice. Blended learning is an approach to education that combines online educational materials with opportunities for real-world interaction. The blended learning concept in wound care contains the e-learning modules combined with a 2-day study visit in the University Center of Wound Healing targeting the other department's dedicated wound care nurses. The study visit must also contain training in wound cleansing, how to choose the right wound dressings, as well as description/documentation of the wound. The aim of the study visit is to increase the competencies of the dedicated wound care nurses, so they feel more secure and confident in providing wound care for patients admitted with wounds. The dedicated wound care nurses can use the same concept in bedside training in their own department.

A part of blended learning is four to six meetings a year with different themes, which will be provided by the wound care specialist nurses at OUH. The meetings contain workshops, walk through different cases, and focus on challenges in clinical practice. The meetings are targeting all dedicated wound care nurses and all basic nurses.

As a follow-up and supervision, it is recommended that the wound specialist nurse from the Department of Plastic Surgery visits all the dedicated wound care nurses in the different departments within the hospital.

How to measure?

As implementation of blended learning began on March 1, 2020, the authors have no measurements of outcome — yet.

Before implementing the blended learning, the Department of Geriatric Medicine in Svendborg conducted a survey to measure the baseline in the basic nurse's knowledge in wound care. The survey contains questions specific to the knowledge in the e-learning module. The survey is sent to all basic care nurses before the start of the e-learning course, and will be repeated 6 months after implementations and 1 year after base-line measurements. Results from the survey in Svendborg gives an overview of basic care nurses knowledge in wound care before, during and after participated the online e-learning in basic wound care.

The Department of Clinical Development and the Department of Plastic Surgery have conducted a questionnaire to evaluate blended learning concept, each approach separately. The results show to what extent the basic nurses have increased their knowledge and competencies within wound care. The questionnaire is sent electronically to all nurses after participating in blended learning.

A higher level of knowledge and treatment of wounds is, however, difficult to measure in clinical practice. During the past 2 months, the wound care specialist nurse has listed up all the telephone calls. The list contains what the call is about, as well as the numbers of calls. After implementing the blended learning, the authors hope to see that the request for assistance becomes more appropriate and relevant. Nevertheless, the number of enquiries may increase due to the lack of initial awareness of the blended learning concept.

Compared to now, it may be relevant to examine the use of dressings (i.e. which ones that are chosen and the numbers of dressings used in different departments).

Overall, the authors hope that blended learning contributes to an increased focus on wound care, along with more confidence in wound care among basic nurses. This initiative could hopefully lead to an elevated standard of wound care across all departments at OUH.

The results of the different measurements and the effect of blended learning are expected to be published in early 2021.

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