Telemedicine & Wound Management

Wound experts dramatically speed up healing of chronic wounds.

Summary

Having a wound expert involved with the care of a patient with chronic wounds will reduce the length of time and the number of visits needed to achieve healing. These patients are often at home and have visits by community nurses. The innovation is to capture information about the patient, take images, record treatments are being done during the home visit and then transmit this information to a wound expert that can review the images and recommend further treatment. Images, treatments, and clinical characteristics would be stored in a database and be available for analysis.

The Plan

The management of chronic wounds may consume 40% of community nursing budgets. The literature has shown that having a specially trained wound expert involved with the management of individual patients will reduce the time it takes to achieve healing. This implies that fewer visits would be required. Many of these patients need home visits which are very time consuming and limits the number of patients an individual provider can be involved with. Having a telemedicine application would provide the capability to collect information at the bedside and transmit it to where it can be reviewed by a wound expert. The wound expert could then be involved with the care of many more patients.

There are many treatment options and a bewildering array of products that could be used. Some of these are very expensive yet they could be more effective than cheaper products. The challenge is to optimize the treatment to achieve faster healing in the most effective manner. By recording the patient characteristics like the location of the wound, characteristics of the wound, the co-morbidities that the patient has and the types of wound care products used a database can be built and the data later analysed to find the best treatments for any combination of characteristics.

To reduce the need for redundant data entry the data collected about the patient in the EHR should be imported into the wound management application. The conditions, medications and procedures should be extracted from the EHR. The location and characteristics of the wound should be recorded in a standardize manner so that the progress of the healing can be tracked for the individual patient and also aggregated across all patients. Generally used standardized descriptions are yet to be developed.

Studies done in British Columbia showed that as soon as the program was implemented the time to healing and the number of visits were reduced by 40%. This information has been available for about 5 years and there is widespread use of this application in BC. Thousands of patients have been managed with this application. This type of application would be of particular benefit for isolated communities such as in the Canadian North. There is a great deal of concern about native populations who have a high incidence of diabetes and are at risk for having considerable difficulties in having chronic wound
managed. Another benefit is that with this amount of coded data it should be possible to look at patient and wound characteristics and predict which type of wound dressings would be most beneficial.

The next step with regard to innovation would be to have the family take the photos and submit the photos to the wound management application. Since there is widespread availability of cell phones and digital cameras family members could take the pictures. With the growing acceptance of personal health records it should be possible to integrate data entered by patients with a clinic based application that the wound expert would use.

The innovation needed here is how to promote this approach so that its use would be more widespread. The other innovation would be to create more standardized linkages between the rest of the clinical record and the data collected with this application.