

The need for EU standards in wound care: an Irish survey

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Abstract

Background: In Ireland there is no strategy or standardised policies for the management of wounds. **Objective:** This study aimed to describe the nature of wounds managed, identify the providers of wound care advice, determine the existence of policy/guidelines and examine costing issues. **Method:** A pre-piloted questionnaire was used to collect data from the 121 Directors of Nursing/Public Health Nursing in all community care areas and hospitals (with a capacity of 40 or more beds) in Ireland. **Results:** A response rate of 96% was obtained. Leg ulcers, diabetic foot ulcers, and pressure ulcers were the most commonly encountered wound types and were mostly encountered in the long-stay setting, where the access to specialist wound management services was poorest. **Conclusion:** The results confirm an unsatisfactory wound management system in Ireland and recommendations are made for the conduct of similar studies in other EU member states. **Declaration of interest:** This was a joint project between The Faculty of Nursing & Midwifery and the School of Pharmacy, Royal College of Surgeons in Ireland (RCSI). The study was funded by a research grant from the RCSI and an unrestricted research grant from ConvaTec, Ireland

KEY WORDS

Wound care services
Costs
Accessibility
Clinical nurse specialists
Standards and guidelines

The costs associated with wound care are considerable and a lack of standardised education approaches and policies compound this cost and contribute to increased morbidity and mortality of patients (Harding and Boyce, 1998). In Ireland, there are currently no standardised policies or strategies for the provision of wound care. The UK and many European countries, by contrast, have wound management guidelines and standards in place, which serve to guide professionals and enhance patient care practices (Gottrup et al, 2001; RCN, 2001).

Wounds and the many associated problems have challenged health care providers for centuries and today, despite

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the wealth of knowledge available, neither the incidence or prevalence of wounds is reducing (Harding and Boyce, 1998; O'Brien et al, 2000; Kaltenthaler, 2001; European Pressure Ulcer Advisory Panel, 2002). Furthermore, a lack of interdisciplinary models of wound care provision has led to sporadic developments in the field and an inadequate evidence base for practice (Lindholm et al, 1999).

In recognition of the dearth of information on the provision of wound management in Ireland, a survey to investigate the key aspects related to current practices was undertaken. This paper reports on the first ever survey conducted in Ireland and the results provide significant insights into policy formulation, decision-making, and the use of resources in the management of wounds in the Irish health care setting.

The scope of the problem

Pressure ulcers

Pressure ulcers are a significant health care burden. European figures suggest that approximately 18% of hospital patients have a pressure ulcer (European Pressure Ulcer Advisory Panel, 2002). One Irish study identified that 12.5% of patients in acute care are affected, with

the greatest number of ulcers occurring in the elderly (Moore and Pitman, 2000). The statistics on the incidence of pressure ulcers estimate a range from 2.2–66% in the UK, and 0–65.6% in the USA and Canada (Kaltenthaler, 2001). These figures are influenced by the location and condition of the patient group, for example, hospital vs community setting, general hospital patients vs those with fractured neck of femur (Richardson and Meyer, 1981; Versluysen, 1986; Hanson et al, 1993; Bridel et al, 1996).

Chronic leg ulceration

Chronic leg ulceration is a common and debilitating condition, with venous disease being the most frequent aetiological factor (Harding and Boyce, 1998). Studies have suggested that the prevalence of chronic venous disease is between 0.18% and 1.9% (Callum et al, 1985; Cornwall et al, 1986; Baker et al, 1991; Lees and Lambert, 1992; Nelzen et al, 1996), although the accuracy of this figure varies from study to study depending on the inclusion criteria used (e.g. age restrictions, ulcer location), as well as the source of identification: community, hospital or self-referral (Moore, 2002).

One regional study conducted in Ireland noted that 12 out of every ►►

10,000 people have a leg ulcer at any given time (O'Brien et al, 2000). The prevalence of leg ulcers was found to increase in the older population (103 in every 10,000 aged 70 years and above); a particularly important trend given our aging population.

Diabetic peripheral neuropathy

Diabetic peripheral neuropathy is one of the most common predisposing factors leading to foot ulceration; indeed, people with diabetes are 50 times more likely to develop a foot ulcer than their non-diabetic counterparts (Tyrrell, 1999). Furthermore, diabetes is the leading cause of non-traumatic limb amputation in the world (Tyrrell, 1999). Within 18 months of limb amputation, almost 50% of amputees will develop ulceration in their other limb and of these people, 58% have further amputations within three to five years (Tyrrell, 1999).

Impact on the individual

The presence of a wound impacts on the individual in many ways (Clark, 1994). Pain is one of the most widely reported complaints for patients with wounds of varying aetiologies (Moffatt et al, 2002). Indeed, up to 80% of patients with leg ulceration suffer pain and, in many cases, this pain is protracted (Franks and Moffatt, 1999). Pain may occur at any time of day and, worryingly, has been noted to be continuous, thereby impairing the individual's functional ability (Quirino et al, 2003).

Fox (2002) noted that the main issues concerning patients with pressure ulcers were pain, exudate, body image,

and worry about healing. Similarly, in a systematic review, Persoon et al (2004) identified that the presence of a leg ulcer not only affected the individual from a physical perspective, but also from both a social and psychological perspective. The issues of greatest concern to individual sufferers were noted to be pain, immobility, sleep disturbance, lack of energy, and limitations in work and leisure activities, all of which significantly reduce the individual's quality of life (Persoon et al, 2004).

The financial cost of wounds

Wound management places a considerable burden on the health service (Rich, 1992; Hamer et al, 1994; Phillips et al, 1994; Husband, 1996). As far back as the 1990–91 UK expenditure, it was estimated that approximately 1–2% of total health care spend went on leg ulcer management, with the major costs being bandaging materials and application (Bosanquet, 1992; Coleridge-Smith, 1997). In Ireland, expenditure on leg ulcer management is estimated to be 6.5 million euro per annum, with the majority of care being provided by nurses in the primary health care setting (Grace, 2002). More recent estimates suggest that leg ulcer management costs more than \$1 billion in the US and £400–600 million in the UK annually (Simka and Majewski, 2003).

The famous, now quite dated, Touche Ross report (Touche Ross, 1993) noted that the cost of pressure ulcer prevention was more expensive than pressure ulcer treatment annually. They estimated the costs of pressure ulcer treatment at £180–321 million annually, whereas, the cost of prevention was estimated at

£180–755 million annually (Touche Ross, 1993). Bennett et al (2004) explored the treatment cost per episode of care and per patient with pressure ulcers. They suggested that costs range from £1,064 (grade 1 pressure ulcer) to £10,551 (grade 4 pressure ulcer). This equates to a total annual cost of £1.4–2.1 billion or 4% of total health care expenditure, of which the majority of the cost is nursing time. Similar findings have been noted in the Netherlands, where pressure ulcers have been found to be the third most expensive disease, not because of the cost of medication or surgical interventions, but due to prolonged hospitalisation and the intensive nursing care required (Haalboom, 2000). Importantly, it has also been argued that pressure ulcers contribute to increased mortality (Allman, 1997).

Gordis et al (2003) explored the annual medical costs of diabetic peripheral neuropathy (DPN) and its complications and argued that these costs are likely to form a large portion of the overall diabetes health care spending. The cost of DPN is related to the prevalence of foot ulceration as the two are intrinsically linked. This cost was estimated to be between \$4.64–13.71 billion, or 9% of all health care costs incurred by people with diabetes. Thus, any improvements in the prevention of the long-term complications of diabetes will have far reaching implications for health care services (Gordis et al, 2003).

The multidisciplinary approach

The process of wound management involves not only the application of an appropriate dressing, but must also include consideration of all the wider factors, which may impede the wound healing process (Baxter, 2002). In order to achieve this, all the members of the multidisciplinary team must work together, as no one profession has all the required skills (Franks, 1999). Indeed, Lindholm et al (1999) identified that limited availability of adequately trained personnel and diagnostic equipment compounds the suffering of patients and increases costs to an already overstretched health budget.

The role of the multidisciplinary team is widely reviewed in the **▶▶**

Table 1

Type of wounds managed in different clinical settings (%)

Type of wound	Long stay	Community	Teaching hospital	General hospital
Leg ulcer	40.9	11.8	28.6	10.5
Pressure ulcers	41.7	12	25.9	15.7
Foot ulcers	34.7	13.7	31.6	15.8
Surgical wounds	19	16.5	36.7	22.8
Traumatic wounds	14.1	20.3	46.2	18.8
Burns	20.4	26.5	40.8	10.2

literature (Moffatt and Oldroyd, 1994; Franks, 1999; Ghauri et al, 2000; Douglas et al, 2001; Richardson et al, 2001). Following a review of 41 studies pertaining to the provision of diabetic services, Renders et al (2001) concluded that structured multi-professional interventions, such as interdisciplinary collaboration, professional and patient education, and the increased role of the nurse, resulted in improved patient outcomes and service delivery.

Within the EU, an excellent example of the development of wound healing services can be seen in the work of Gottrup et al (2001) in Denmark. Armed with the knowledge that wound-care services were not standardised, the authors developed an integrated wound healing service, with both primary- and secondary-care involvement, and multidisciplinary (not unidisciplinary) team work. The service offered is based on agreed standards and is available for all wound care problems not just a single speciality, and most importantly, the system is fully integrated into the NHS, thereby allowing access for all users of the Danish health care system. Indeed, it is suggested that this approach is an ideal model for the EU (Gottrup, 2003).

Based on this brief review of the literature, it may be concluded that wound management is a complex entity and as such requires good team working, standards and a strategic

Table 2

Services available

Service	Yes: n(%)	No: n(%)
Dressing clinic	54(47%)	60(53%)
Specialist wound clinic	14(12%)	100(88%)
Vascular clinic	29(25%)	85(75%)
Diabetic foot clinic	18(16%)	96(84%)
Specialist leg ulcer clinic	34(30%)	80(70%)
Tissue viability clinical nurse specialist	22(19%)	92(81%)

approach. With these issues in mind, this Irish-based study was developed.

Objectives

A national survey was undertaken which included representative samples in order to clarify the range of existing practices. The specific aims and objectives of the study were to:

- ▶ Describe the type of wounds managed
- ▶ Identify the availability of specialist wound management services
- ▶ Identify the presence or absence of a clinical nurse specialist in wound care
- ▶ Identify who is providing wound care advice to practitioners
- ▶ Determine the existence of policy/guidelines pertaining to wound management/prevention
- ▶ Examine costing issues associated with wound management and pressure ulcer prevention.

Methods

Research design and data collection

A cross-sectional descriptive survey research design was used in the study, in order to ensure inclusiveness with data collection. A questionnaire was developed and pre-tested for content

and face validity with a sample of respondents who were excluded from the main study. The final questionnaire was a 14-item, self-completion instrument. The specific areas addressed in the questionnaire included:

- ▶ Type of wounds managed
- ▶ Tissue viability services
- ▶ Who advises on wound management
- ▶ Wound management policies/committees/procedures
- ▶ Administration budgets
- ▶ Purchase of wound management products.

As wound care is practiced across the range of health service settings, including hospitals and community care, it was important to obtain a representative sample from all these settings. All hospital facilities with a bed capacity in excess of 50, and all community areas (e.g. settings outside of secondary care, excluding GP practices) in Ireland were included in the study. The health care settings included:

- ▶ Teaching hospital (n=17)
- ▶ General hospital (n=22)
- ▶ Long-stay facility (n=61)
- ▶ Orthopaedic hospital (n=2) ▶▶

Table 3

Who advises on wound management

Name	Yes: n(%)	No: n(%)
Consultant	65(47%)	49(43%)
Non-consultant doctor	43(38%)	71(62%)
General practitioner	35(31%)	79(69%)
Pharmacist	12(11%)	102(89%)
Public health nurse	22(19%)	92(81%)
Clinical nurse specialist (infection control)	40(35%)	73(64%)
Clinical nurse specialist (stoma care)	29(35%)	85(75%)
Clinical nurse specialist (tissue viability)	25(30%)	89(78%)
Clinical nurse specialist (breast care)	20(18%)	94(82%)
Company representative	51(45%)	63(55%)
Ward manager	89(71%)	25(29%)
Staff nurse	81(71%)	33(29%)

Table 4

Who selects which wound management products will be available?

Discipline	Number (%)
Medicine	4(3.5)
Nursing	81(77.1)
Pharmacy	5(4.4)
Wound care committee	8(7)
Product user group	6(5.3)
Material management	2(1.8)
Central supplies	6(5.3)
Infection control nurse	1(0.9)
Clinical Nurse Specialist in Wound Care	1(0.9)
Total	114(100)

- ▶▶ Rehabilitation facility (n=1)
- ▶▶ Community care (n=18).

A total of 121 questionnaires were distributed to the Directors of Nursing (hospitals) and Directors of Public Health Nursing (community care). Consent was sought from the study participants and was assumed on receipt of the completed questionnaires.

Results

A total of 116 completed questionnaires were returned, yielding a response rate of 96%. The responses included representation from across a wide range of hospital services. Based on the total response rate, the majority of respondents came from long-stay care facilities (55%) with a bed capacity in excess of 100.

Types of wounds managed

The survey revealed that many types of wounds are managed, with leg ulcers, pressure ulcers and diabetic foot ulcers being most commonly encountered. The pattern of distribution of wounds is outlined in Table 1. It is noted that long-stay areas have the highest concentration of leg ulcers, pressure ulcers, and diabetic foot ulcers. The level

of wound care requirements within the community setting is also high.

Availability of specialist wound management services

Only 25% of respondents reported that they had direct access to a vascular clinic despite 97% of respondents indicating that they had involvement in this aspect of patient care. Furthermore, 83% of respondents reported that they are actively involved in the management of foot ulcers, yet 84% have no direct access to a diabetic foot clinic. Another important finding is that only 47% of respondents had access to a dressing clinic (Table 2).

Availability of clinical nurse specialists

Across the 116 respondents only 22 clinical nurse specialists in tissue viability (CNS) were reported and these were located in 19% of clinical settings. The pattern of employment identifies an unequal distribution with the greatest concentration being in the teaching hospital (76%) and only 7% in long-stay care facilities.

Who is providing wound care advice?

The majority of advice regarding wound care is provided by the ward manager (71%) or the staff nurse (71%) (Table 3). It is noted that 45% of respondents indicated that a company representative advises on wound management, which is almost as often as is sought from the medical consultant (47%) who is responsible for the care of the patient. Interestingly, advice is rarely sought from the pharmacist (11%).

Existence of policy/guidelines for wound management/prevention

The results indicate that only 31% of respondents reported the existence of a wound committee, 41% a wound management policy and 62% wound management guidelines. It is worthy of note that 46% of respondents reported that they do not have a policy for pressure ulcer prevention and management, despite 95% indicating that they are involved in this aspect of patient care.

What are the costs associated with wound care?

The responses to this section of the questionnaire were most unclear and

it can only be concluded that there is little information available regarding expenditure on wound management and prevention. Indeed, 58% of respondents did not have access to such figures at the time of the survey. The majority of respondents (71%) reported that nurses select which wound management products are available in the work place (Table 4). However, purchasing wound management products is reported as primarily the responsibility of the pharmacist (50%) and central supplies (33%).

Discussion

The results of this study support the case for the development of wound management services in the Republic of Ireland. The rather complex, deficient and unclear pattern of service provision as identified in the literature is confirmed in this study (Gottrup et al, 2001).

For practitioners and patients alike, not having access to various specialist clinics can directly impact on the type, level and quality of services (Lindholm et al, 1999). The study also highlights the necessity to ensure that available services are targeted at the point of greatest need; for example, only 7% of long-stay facilities had a nurse specialist in tissue viability, compared with 76% of teaching hospitals. However, the results indicate that there is a higher concentration of some wounds in the long-stay setting. Wound management services in those areas would be greatly enhanced through the employment of a tissue viability nurse and the establishment of specialist clinics (Renders et al, 2001).

The high level of dependence on company representatives to advise on wound management demonstrates a lack of professional authoritative structures in this key area of wound care. The importance of the ward manager and staff nurse in advising on wounds is confirmed in the study and suggests that greater educational efforts must be targeted at developing the knowledge and expertise of this group of professionals (Lindholm et al, 1999). The lack of a national strategy on wound management is reflected in the ad hoc existence of wound management committees, policies and guidelines in all

health care settings. The establishment of such structures are centrally important in ensuring regulation, standards and quality-driven initiatives in wound care (Gottrup, 2003).

Conclusion

The results of this survey are revealing in terms of the Irish health care system, and it is recommended that similar studies be conducted in other EU member states. The results from EU surveys that are similar to those of this study could help to bring about much needed clarification of existing practice and help to identify where to target education and research initiatives. The establishment of an EU agenda on wound management is important in moving forward with definable standards and best practice models of wound management. **WUK**

Key Points

- ▶ Wound management is a significant clinical issue for nursing in both the community and hospital setting in Ireland.
- ▶ The provision of care lacks standardisation and in some circumstances there is an absence of best practice guidelines to assist decision-making.
- ▶ There is an urgent need for the development of a national strategy for the prevention and management of any wound-related problems.
- ▶ The study prompts questions about wound management practices across the EU member states.

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