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Implementing a wound assessment and management system (WAMS)

About the authors

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Introduction

Wound management and dressing product selection places pressure on nurses to continually maintain currency of knowledge and incorporate best practice information. This paper outlines and discusses strategies used in a rural health care facility to develop and implement a wound assessment and management system. Strategies included the introduction of two wound documentation charts; resource allocation for a project officer; provision of wound product resources and formalisation of education sessions.

Background

The issue of sub-optimal wound management at our 202 bed facility was first raised by nurse clinicians in late 2003. The facility resourced a community based clinical nurse consultant who had limited capacity for inpatient service. Clinicians identified the facility lacked skilled staff to accurately assess wounds and conduct appropriate wound management; it lacked standardised, evidence-based continuity of wound management; had poor documentation to support continuity of care; and a lack of resources to support practices. Staff believed these problems resulted in poor wound healing, delayed diagnosis and treatment of wound infections, resulting in increased length of hospital stay, and reduced cost effectiveness of wound management.

Options considered in resolving the issues included writing a wound management manual, buying a wound management manual designed specifically for our environment, or introducing a wound assessment chart. After discussion, it was decided that developing a wound assessment chart and providing readily accessible educational tools was more likely to result in better wound management care than simply purchasing a wound management manual.

Reviewing wound management literature highlighted the need for accurate assessment of wounds as central to effective wound management (Cooper 2000; Doughty 2004 and Carville 2005). A study by Tapp (1990), revealed nurses prioritise the provision of hands-on care over documentation. These findings were supported by other researchers including Marelli (1992), and Banchar and McNicholas (1999) who found nurses attributed failure to comply with wound care documentation to a lack of time and insufficient staffing levels.

Method

On review of the facility's wound documentation processes, staff identified the space allocated for wound care documentation on the nursing care plan as inadequate. The absence of a standard documentation tool led to insufficient, inconsistent or omission of information in the patient record. Lack of documentation has legal implications for nursing staff and the organisation as a whole.

A meeting was held between the surgical nurse manager, nurse researcher and clinical nurse specialist early surgical service to plan the project. Initially, a trial was undertaken to compile a wound assessment chart and associated educational resources for use at the facility.

Resource staff were identified and recruited to assist with the educational component of the project. The project was then conducted over a one month period in the surgical unit.

The aims of the project were to improve clinical care provided to patients with wounds by:

- creating and implementing a wound assessment and documentation system based on best practice principles and clinical evidence;
- improving wound management outcomes by addressing the lack of a standardised wound assessment and documentation tool;
- improving communication between clinicians by standardising terminology used when discussing wound management;
- supporting nursing staff through the provision of education and resources relating to wound management; and
- increasing staff and patient satisfaction while maintaining cost effectiveness.

At the completion of a one month trial an audit was conducted to ascertain documentation compliance rates, appropriateness of chart content and staff satisfaction using the wound management system.

Twenty-two wound assessments charts were sourced from local, regional, interstate and international sources. Most charts were found to be lengthy, laborious, complex and time consuming. The data entry most often required was descriptive rather than 'check box' style entry. To maximise the potential for compliance, a decision was made to create a single page chart, containing all the necessary components for a comprehensive wound assessment that would expedite documentation. A chart developed by the Department of Veterans' Affairs as part of a wound management clinical pathway, met most of the criteria identified. In its original format the form focussed on wound care provided in the community setting. The chart was modified and adapted to make it more relevant to the inpatient setting.

Emphasis was placed on compiling a document which would be useful, irrespective of the clinicians' level of experience or expertise, which guided assessment, included alerts that may indicate impending infection or reduced circulation, and prompts for medical review and interventions when indicated.

The wound assessment chart

The chart developed to support initial wound assessment includes:

- images to indicate the location of the wound;
- aetiology of the wound;
- classification information for determining wound stage;
- clinical appearance;
- exudate descriptors indicating the amount, type, odour, suspected infection and indication of wound swab collection;
- condition of skin surrounding the wound;
- pain assessment using an analogue scale for constant pain and pain related to dressing changes;
- wound measurement for length, width and depth;
- techniques for assessing circulation in lower legs incorporating a scoring system which prompts medical review if circulation is reduced; and
- description of dressing regime including date for review and dressing frequency required.

The assessor's signature, designation and assessment date completes the document. The completed assessment chart forms part of the patient record and the infor-

mation it contains is not duplicated in the patient's progress notes.

The reverse side of the initial assessment chart contains information about how to complete the assessment chart, diagrams indicating where to locate pedal pulses and a photograph demonstrating how to measure wound dimensions.

The wound monitoring chart

A wound monitoring chart was developed to support ongoing assessment, management and documentation of wound care. The descriptor elements of the monitoring chart include:

- clinical appearance;
- exudate and odour;
- condition of surrounding skin;
- pain assessment;
- wound dimensions; and
- dressing regime.

Additional elements developed specifically for the monitoring chart include the provision of flag alerts signalling the user to signs or symptoms indicating possible wound infection. The presence of two flag alerts prompts the user to seek a medical review of the wound. The signs and symptoms indicating likely wound infection are also repeated at the bottom of the chart.

The format of the wound monitoring chart was modelled on the current nursing care plan. The two documents can be placed side by side to facilitate quick, holistic care planning. The wound monitoring chart has the capacity for eight assessments.

Educational resources to complement the wound assessment chart

Additional resources, designed to complement the two charts, were compiled, laminated and displayed in prominent areas within the ward environment.

The resources included a dressing selection guide and a glossary of terms relevant to wound care.

Dressing selection guide

The wall chart developed includes photographic examples of wounds accompanied by a colour coded description of the tissue, ranked according to the internationally accepted black, red, yellow and pink classification scale. The next section of the wall chart outlines the aim of treatment according to the stage of healing and the final column suggests appropriate dressing products. Several choices of dressing product are provided allowing

staff preference, and appropriate choices are suggested based on the location of the wound and conformity required to maximise wear times of the product. The wall charts are located in the treatment rooms where dressing products are stored. The format is similar to guides provided by wound product manufacturers. To make the guide more effective and prevent confusion, only products used by our facility were included on the chart.

Wound glossary

Utilisation of the wound glossary wall chart assisted less experienced staff members to understand the meaning of the terminology used in the assessment and monitoring charts and enhance communication within the multidisciplinary team. The charts were displayed outside patients' rooms, in documentation areas and in treatment rooms.

Continuing education needs

To address the continuing education needs of nursing staff, folders containing manufacturers' product information sheets and a sample product, were compiled to assist staff identify products in the treatment room. Another folder containing current wound management articles, clinical research papers, product reviews and wound management techniques was made available as a resource. A list of wound resources available online, reference books and journals located in the facility's library were also included in this resource folder. An educational CD-rom library was established to allow staff to view in-service presentations if they were unable to attend or to review information.

Results

Following the one month trial, an audit was conducted and the results revealed compliance with completion rates of the assessment section of the wound chart exceeded 80% in all sections of the chart. Initially the wound monitoring section in some charts audited demonstrated some staff had reverted to documenting on the nursing plan. Documentation of wound assessment and management was generally comprehensive and ongoing. Staff satisfaction surveys were distributed to clinicians with a 75% return rate. All respondents found the wound assessment chart easy to use, found it had useful content, clear and specific instructions and was quick to complete and practical. The chart was seen as beneficial because it acted as a teaching tool, and promoted continuity of wound care and standardised practice.

Results of the staff survey indicated improved knowledge, increased availability of educational resources, improved documentation and consistency, and more appropriate dressing practices.

As a result of the trial, a report was submitted to management recommending the chart be adopted for use across the facility. This was supported and the WAMS project is currently being implemented in the medical, medical assessment planning, and rehabilitation units.

During the implementation in the medical, medical assessment planning, and rehabilitation units, six in-service sessions to introduce the WAMS were well attended with over 60% of staff attending. Staff were supported while performing assessments and completing the wound chart.

Upon completing the chart, staff referred to the wound dressing selection guide to assist choosing the most appropriate wound product. Staff agreed that a choice of product facilitated increased autonomy. The structured approach to assessment, documentation and dressing selection gave staff a method which they could easily replicate in daily practice, irrespective of the type of wound encountered. This improved nurses' confidence levels and provides ongoing education which is sustainable beyond the life of the trial phase.

Patient satisfaction

Staff members had previously reported that patients became anxious when the wound care regime was changed from one nurse to the next, creating a lack of confidence in nursing staff. In this project, particular emphasis was placed on approaching wound management as a team. Adherence to the proposed treatment plan and, resisting frequent changes of treatment based on staff personal preference and or knowledge, was shown to enhance wound healing and promote cohesion among staff.

Patient education and involvement was encouraged in care planning and positive feedback was provided to the patient as their wounds progressed. Patients reported increased satisfaction with the improved consistency of wound care being provided by clinicians.

Discussion

Prior to the implementation of WAMS the project coordinator reviewed patients' medical records and noted descriptors such as 'wound smelly', 'lots of drainage' and 'wound looking better today'.

Adopting a standardised approach to terminology improved communication within the multidisciplinary team. Following the implementation of the wound glossary chart for example, the amount of wound exudate was quantified in patient's records promoting consistency in terminology.

With four assessments recorded on one page of the wound monitoring chart an unpredicted graph-like pattern evolved in the area related to the amount of exudate. Staff recognised this provided an indication of healing or decline in the status of the wound. A consistent reduction in exudate levels reassured staff the treatment plan was effective, as opposed to a sudden increase in exudate which signalled a possible regression in the progress of the wound.

The benefit of the 'red flag' alert assists clinicians to identify wound infections earlier and commence treatment in a timely manner. Wound swabs are now collected only when clinically indicated, avoiding unnecessary collection or duplication of pathology tests due to poor documentation.

The initial compliance audit conducted on the medical and rehabilitation units in the third week of the project has revealed compliance rates of 100% and 86% respectively. All patients with wounds, in both units, had wound assessment and monitoring charts initiated and documentation has been ongoing. On the medical unit, the wound assessment and monitoring charts had been initiated. However, some staff had reverted to documenting on the nursing plan. This was not unexpected as change to practice evolves over time.

Prior to the implementation of the WAMS project, early surgical discharge staff conducted wound assessments for inpatient services on request. Often the assessment would be for uncomplicated wounds. Since the implementation of WAMS, the early surgical discharge nurses have reported a decreased number of requests for wound assessments.

Requests, post implementation of WAMS, are now for more complex wound assessments and management strategies. This reflects nurses' increased confidence to perform wound assessment and initiate a management plan, and consult with experts only when wound management complexity increases.

Nurse educators across the facility will include an introduction to WAMS when

orientating new staff members. The sustainability of WAMS will be supported by the ongoing planned implementation of the system, ensuring the educational component is entrenched in practice. As a result of educating and informing ward nursing staff, a group of resource people will continue to educate and use current resources to promote its continued use.

Future planning includes further audits to determine WAMS compliance. These audits will be performed six months after the completion of the implementation phase.

Wound management education should encompass all members of the multidisciplinary team. Future projects may include the development of a multidisciplinary education program.

The compilation of online wound management education packages for nursing staff commenced in 2006.

Conclusion

The wound management charts are now a part of the facility's documentation process. Nurses need to be vigilant in maintaining their knowledge and unified in their quest to promote and provide wound management based on reliable clinical evidence and best practice principles. Nurses have a responsibility to advocate on behalf of their patients if proposed treatments do not meet these criteria. The implementation of WAMS has provided nursing staff with the tools required to ensure wound management is consistent and based on appropriate clinical principles.

For further information or copies of the charts contact: Kasaunders@mncahs.health.nsw.gov.au or jrowley@mncahs.health.nsw.gov.au

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