Learning About Wound Management: The Clinical Effectiveness Model

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Summary

Over the last century, nurses' involvement in wound management has ranged from that of following strict dressing regimes to autonomous practice [1]. In the past, nurse education tended to reinforce the expectations of the time. An adherence to apprenticeship-style training, whereby nurses often had little understanding of the effects of the dressing they were applying to a wound, contributed significantly to a theory-practice gap in wound management. Nurses were not actively involved in the decision-making process.

This paper reviews the means by which nurses have learned wound management skills in the past. It also illustrates the use of the clinical effectiveness model in the education of advanced wound management practitioners. The benefits of using this model as a basis of teaching include encouragement of evidence-based practices in the workplace, a breaking down of research barriers and a sharing of the skills and knowledge of experienced clinicians intimately involved in the care of clients with wounds [2].

Introduction

Wound management has changed considerably over the centuries [1]. In recent years, as the understanding of wounds and wound healing has increased, a plethora of wound care products have become available to clinicians [3]. And, while many of the products and treatments used in the past were based on creativity and trial and error, the increasing availability of well-controlled clinical trials and scientific studies means that wound management decisions can now be better informed. That said, many clinical decisions continue to be influenced by tradition and the experience of individual practitioners rather than scientific data [1].

This paper will examine the role of nurses in wound management over the last century, and how they have learned about it. In addition, it is pertinent to consider the relationship between nurses, evidence-based practice and decision-making processes within wound management today. One way of encouraging the relationship between nurses and evidence-based practice is through use of the clinical effectiveness model (CEM).

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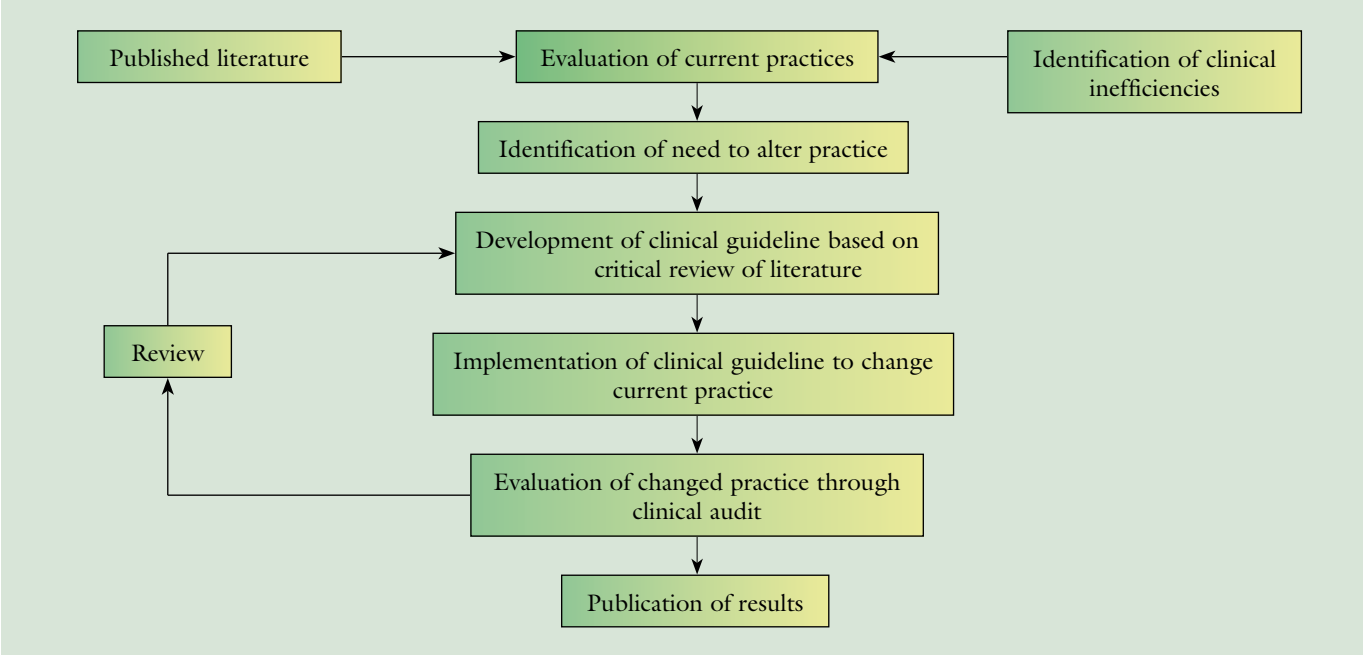
Clinical effectiveness has received considerable attention within the United Kingdom in recent years [2, 4, 5]. The CEM consists of a number of stages in which current practices are evaluated by comparing them with best practice recommendations, as found in the literature. Clinical guidelines specific to the clinical environment are then formulated, implemented in the workplace and reviewed through auditing. The process is outlined in Figure 1.

Learning Wound Care Skills in the Past

In the past, many products have been used to aid the body in its healing process [1, 3, 6]. Some appear to have worked, while others, such as dung, seem of dubious value. Indeed, much attention is currently being paid to one ancient remedy, honey, in order to further understand its healing properties [7]. The way such pro-ducts were applied, and the length of time the dressings were left in place, varied considerably, ranging from almost constant interference with the wound, such as 4th-hourly regimens, to leaving it undisturbed for a number of days. It would seem that the rigidity of a dressing regimen influenced practice, as op-posed to assessment of the wound in determining the dressing requirements of that wound.

This rigidity of practice in the past is better understood when viewed in the context of the traditional nurse-doctor relationship. Over the last century, nurses have moved from

Figure 1. The clinical effectiveness model [4,5].



assisting the doctor with dressing rounds to undertaking a major role in the decision-making process of wound management. For most of this century, nurses had primary responsibility for carrying out dressings, while decisions regarding what was to be used, and how often, remained those of the medical profession [8-10]. Nurses were not encouraged to question or challenge doctors' directions, so rigidity of practice developed. This had a significant effect on the way nurses viewed wound manage-ment, and the traditional emphasis placed on the actual dressing technique [11].

Nurses learned how to do dressings as part of their apprenticeship style of training. During the early decades of this century dressings were taught informally on the wards rather than as part of a formal lecture. There seems to have been considerable variation in technique internationally, although the basic principles of asepsis were adhered to in all methods [8-10]. Under this apprenticeship type of training, dressings were learned through watching more senior nurses undertake the procedure, then being supervised for a couple of procedures before being allowed to perform a similar dressing unsupervised. As procedures became more complex, the same process was repeated [11]. This process of demonstration and supervised practice became the basis of nurse training and staff in-service when the latter became available later in the century.

While the process remains an important method of teaching practical skills, it is usually concerned with the technicalities of a skill only, and does little to improve understanding of the under-lying principles and rationales [12]. This approach has therefore contributed to the theory-practice gap evident in many aspects of nursing practice [12]. Students in particular have been concern-ed mainly with perfecting the 'right' technique, as opposed to comprehending the effectiveness of any wound management techniques [13]. For the latter information, nurses have often turned to journals and textbooks and undertaken courses such as those listed towards the back of this journal. And, as nurses have become accountable and responsible for wound manage-ment beyond the application of a dressing, so their need for such courses has increased.

One of the more recent developments within wound management internationally is the advent of the wound care specialist [14]. In Australia, a number of institutions now employ nurses in this role, although there seems to be little consensus regarding the title. Nurses undertaking such a role must have a thorough understanding of wound healing, wound products and wound care techniques. Further, their responsibilities include coordinating wound management practices within a multidisciplinary team, educating staff, reviewing wound documentation and prevention procedures, and undertaking research [15]. In order to prepare nurses for this role, Central Queensland University (CQU) is offering a 3-year Clinical Master's program which involves using the CEM to teach advanced wound management. This approach helps clinicians meet the requirements of a wound care specialist.

Clinical Effectiveness

Clinical effectiveness is a systematic process of obtaining appropriate evidence, implementing it and evaluating its impact on current practices. The CEM allows clinicians to actively seek, implement and evaluate new – and reassess existing – practices in a systematic way that ensures the best outcomes for patients, clinicians and administrators using the resources available [4].

Clinical effectiveness, then, involves the clinician developing a number of essential skills: firstly, the ability to seek information on a specific issue by completing a literature search. Literature searches and systematic reviews provide the evidence. Sources such as the Cochrane Collaboration library are highly advantageous to the searcher [5]. Once the evidence is collected, the clinician must be able to critique and analyse it [5]. From such a literature review, the clinician can draw conclusions and make informed decisions, based on the available evidence, for particular clinical problems or issues [16].

The second skill necessary to implement clinical effectiveness is the ability to develop clinical guidelines, which should be clear, simple to follow and relevant to a specific clinical environment. They should help staff achieve consistency of clinical skills related to a particular wound management practice issue. Clinical guidelines have been published in many clinical areas, nationally and internationally, with guidelines for pressure ulcers but one example [17]. However, if guidelines are to be effective in a specific location, they need to be reviewed and adapted to suit the institution concerned [5].

Once guidelines have been introduced, the process demands that the clinical decision be evaluated. This is usually achieved through a process of auditing [18], which tells the advanced wound practitioner whether the guidelines has been implemented successfully and provides an opportunity to systematically review the guidelines in question [19].

The process of formulating nursing protocols and procedures has been more or less evident within the clinical arena for some decades, on both a formal and informal basis [20]. However, it is suggested that nurses have seldom based their practice on the best available evidence [21]. The CEM encourages nurse practitioners to seek a broad base of evidence in their decision-making initiatives. This in turn minimises wide variations in practice and the risk of deciding in favour of ill-founded prac-tices [21]. Thus, the CEM formalises the decision-making process and advocates documentation of practices by way of guidelines and auditing.

The CEM in Wound Management

In the author's opinion, there would be significant advantages if adoption of the CEM by wound practitioners was more widespread. They include greater consistency of practice, encouragement of research and dissemination of information relating to the practice of wound management.

Clinical guidelines improve consistency of practice by outlining a pathway based on relevant research, to assist in clinical decision-making [20]. Hence, they negate the need for clinicians to make decisions based on an individual reading and assimilation of the literature [21]. It should be noted, however, that clinical guidelines are just that – guidelines – and are not meant to override nurses' clinical judgement in specific circumstances [20].

To develop guidelines one must locate the appropriate research literature, a process facilitated by the use of systematic reviews. However, as noted by Cullum *et al* [22] in their review of leg ulcer research, much research is of dubious value, due to a lack of methodological rigour. Hence, wound clinicians need to exercise caution when using the research literature to develop guidelines.

The CEM encourages nurses to overcome what, for many, is a reluctance to use research findings or undertake research projects. The barriers at work here have been well-documented and include cultural, organisational and individual factors [23]. Use of the CEM encourages practitioners to become more familiar with the research literature by searching for and reviewing studies. Further, it introduces clinicians to a range of data-gathering and analysis techniques used in clinical audits. Hence, the process provides a good grounding for clinicians wishing to undertake clinical research in their area of expertise and/or as part of postgraduate studies.

Encouraging clinicians to publish the results of their clinical audits would significantly complement the scientific papers and clinical trials currently available. Practising clinicians especially would find reading about the successes (and failures) of others in similar circumstances of immense benefit. In addition, dissemination of specific practice guidelines could further stimulate research initiatives that focus on the clinical application of wound management.

Clinical Master's in Wound Management, CQU, Using the CEM

The CEM is used as a teaching strategy in an advanced wound management program at CQU. This approach gives students a better understanding of wound management issues and provides them with the management skills required to implement evidence-based practices within their work environment.

One of the roles of the wound care specialist is to implement change within the workplace. As Batstone and Edwards [19] have noted, there must be good reasons for changing clinical practice if the change is to be successful. Since the CEM is aimed primarily at encouraging evidence-based practice within the clinical arena, it provides a good framework within which ad-vanced practitioners can learn many of the management skills they will require as wound care specialists.

Throughout the CQU program, students are asked to identify areas of practice that would benefit from further research, and to relate the various stages of clinical effectiveness to the management of people with wounds in acute, long-term and community care settings. For example, while critically reviewing the literature on burn management, students may be asked how they would implement a practice guideline for the initial treatment of burns within an accident and emergency department. In fact, students who complete the Clinical Master's program in wound management through CQU do undertake a research project as the culmination of their studies.

Conclusion

The role of nurses in wound management has altered significantly over the last century. While they remain the primary applicators of dressings, their involvement in decisions on what to apply, and when, is now much greater. Today, nurses can undertake an advanced practice role as wound care specialists. This paper has reviewed the development of the nurse's role in wound management and outlined a model to assist in the edu-cation of advanced practitioners aspiring to be wound care specialists. That model, based on the concept of clinical effectiveness, encourages clinicians to explore the research literature and develop and audit clinical guidelines. It has been postulated that encouraging clinical effectiveness in wound management will decrease variations in practice, promote clinical research and help disseminate the wound management activities of practising clinicians. In this way, evidence-based practice is supported, to the ultimate benefit of those seeking treatment of their wounds.

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