Knowledge development and research utilization in evidence-based wound care
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Chapter 1

General introduction and outline of the thesis
GENERAL INTRODUCTION

Patients visiting health care institutions (e.g., hospitals, outpatient clinics, or wound expertise centers) deserve a good quality of care. Therefore, the decisions that caregivers make should be of the best possible quality, because these directly influence the health of patients. This may seem logical, but it is unclear what exactly constitutes good quality in daily practice.

Variety hampers quality of care

This is especially true in the realm of wound care. Here, quality of care is confounded by a large variation in wound types, physicians’ and nurses’ preferences, and the competencies of the caregivers involved. In addition, the number of types of available wound dressing materials is overwhelming and the availability of high-quality evidence and evidence-based guidelines is disappointing. Moreover, a variety of stakeholders with different interests play a role in wound care, such as general physicians, clinical specialists, (wound care) nurses, dressing manufacturers, buying departments, and insurance companies.

This situation is likely to result in suboptimal care for the many patients suffering from wounds, and it is a challenge for evidence-based decision-making. Only recently some national interdisciplinary initiatives have started to survey and counteract this variety. However, if the variety of wound types is an important factor in causing the variations in wound care, then less variation should be expected in the care of ‘standard’ wounds. For this purpose we chose a seemingly uniform type of wound that should be simple to classify and treat, i.e., donor site wounds after split-skin grafting.

Sources available to decrease variation

Many ways of decreasing the variation in care have been described, of which many refer to research utilization in daily clinical practice during the treatment phase as well as to education. In this thesis we will focus on a few of these sources.

A first-stage method of reducing variation is to use or develop valid and reliable classification instruments. These measures of (wound care) outcomes are essential in clinical practice as well as in scientific research. The aim of such assessments should be to arrive at an unambiguous classification in order to make a suitable treatment decision.

To further reduce variation in care and to facilitate evidence-based clinical decision-making, well-designed and well-conducted studies are needed. In particular, a higher methodological quality of randomized clinical trials (RCTs) will also increase the value of what are often derogatorily called “unhelpful Cochrane systematic reviews of wound care.” For this purpose, a standard framework for wound care studies, focusing on
design and reporting, may help to improve the standard of research and transparency about the methodology of research.

On the other hand, some wound care systematic reviews are available that can be considered as high-quality evidence as they provide helpful results, which does make evidence-based treatment decisions in wound care possible\textsuperscript{5-8}. In this situation the newly generated evidence should be implemented in practice and in education. This would enable caregivers to keep abreast of current professional knowledge, and to apply research evidence in their daily practice in order to deliver the highest possible quality of care.

Overall, this thesis is a compilation of interdisciplinary efforts to contribute to the body of knowledge on wound care, and it aims to promote evidence-based decision-making in order to reduce unnecessary variation in wound care. Therefore, we investigated (1) the extent of treatment variation; (2) the niches in available evidence; (3) and strategies to decrease this variation in the care of donor site wounds. We aimed to collaborate with as many stakeholders as possible (e.g., doctors, wound care nurses, educators, and manufacturers), as stakeholders are pivotal in promoting knowledge development and in the utilization of research into evidence-based wound care.

OUTLINE OF THE THESIS

To appreciate the variation in the current care of donor site wounds after split-skin grafting and to identify the most commonly used dressing materials we first conducted a national survey (Chapter 2). Several reasons may be advanced which explain why current wound-dressing policies are not standardized, for instance, the absence of a useful and reliable classification tool. Therefore, in Chapter 3 an inter-observer analysis is described, in which the usefulness of the well-known Red-Yellow-Black scheme for classifying donor site wounds is evaluated.

Another reason for the variations in practice could be a lack of convincing evidence of the effectiveness of different dressing materials. We conducted a Cochrane systematic review (SR) to find the available evidence on the effectiveness and adverse effects (healing, pain, infections, itching, and cosmetic appearance) of the dressing materials most frequently used for the treatment of donor site wounds (Chapter 4). Because the design and conduct of RCTs in wound care are considered a challenge given the variety of wound types, dressings, and patients\textsuperscript{9}, we set out to formulate minimum requirements for proper clinical trials in wound care and designed a framework to deal with methodological problems; this is described in Chapter 5.

Based on the large variation in the practice of dressing usage and the paucity of evidence revealed in the SR, a new randomized clinical trial (RCT) appeared expedient.
The trial protocol and the results of this RCT, called “the Rembrandt trial”, are described in detail in Chapter 6 and Chapter 7.

Caregivers mostly focus on wound healing. However, scars also have a psychological impact and can affect the patient’s quality of life. Therefore, in Chapter 8 we have described an inter-observer and patient analysis carried out to investigate the agreement between caregivers and patients on the cosmetic outcomes of the scar caused by the donor site wound using the Patient Observer Scar Assessment Scale (POSAS). In addition, we investigated which POSAS items best correlate with overall cosmetic satisfaction with the scar, which can be important for clinical decision-making in terms of what to focus on when pursuing scar satisfaction.

Not only should new evidence be generated where it is lacking, but already available evidence, particularly if it is compelling, should also be internalized by all stakeholders in wound care. This is a prerequisite for eventual evidence-based patient care. In Chapter 9 we have described how we carried out a national survey to investigate the awareness and use of available evidence on wound dressings among the stakeholders.

When looking into the near future, the boundaries of the responsibility of nurses will change and task substitution is likely to occur. Furthermore, the competencies of wound care nurses and the ideas about the ideal competencies differ widely. We therefore undertook a Delphi study among healthcare professionals in several European countries (Chapter 10) to reach a consensus about the desired competencies of specialized wound care nurses.

Finally, Chapter 11 presents a general discussion that puts the results of the studies in this thesis into a broader context.
REFERENCES


