

**Trends in Wound Care**  
**Volume V**



Trends in Wound Care

Volume V

edited by

Keith F Cutting



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# Foreword

It is testimony to the growing interest in wound management that the *Trends* series has reached Volume V in barely as many years. This highly reputable source of up-to-date monographs has become a standard text for those seeking to keep in touch with key areas of clinical and scientific research. The current volume, edited by Keith Cutting, maintains the established standard. It contains an eclectic miscellany of chapters, each based upon published (and so, peer-reviewed) articles from journals in the MA Healthcare collection. Where important new information has been published, chapters have been updated accordingly; thus, this volume is of 2009 vintage.

The editor has included something for those with a practical focus as well as new science and theoretical debate. Such disparate topics as wound survey/audit, topical negative pressure, bacterial profiling and biofilms, wound pH, scar assessment, fibroblast senescence, the role of nitric oxide, and theories on wound contraction are covered.

For example, the growing interest in topical negative pressure is reflected by the inclusion of a meta-analysis updated to incorporate the most recent data available. This chapter is an excellent baseline for all wishing to update their knowledge on clinical evidence in this exciting field. Chapters on wound microbiology and biofilms similarly reflect what is, in my opinion, the most fascinating area of chronic wound pathophysiology. These chapters illustrate just how far our understanding has come in the past decade, and just how important it is for clinicians to be aware of the latest developments in wound microbiology and infection if they are to provide ‘best practice’ care.

This collection of chapters shows how our chosen field has progressed in recent years, and, helps busy clinicians keep apprised of important research.

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# **A point prevalence survey of wounds in North East England**

*N Srinivasaiah, H Dugdall, S Barrett and P J Drew*

Wounds represent a major burden in terms of morbidity and reduced quality of life for patients and their carers, and a drain on health-care resources (Cully, 1008). They are a significant problem in both hospital and domestic settings, affecting people of all ages, social class and race. Pain, discomfort, low self-esteem and poor body image can cause personal suffering (Cully, 1998). Osteomyelitis and life-threatening sepsis are associated major complications (Cully, 1998).

Several guidelines have been published to promote better wound management practice. They include the Royal College of Nursing's clinical guidelines on pressure ulcer prevention and the management of venous leg ulcers (Royal College of Nursing, 2008), the National Institute of Health and Clinical Excellence guidelines on debriding agents, diabetic foot care and pressure ulcer care (National Institute for Health and Clinical Excellence, 2001a, b, 2004), and the Scottish Intercollegiate Guidelines Network (SIGN) (2008) recommendations on the management of diabetic foot disease and the care of patients with chronic leg ulcers.

It is an essential requirement to have a baseline measurement of wound care in order to monitor practice and ascertain if national and regional guidelines are in place and being adhered to. In May 2005, the wound-care audit team in Hull and East Yorkshire, located in the north-east region of the UK, conducted a point prevalence audit which aimed to:

- Review current wound-care practice and the standard of wound care.
- Obtain information on prevalence, treatment and outcomes.
- Provide a basis for estimating the extent of the problem, treatment modalities used, service provision and future needs.
- Highlight areas of care in need of improvement.
- Highlight areas with excellent wound practices.
- Gain valuable information for future research projects.

This chapter describes the audit, its findings and recommendations for improvements.

## **Method**

A team of tissue viability nurses (TVNs) and audit staff within the catchment area conducted the prevalence audit. The five trusts covered by the audit were: West Hull Primary Care Trust (PCT) and Eastern Hull PCT (now combined to form Hull PCT), Yorkshire Wolds and Coast PCT, East Yorkshire PCT (now combined to form East Riding of Yorkshire PCT), and Hull and East Yorkshire Hospitals NHS Trust. The trusts have a combined population of approximately 590 000.

### ***The audit forms***

There were two types of data-collection forms. First, one which gathered information on total bed occupancy or the number of patients registered at each district nurse base on the day of the audit. Second, a specific wound-care audit form which was completed for each patient with a wound.

Data were gathered on the professional treating the wound, the geographical location in which treatment was provided, patient comorbidities, number of wounds on each patient, the wound type, wound assessment, suspected wound infection and reasons for undertaking a swab. Information was gathered on the reference wound including exudate levels, wound bed characteristics, pressure ulcer prevention strategies used, pressure-redistributing equipment, dressings used and patient concordance.

The audit forms were developed by the local wound-care experts and were based on clinical experience. Data were gathered from the patients' notes and via verbal feedback from key staff caring for the patients. Wounds were not inspected for the purposes of the audit.

If a patient had more than one wound, data were collected only on the most serious wound (the 'reference' wound), as judged by the clinician caring for the patient.

A small pilot study was undertaken to ensure the forms were acceptable in terms of ease of use. In addition, TVNs were questioned on the same patient sample to determine whether the responses were consistent in relation to appropriate, inappropriate or unsafe dressing usage. Following

the pilot it was agreed that the data collection tool was fit for purpose without any alterations.

### **Data collection**

Data were collected from the region's acute trust and its primary care trusts, nursing and residential homes, hospice and local prisons.

In the acute hospital trust, a TVN and a member of the audit department visited each ward over a two-day period to gather data from ward nurses on all inpatients with a wound. A TVN also collected data in this way from the local hospice.

On the same date, all district nurses employed by the PCTs were asked to provide data on every patient with a wound on their active caseload.

Meanwhile, senior staff from the nursing homes, the local hospice and Hull and East Riding prisons collected data on all of their patients with wounds, which were then reported to a visiting TVN.

### **Data entry and analysis**

The audit was coordinated by the clinical effectiveness department of West Hull PCT and the clinical audit department of Hull and East Yorkshire Hospitals NHS Trust. Data analysis was performed using SPSS software. Descriptive analysis and cross tabulations were also used. The clinical governance department ensured the full audit process was conducted to an acceptable standard.

## **Results**

### **Response rates**

A total of 1645 forms, relating to 1644 wounds, were received: 1291 from the primary care trusts (PCTs), prisons and nursing and residential homes (16 of the 32 nursing and residential homes responded), and 354 from the acute trust and hospice.

As stated above, the intention was to include data on the reference wound only. However, some participants returned more than one form per patient, which is reflected in the prevalence figures given below. This is discussed in more detail in the study limitations section in the discussion.

## Wound prevalence

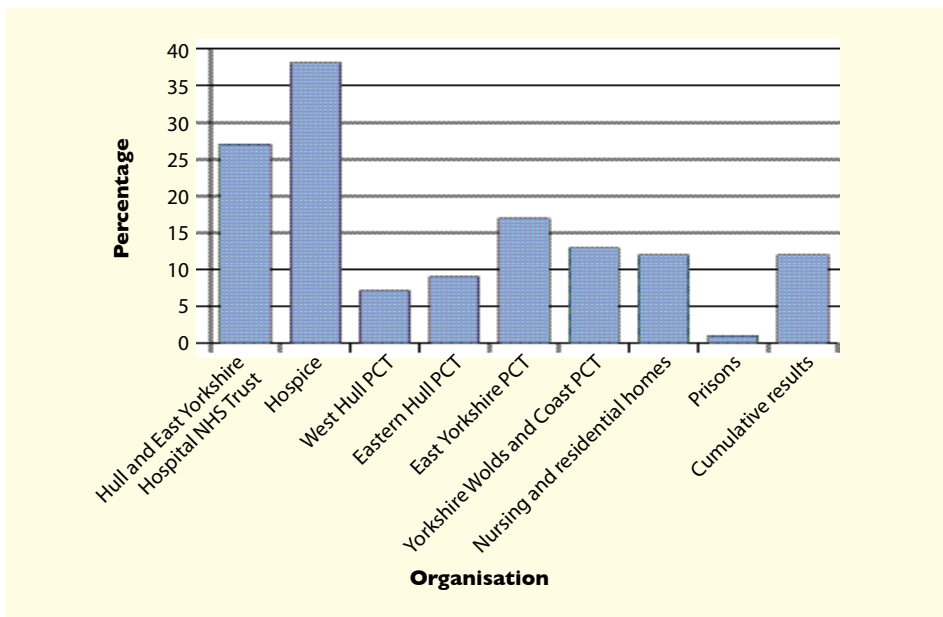
The cumulative wound prevalence for the region was 12%. Prevalence rates for the different settings are given in *Figure 1*. The acute trust had a prevalence rate of 27%, while the PCT rates ranged from 7% to 17%. Prevalence in the nursing and residential homes was 12%, while prisons had the lowest rate of 1%.

## Wound type

Surgical wounds were the most common type (n=699, 41.5%), followed by leg and foot ulcers (n=629, 37.3%) and then pressure ulcers (n=294, 17.4%). Full details are given in *Table 1*. Most of the surgical wounds (31.4%) were primary closures.

## Wound duration

Most of the 1644 wounds (44.1%) were six weeks old or less; 14.8% were at least one year old, including 28% of the leg and foot ulcers, but only 7% of the surgical wounds.



*Figure 1. Percentage of patients with wounds in different settings within Hull and East Yorkshire.*