

Determining the effectiveness of implementing the AWMA Guidelines for the Prediction and Prevention of Pressure Ulcers in Silver Chain, a large home care agency

Stage 1: baseline measurement

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Abstract

Silver Chain is the largest aged and community care provider in Western Australia and assists the frail aged and disabled to remain in their own homes. Many of these individuals have compromised mobility and health status and without appropriate prevention are at significant risk of developing pressure ulcers.

Like many other community organisations, Silver Chain did not have any standardised work processes for predicting the risk and reporting of pressure ulcers. As part of its commitment to providing high quality care, Silver Chain is currently undertaking a project to introduce the Australian Wound Management Association's (AWMA) *Clinical Practice Guidelines for the Prediction and Prevention of Pressure Ulcers*¹. This will be achieved by incorporating the guidelines into everyday work processes and accompanying the introduction of the new processes by a comprehensive staff education and training programme.

The methodology and the tools developed by Prentice² for the introduction and evaluation of the AWMA guidelines in Australian tertiary hospitals were adapted for use within a community setting. Baseline measurements of clinical and non-clinical staff knowledge and pressure ulcer prevalence were collected in December 2002. The results of the baseline study clearly demonstrated a need to improve staff knowledge of pressure ulcer prevention and the need to implement standardised quality processes to prevent pressure ulcers.

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Introduction

Pressure ulcers are a significant contributor to morbidity and mortality in the frail aged, debilitated or neurologically impaired. In Australia in 1998, pressure ulcers were cited as the cause of death for 49 people and have been a contributory cause in the deaths of a further 227 individuals³. Additionally, the treatment of pressure ulcers is expensive. In 1997 the Federal Minister of Health stated that pressure ulcer treatments cost A\$350 million annually⁴.

Epidemiological data on the prevalence of pressure ulcers in Australia are relatively rare and national figures are not available. In tertiary hospitals the prevalence has been previously reported to range from 3.2%⁵ to 22.9%⁶. Most recently, Prentice, in her multi-centre study of teaching hospitals across Australia, found prevalence figures at baseline

(prior to her intervention) that varied between 13-37%². No prevalence data currently exist for home care clients, although in 1996 Silver Chain found pressure ulcers to make up 8% of the wounds receiving treatment from their home nursing service⁷.

Pressure ulcers are generally agreed to be both predictable and preventable. On this basis, clinical practice guidelines for the prediction and prevention of pressure ulcers were developed in 2000 by the Australian Wound Management Association (AWMA)¹. Reductions in the prevalence of pressure ulcers have been demonstrated in a range of studies in the USA following the introduction of clinical practice guidelines⁸⁻¹¹. In Australia, the Joanna Briggs Institute showed no significant change in prevalence when they introduced their own practice guidelines into three hospitals¹². However,

Prentice & Stacey have recently demonstrated significant reductions in pressure ulcer prevalence associated with the introduction of the AWMA guidelines in some of the hospitals studied⁶.

The introduction of *Clinical practice guidelines* will not be effective if there is insufficient regard to ensuring their incorporation into everyday practice. Prentice & Stacey provide a useful overview of the many variables that have been shown to relate to the successful incorporation of guidelines into practice¹³. These include factors such as the level of institutional support and consultation, planning and staff attitudes. Education was identified as a particularly critical element in influencing staff attitudes and therefore ensuring the successful implementation of practice guidelines. Another was the assignment of responsibility for overseeing implementation to an individual or group who have direct access to the agency's executive.

Silver Chain, the largest provider of home care in Western Australia, cares for aged and disabled individuals who need assistance with everyday activities of daily living. Approximately 400 of the 6,000 individuals cared for at any point in time by their metropolitan home support services are immobile or rely on a wheelchair for mobility. These individuals can, amongst home care clients, be considered to

be most at risk of developing pressure ulcers. Unless a clinical need arises, the care needs of these individuals are assessed, managed and delivered by non-clinical staff.

Prior to the present project, there was no formalised training or education about pressure ulcers and their prediction and prevention provided to Silver Chain staff. Neither were there standardised work practices and protocols for clinical or non-clinical home care staff for this area of care. Both of these deficits are directly addressed by the current project which uses Prentice's study design and methodology¹⁴, adapted to suit a community setting, to examine the effectiveness of implementing the *AWMA Guidelines for the Prediction and Prevention of Pressure Ulcers*¹ across Silver Chain's metropolitan community based services.

Study design

The project has been designed to have four discrete stages:

- Collection of baseline data.
- Implementation of the AWMA guidelines.
- Collection of post-implementation data.
- Ongoing evaluation.

This paper describes the baseline data collection methods and results.

Project structure and management

Managers of those divisions directly responsible for service provision and training in the metropolitan area, together with senior members of the project team, were invited to form the project steering group. This group has direct access to, and the support of, Silver Chain's executive team. Day to day management of the project is the responsibility of the research manager whilst day to day organisation is the responsibility of the project officer.

Methods

The effectiveness of guideline implementation will be examined in terms of changes in two outcome measures: pressure ulcer prevalence; and staff knowledge and current practice.

Pressure ulcer prevalence

Given the lack of work processes for the systematic identification and recording of pressure ulcers in Silver Chain, the baseline prevalence rate of pressure ulcers amongst individuals receiving care from Silver Chain was unknown. It was therefore necessary to conduct a prevalence survey.

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Survey sample

At any point in time Silver Chain's metropolitan community care services provide assistance to approximately 6,000 individuals, the majority of whom have low level home support needs, are independently mobile, and are therefore at very low risk of developing a pressure ulcer. To survey a sample large enough to be able to obtain an accurate estimation of what could be expected to be a very low prevalence rate in this total population, was considered cost prohibitive and hard to justify.

It was therefore decided to survey those individuals who could, in terms of data already routinely collected, be considered to be potentially at high risk of developing a pressure ulcer. Individuals with a score on the mobility sub-scale of the Barthel Index¹⁵ that indicated that they were essentially immobile or wheelchair bound were therefore identified as the 'at risk' group to be surveyed. At study commencement, 344 current clients were identified as meeting this criterion. Given the relatively small number, it was decided that, in order to obtain as accurate an estimate of the prevalence as possible, it would be necessary to invite them all to participate in the study.

Client recruitment

A letter explaining the importance of the pressure ulcer project and inviting them to participate was sent, together with a consent form, to each of the individuals identified. If the client was under 18 years of age, the letter was addressed to their parent or guardian. The letters were followed up two weeks later by phone calls.

In those instances where the individual had already identified that they would take part in the study by signing and returning the consent form, the phone call was used to arrange the date and time that the survey would take place. For those people who had not yet returned their consent form, the call was used to follow up whether they did not wish to participate or whether the invitation was still under consideration. In the former case, any reason provided for non-participation was recorded, and they were informed that they could be invited to participate in the next survey which would take place in one year's time. Individuals who were still participating in this study were invited to ask questions and were offered information as required. A date and time for a survey visit was then arranged if the individual decided to participate in the survey.

Participating clients were sent a letter confirming the date and time of the arranged survey visit. Additionally, the surveyors rang each client the day before their appointment

to introduce themselves and remind the client that they were visiting the next day. Any client that changed their mind about participating at any time during this process was asked if there was a particular reason for their decision and informed that they could participate in the next survey. Any client who had not returned their signed consent form to the research team prior to the day they were visited were asked for it, or requested to sign a new form if the original was lost, before the surveyor commenced the survey protocol.

Clients in need of two persons to assist them to undress and position themselves for their skin inspection had their survey visits arranged at a time when a carer had agreed to be present or when the Silver Chain care aide was scheduled to visit.

Surveyor recruitment, training and reliability testing

Surveyors were recruited using a newspaper advertisement as well as advertisements placed on notice boards in university schools of nursing. The position requirements included a minimum of 2 years' nursing or allied health experience or training, plus a current driver's licence and a reliable vehicle which they could use during the survey. There were more than 90 enquiries about the positions and 42 applications were received. Fourteen applicants were short-listed for interview and nine were appointed.

Surveyors were required to attend two 4 hour training sessions in the week preceding the survey. The first session included an overview of the project and a comprehensive education session about pressure ulcers and related equipment. The second session commenced with a test of the surveyors' ability to stage pressure ulcers reliably. The surveyors were shown photographs of 20 pressure ulcers and asked to stage them. Each surveyor was required to correctly identify at least 18 out of the 20 staged pressure ulcers. This equated to a 90% success rate. The criterion adopted in this study of 90% correct was stricter than that adopted by Prentice, whose criterion was 80% correct. This was considered necessary as the surveyors were to be conducting the survey on their own.

In addition, the surveyors' staging skills were only considered to be sufficiently accurate if neither of the two misclassified ulcers were assessed as more than one stage higher or lower than the predetermined stage. That is, a Stage 2 was assessed as a Stage 3 or a Stage 1 but not as a Stage 4. Individuals who did not achieve the accuracy criteria were required, after a short remedial education session on staging, to do a re-test with different photographs. Had any of the surveyors not met the criteria in the second testing session, they would not have been employed to conduct the survey, this having been

explained to all applicants at interview. All the potential surveyors who undertook the training and testing performed well and were employed to conduct the survey.

The second half of the second training session was spent familiarising the surveyors with the survey protocol and study forms. Each surveyor was given a list of the clients booked for him or her, plus a list of the clients' contact details. They were asked to call each client the day before they were scheduled for a visit and asked to take responsibility for rescheduling if they needed to, but were told to contact the project officer if her assistance was needed.

All surveyors were provided with a mobile phone and a list of Silver Chain contacts in case they were unable to get through to the project officer should a problem occur. The surveyors were also informed that they would be accompanied on at least one of their visits by one of the Silver Chain Clinical Nurse Specialists (CNS) or a Wound Care Consultants (WCC) who they had met during the training sessions.

The CNSs were all also required to attend the pressure ulcer education session and to have their ability to stage pressure ulcers tested as they were responsible for surveying clients who were already receiving clinical nursing services for a wound. This was considered necessary, as the survey protocol required that any existing wound dressing be taken down so that the skin could be thoroughly inspected. To avoid the necessity to schedule surveyor visits to coincide with already scheduled wound care visits (or reschedule the latter), it was decided that the CNSs would survey these individuals and perform the wound care at the same visit. In order to avoid any possibility of bias in the survey of these clients, the CNSs did not survey any individual that their service centre was

responsible for, but instead surveyed individuals from outside their geographic area of responsibility.

In addition, the two registered nurses employed as home support consultants were trained and tested as surveyors to act as back-up surveyors in the event of any of the recruited surveyors becoming unavailable during the course of the survey.

Survey tool and protocol

The survey tool, shown as Figure 1, was based on the tool developed by Prentice¹⁴. Modifications to the original were made with permission in order to align the content with providing care in the community and with the new work processes to be implemented. The Silver Chain Pressure Ulcer Risk Assessment (PURA) tool, which includes a Braden Score and a Silver Chain Carer Support Score, was incorporated. Other modifications were made to streamline the tool, at Prentice's suggestion, based on her experiences with the original.

The protocol adopted within this survey differed from Prentice's in one very important respect. In the majority of cases, surveyors completed surveys on their own, rather than, as in Prentice's and many other hospital-based studies, in pairs. Thirty surveys were, however, randomly selected for a reliability check. A CNS or WCC joining the surveyor for that particular home visit and independently completing a survey form achieved this.

Immediately following the visit, the CNS or WCC and the surveyor compared the data they had collected and, if there were any discrepancies, these were discussed and a consensus reached on what would be recorded. The intention was that the two independently completed survey

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Pressure ulcer prevalence: survey tool

1 Date of survey / /

2 Client/resident PID

3 Gender male female

4 Date of birth / /

5 Is there documented evidence of an assessment of this client/resident's risk of developing a pressure ulcer?
 No **Go to Question 6** below
 Yes When was the last recorded assessment? / /

How was this assessment documented?
 Progress notes Norton Score
 Braden Scale Waterlow Score
 Silver Chain Pressure Ulcer Risk Assessment Scale
 Other

Was a level of risk or score documented for this assessment?
 No
 Yes No risk Moderate risk Very high risk
 Low risk High risk Numerical score (if recorded)

Skin inspection

6 Client/resident's skin tone white light olive dark olive black

7 On skin examination is there current evidence of a pressure ulcer?
 No **Go to Question 10** on page 3
 Yes

8

Please record the site and classification of ALL pressure ulcers using the table below.

Site	Ulcer		Stage				Aetiology ¹				Acquired ²	
	No	Yes	1	2	3	4	P	S	F	U	SC	Ex
a Occiput	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b Ear	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c Chin	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d Scapula	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e Elbow	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f Fingers: 1st ulcer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2nd ulcer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3rd ulcer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4th ulcer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5th ulcer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g Arm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h Spine: 1st ulcer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2nd ulcer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3rd ulcer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i Iliac crest	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j Trochanter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
k Ischium	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
l Sacrum/coccyx	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
m Anterior knee	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
n Lateral knee	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
o Medial knee	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
p Leg (not knee/foot)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
q Lateral malleolus	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
r Medial malleolus	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
s Posterior heel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
t Lateral heel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
u Medial heel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
v Plantar foot	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
w Dorsal foot	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
x Lateral foot	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
y Medial foot	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
z Toes: 1st ulcer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2nd ulcer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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4th ulcer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5th ulcer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other <input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

¹ Aetiology: Please tick if the primary aetiology of the ulcer can be clearly attributed to pressure (P), shear (S), or friction (F), if you are unsure about the aetiology, please record unknown (U).

² Acquired: Please tick whether it was acquired during the time the client/resident was receiving services from Silver Chain (SC), or externally (Ex) eg. whilst in hospital or in respite.

9 What was the total number of ulcers found?

10 Are any lifting, turning, pressure relieving or devices used with this client/resident?
 No Go to Question 12 on page 4
 Yes

11 Please tick all the devices currently in use for this client/resident

Repositioning equipment: turning sheet hi/lo bed standing/sitting turntables
 slide boards electric bed wedge cushion 30"
 hoist mecca bed frame automated turning device

Comfort equipment: Sheepskins: bed chair heel elbow
 Convoluted foam devices: bed chair heel elbow
 Polyester fibre filled devices: bed chair heel elbow
 (eg. Spenco™)

Static equipment: Polyester fibre filled overlays with 2-way stretch, waterproof cover
 (eg. Transoll™/Undown™)
 Pressure reducing foam mattress with 2-way stretch cover (eg. Vaper™/Transoll™)
 Roho™ cushions mattress sections
 High density/low resistance foam with 2-way stretch cover: bed overlay
 cushion
 Water/gel: mattress cushions fallout chairs
 Air cushions: air ring square shape

Dynamic equipment: Alternating air overlay (eg. AlphaXcell™)
 Alternating air replacement mattress (eg. Nimbus™)
 Pulsating and low air loss therapy: overlay mattress

Specialty beds: Low and high air loss therapy (with or without pulsation therapy) beds
 Kinetic therapy beds Air fluidised beds

Other—please describe

12 Please record a client/resident pressure ulcer risk assessment using this Braden Scale and Carer Support Assessment below

Braden Scale	Score
Sensory perception Ability to respond meaningfully to pressure related discomfort	1 Completely limited Unresponsive (does not mean, flinch or grasp) to painful stimuli. Cannot communicate discomfort except by moaning or restlessness, or has a sensory impairment which limits ability to feel pain over ¼ of body.
Moisture Degree to which skin is exposed to moisture.	2 Moist Skin is often but not always moist, requiring an extra linen change approximately once a shift.
Activity Degree of physical activity.	2 Chairfast Ability to walk severely limited or non-existent. Cannot bear own weight and/or must be assisted into chair or wheelchair.
Mobility Ability to change and control body position.	2 Very limited Makes occasionally slight changes in body position but unable to make frequent or significant changes independently.
Nutrition Usual food intake pattern.	1 Very poor Never eats a complete meal. Rarely eats more than ½ of any food offered. Protein intake includes only 1 or 2 servings of meat or dairy products per day. Takes fluids poorly. Does not eat or drink for maintenance or medical treatment. NPO and/or maintained on clear liquids or IV's for more than 5 days.
Friction and shear	1 Problem Requires moderate to maximum assistance in moving. Complete lifting without sliding against sheets is impossible. Frequently frequent re-positioning with maximum assistance. Spasticity, contractures, or incontinence lead to almost constant friction.
Carer support	1 No carer available But needed to promote and maintain skin integrity.
Sensory perception Responds only to painful stimuli. Cannot communicate discomfort or sensory deficit which would limit ability to feel or voice pain or discomfort which limits ability to feel pain or discomfort for 1 or 2 extremities.	2 No impairment Responds to verbal commands. Has no sensory deficit which would limit ability to feel or voice pain or discomfort.
Moisture Skin is kept moist almost constantly by perspiration, urine, etc. Dressings is detected every time patient is moved or turned.	3 Occasionally moist Skin is occasionally moist, requiring an extra linen change approximately once a day.
Activity Ability to walk severely limited or non-existent. Cannot bear own weight and/or must be assisted into chair or wheelchair.	3 Walks occasionally Walks outside the room for very short distances, with or without assistance. Spends majority of each shift in bed or chair.
Mobility Ability to change and control body position.	3 Slightly limited Makes frequent though not independent changes in body or extremity position without assistance.
Nutrition Usual food intake pattern.	3 Adequate Eats over half of most meals and generally eats only about ¾ of any food offered. Protein intake includes only 3 servings of meat or dairy products per day. Usually takes a supplement (eg. Vite) with feeding or TPN regimen, which probably meets most of nutritional needs.
Friction and shear	3 No apparent problem Moves in bed and chair independently and has sufficient muscle strength to lift up completely during chair, restraints, or other devices. Maintains relatively good position in chair or bed, with occasional sliding but no constant friction.
Carer support	3 Carer support -50% Willing and available to promote and maintain skin integrity.
Sensory perception Responds to verbal commands. Has no sensory deficit which would limit ability to feel or voice pain or discomfort which limits ability to feel pain or discomfort for 1 or 2 extremities.	4 No impairment Responds to verbal commands. Has no sensory deficit which would limit ability to feel or voice pain or discomfort.
Moisture Skin is often but not always moist, requiring an extra linen change approximately once a shift.	4 Rarely moist Skin is usually dry; linens are changed only at routine intervals.
Activity Ability to walk severely limited or non-existent. Cannot bear own weight and/or must be assisted into chair or wheelchair.	4 Walks frequently Walks outside the room at least twice a day and inside room at least once every 2 hours during waking hours.
Mobility Ability to change and control body position.	4 No limitations Makes major and independent changes in body or extremity position without assistance.
Nutrition Usual food intake pattern.	4 Excellent Eats most of every meal. Never refuses a meal. Usually eats a total of 4 or more servings of meat and dairy products. Usually takes a supplement (eg. Vite) with feeding or TPN regimen, which probably meets most of nutritional needs.
Friction and shear	4 No apparent problem Moves in bed and chair independently and has sufficient muscle strength to lift up completely during chair, restraints, or other devices. Maintains relatively good position in chair or bed, with occasional sliding but no constant friction.
Carer support	4 No carer required Manages independently to promote and maintain skin integrity.
Total Braden Score	Total Risk Score

13 If a pressure ulcer is present, or if the client/resident has been assessed as being at risk of developing a pressure ulcer, is the appropriate equipment (as per PURA guidelines) currently in use?
 No Yes

Thank you for completing this survey. Please return your completed form to the Research Team.

This tool based on the survey tool used in the study 'An Evaluation of Knowledge and Clinical Practices of Pressure Ulcers', Conducted by JL Prentice 2000. Modified with permission. Reference: Barbara Braden and Nancy Bergstrom. Copyright, 1988. Reprinted with permission.



SILVER CHAIN

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ID

Pressure ulcers: Nursing Staff Questionnaire

About this survey: Please answer these questions based on your own current knowledge. Please do not consult with others or refer to texts—the goal is to find out about current understanding and practices.

Why we need this information: We will use this information to develop education programs and quality processes for client care and to inform the purchase and availability of pressure relieving and reducing equipment within Silver Chain.

Returning this form: Please return your completed form to Silver Chain Nursing Association, Research Team, 6 Sundercombe Street, Osborne Park, WA 6017 by Friday 6 December 2002.

1	To which Silver Chain service do you belong?	Metro Community <input type="checkbox"/> 1	Metro Hospice <input type="checkbox"/> 2	Country <input type="checkbox"/> 3	Remote <input type="checkbox"/> 4	Residential <input type="checkbox"/> 5
2	What is your current role in Silver Chain?	RN Level 1 <input type="checkbox"/> 1	RN Level 2 <input type="checkbox"/> 2	Enrolled Nurse <input type="checkbox"/> 3	Nurse Manager <input type="checkbox"/> 4	Home Support consultant <input type="checkbox"/> 5
3	What is your employment status?	Full time <input type="checkbox"/> 1	Part time <input type="checkbox"/> 2	Casual <input type="checkbox"/> 3	Agency <input type="checkbox"/> 4	
4	How many years since you registered?	less than 1 <input type="checkbox"/> 1	1–5 <input type="checkbox"/> 2	6–10 <input type="checkbox"/> 3	11–15 <input type="checkbox"/> 4	more than 15 <input type="checkbox"/> 5
5	How many years have you worked for Silver Chain?	less than 1 <input type="checkbox"/> 1	1–5 <input type="checkbox"/> 2	6–10 <input type="checkbox"/> 3	11–15 <input type="checkbox"/> 4	more than 15 <input type="checkbox"/> 5
6	What shift do you usually work?	day <input type="checkbox"/> 1	evening <input type="checkbox"/> 2	night <input type="checkbox"/> 3	weekend <input type="checkbox"/> 4	all shifts <input type="checkbox"/> 5
7	What is the highest qualification you have obtained?	Hospital diploma RN <input type="checkbox"/> 1	Grad. Dip in Nursing <input type="checkbox"/> 2	Bachelor Degree in Nursing <input type="checkbox"/> 3	Masters Degree in Nursing <input type="checkbox"/> 4	Certificate IV EN <input type="checkbox"/> 5 Hospital Certificate EN <input type="checkbox"/> 6
8	Have you attended any post-basic education on pressure ulcer aetiology, intervention, prevention and management tools in the last two years?	No <input type="checkbox"/> 1	Yes <input type="checkbox"/> 2 How long was the program? (please tick as many boxes as appropriate)			
		less than 1 hour <input type="checkbox"/> 1	1–4 hours <input type="checkbox"/> 2	1 day <input type="checkbox"/> 3	2–3 days <input type="checkbox"/> 4	1 week <input type="checkbox"/> 5 longer than 1 week <input type="checkbox"/> 6
9	When did you last read a text or journal article specifically related to the development or management of pressure ulcers?	within the last 3 months <input type="checkbox"/> 1	within the last 6 months <input type="checkbox"/> 2	within the last year <input type="checkbox"/> 3	more than 1 year ago <input type="checkbox"/> 4	not sure <input type="checkbox"/> 5 never <input type="checkbox"/> 6



Dealing with clients/residents at risk of pressure ulcers

10 When do you assess a client/resident for risk of developing a pressure ulcer?

Please tick more than one box if appropriate.

day of admission	<input type="checkbox"/> 1	on 2nd or 3rd day of admission	<input type="checkbox"/> 4
no specific time	<input type="checkbox"/> 2	when a pressure ulcer is identified	<input type="checkbox"/> 5
never	<input type="checkbox"/> 3	when the client/resident's condition changes	<input type="checkbox"/> 6

11 In your service centre, is there an agreed process for assessing a client/resident at risk of developing pressure ulcers?

No 1 Not sure 2 Yes 3

12 How do you currently identify clients/residents at risk of developing pressure ulcers?

use my clinical judgement	<input type="checkbox"/> 1	both clinical judgement and tool	<input type="checkbox"/> 3
formal assessment tool	<input type="checkbox"/> 2	do not assess	<input type="checkbox"/> 4

13 Which of the following assessment tools do you use?

Do not use tool 1 **Go to Question 15 below**

Braden Scale	<input type="checkbox"/> 2	Waterlow Scale	<input type="checkbox"/> 4	Gosnell Score	<input type="checkbox"/> 5
Norton Scale	<input type="checkbox"/> 3	Silver Chain Pressure Ulcer Risk Assessment Scale (incorporates the Braden)	<input type="checkbox"/> 6		
Other	<input type="checkbox"/> 7	<input type="text"/>			

14 How often would you use this tool?

almost always (95–100%)	<input type="checkbox"/> 1	most of the time (60–94%)	<input type="checkbox"/> 3
some of the time (10–59%)	<input type="checkbox"/> 2	never (less than 10%)	<input type="checkbox"/> 4

15 Do you ever liaise with anyone else for advice on the management of a client/resident with, or at risk of developing, a pressure ulcer?

almost always (95–100%)	<input type="checkbox"/> 1	most of the time (60–94%)	<input type="checkbox"/> 3
some of the time (10–59%)	<input type="checkbox"/> 2	never (less than 10%)	<input type="checkbox"/> 4

16 Who else do you liaise with if you have a client/resident with, or at risk of developing a pressure ulcer?

Please tick as many as apply.

Care Co-ordinator	<input type="checkbox"/> 1	CNC	<input type="checkbox"/> 5	Medical Practitioner	<input type="checkbox"/> 8
Team leader	<input type="checkbox"/> 2	ACN	<input type="checkbox"/> 6	Occupational Therapist	<input type="checkbox"/> 9
RN Level 2	<input type="checkbox"/> 3	Podiatrist	<input type="checkbox"/> 7	Physiotherapist	<input type="checkbox"/> 10
RN Level 1	<input type="checkbox"/> 4	Other	<input type="checkbox"/> 11	<input type="text"/>	

17 How often do you reposition clients/residents (or advise they be repositioned) who are identified as at high risk of developing a pressure ulcer?

every 8 hours	<input type="checkbox"/> 1	every hour	<input type="checkbox"/> 4	not sure	<input type="checkbox"/> 6
every 4 hours	<input type="checkbox"/> 2	on request	<input type="checkbox"/> 5		
every 2 hours	<input type="checkbox"/> 3	Other	<input type="checkbox"/> 7	<input type="text"/>	



Nursing Staff Questionnaire

18 For each item below, please tick how often you have:

	never (less than 10%)	some of the time (10–59%)	most of the time (60–94%)	almost always (95–100%)
a Access to lifting or turning devices to assist you to reposition clients/residents when needed	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
b Access to pressure relieving/pressure reducing equipment to assist you to care for clients/residents	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
c Information about the type and availability of lifting or turning devices and pressure relieving or pressure reducing equipment provided by Silver Chain	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
d The necessary knowledge to allow you to use lifting and turning devices appropriately and safely	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
e The necessary knowledge to allow you to use pressure relieving and pressure reducing equipment appropriately and safely	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
f The necessary knowledge to allow you to assess a client/resident's risk of developing a pressure ulcer	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
g The necessary knowledge to allow you to plan and provide appropriate pressure ulcer prevention or treatment	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
h The necessary knowledge to allow you to document pressure ulcer risk assessment, care plan and care outcomes	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4

19 For each item below, please rate its importance in enabling you to prevent and treat pressure ulcers

	very unimportant	unimportant	neither important nor unimportant	important	very important
a Lack of client/resident knowledge	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
b Lack of own knowledge	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
c Lack of carer knowledge	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
d Lack of in-service education	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
e Lack of suitable lifting/turning devices	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
f Lack of pressure relieving/pressure reducing equipment	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
g Lack of time allocated to each client/resident	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
h Staff shortages	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
i Non-compliant clients/residents	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
j Other ▶ <input type="text"/>	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5



Background knowledge

It is really important that you answer the following questions from your current knowledge ONLY.

This questionnaire is anonymous—we aren't testing you, we are testing the education programs we have currently in place, so that if necessary we can improve them to suit your needs.

20 Please list six categories of intrinsic factors that could predispose a person to the development of pressure ulcers.
 Intrinsic = specifically relating to the person.

21 Please list four extrinsic factors that could predispose a person to the development of pressure ulcers.
 Extrinsic = external things that impact on the person

22 Please list four preventative strategies or interventions that you might use to prevent the development of pressure ulcers.

23 Pressure ulcers are classified as stages 1, 2, 3 and 4 according to the national guidelines. Please identify the stages of pressure ulcers by the following definitions:

Definition	Stage
Superficial/partial loss of skin involving the epidermis and possibly the dermis.	<input type="text" value="1"/>
Full thickness skin loss involving damage or loss of subcutaneous tissue that may extend to, but not through the fascia. Cavity formation with or without undermining of adjacent tissue results.	<input type="text" value="2"/>
The superficial layers of the epidermis are intact but there is persistent erythema, discolouration, change in skin temperature and induration.	<input type="text" value="3"/>
Full thickness skin loss with cavity formation with destruction to muscle, bone and/or tendon.	<input type="text" value="4"/>

24 Have you read the Australian Wound Management Association Guidelines for the Prediction and Prevention of Pressure Ulcers?

No Partly Yes

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Thank you for completing this survey. Please return your completed form to the Research Team.

forms would be retained and used to formally determine inter-rater reliability as part of the data analyses. This, however, was not understood by those involved and the surveyors' forms were retained (changed if agreed), whilst the auditors' were discarded. Anecdotal data only are therefore available as to the reliability of the survey data and these were very positive.

Staff knowledge and current practice

Staff questionnaire

The questionnaire developed by Prentice to assess the knowledge and current practice of hospital nurses and medical staff in relation to the prediction and prevention of pressure ulcers was modified and adapted to community care. Two questionnaires were produced, one designed for community nurses and the other for non-clinical home care staff. The first of these is shown as Figure 2. The non-clinical staff questionnaire, in addition to being framed appropriately for these staffs' role in pressure ulcer risk assessment and management, did not include the section on background knowledge as non-clinical staff were not expected to have received education/training on the aetiology, staging or treatment of pressure ulcers.

Data collection

Several weeks prior to the prevalence survey, questionnaires were sent to all care coordinators, nursing and personal care staff working for Silver Chain, together with their pay-slips. A letter explaining the project and the importance of understanding current staff knowledge and practice in order that an appropriate training programme could be developed accompanied the questionnaires.

Distribution of the questionnaires was preceded by a communication strategy to inform all relevant managers and team leaders that the questionnaires were about to be mailed out and to secure their cooperation. They were requested to set up collection boxes in the community bases and to encourage their staff to complete and return the questionnaires.

Results

Pressure ulcer prevalence

Response rate

The final number of clients that agreed to participate in the survey was 175. Whilst the follow up phone call was very successful in terms of increasing the response rate for those who were available when the research officer telephoned, there were a substantial number who had not been contacted after several attempts. Table 1 shows the breakdown of respondents and non-respondents.

The majority of those not wishing to participate and who offered a reason for their non-participation spoke in terms of there already being too many visits to the house and too much going on and, as a consequence, they were reluctant to participate. This was especially the case for some individuals who, in addition, would have had to be hoisted back to bed for the survey to be completed.

Clients surveyed

Of the 175 survey participants, 88 were men and 87 women. The age distribution of these individuals is shown in Figure 3.

Prevalence of pressure ulcers

It was found that 74 (42%) of these individuals had one or more pressure ulcers. Of the 167 ulcers identified, the majority was Stage 1, as shown in Table 2.

The majority of individuals had only one pressure ulcer. However, one individual had 11 Stage 1 ulcers. The distribution of the number of pressure ulcers per client is shown in Figure 4.

Figure 3. Age distribution of survey participants.

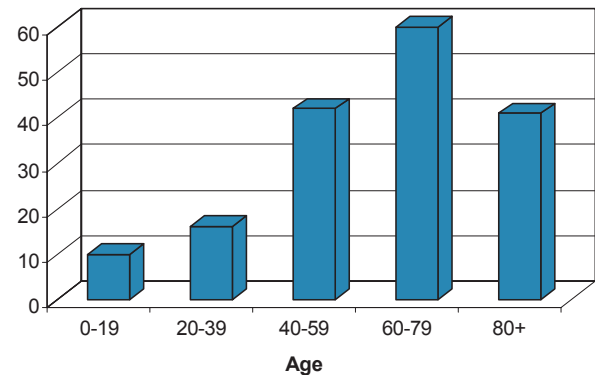
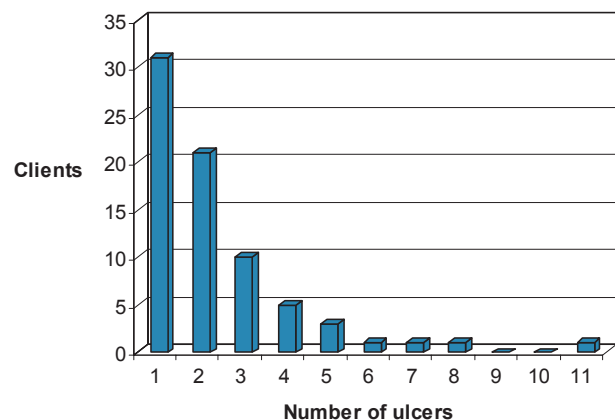


Figure 4. Distribution of pressure ulcers per client.



Documentation

It was found that, of the 175 individuals surveyed, only 46 (26%) had a pressure ulcer risk assessment documented in their case notes. However, 36 of these assessments were of individuals who were found to have a pressure ulcer at the time of the survey. The existence of just less than a quarter (n=41) of the pressure ulcers found was documented.

Aetiology and acquisition

A combination of discussion with the client and carer plus perusal of the case notes was used to try to determine aetiology and where the ulcer had been acquired [unfortunately the survey form had been printed before it was realised that the column pertaining to where the ulcer had been acquired was missing. The surveyors were therefore trained to add this as a final column to the ulcer audit section of the tool]. As can be seen in Tables 3 and 4, the aetiology of most ulcers was thought to be pressure and the majority was also thought to have been acquired during the time the individual had been cared for by Silver Chain.

Table 1. Recruitment outcome.

Agreed to participate	175
Did not wish to participate	109
Discharged/in hospital	3
Not contacted by phone	69
Total	344

Table 2. Distribution of pressure ulcers by stage.

Stage	Number
1	112
2	45
3	6
4	4
Total	167

Table 3. Aetiology of pressure ulcers found.

Aetiology	Percentage of ulcers*
Pressure	71%
Sheer	9%
Friction	19%
Unknown	6.5%

* Totals to more than 100% as some ulcers had multiple aetiologies

Equipment

Amongst those individuals who were either found to have a pressure ulcer or were assessed during the survey to be at risk of developing one, 37% were found not to have appropriate equipment in use at the time of the survey.

Staff knowledge and current practice

Response rate

There were 192 surveys mailed to nurses and 385 to non-clinical staff employed by Silver Chain’s metropolitan community care services. The return rates were 49 (26%) and 133 (35%) respectively.

Nurses

The vast majority of the nurse respondents were able to correctly identify the stages of a pressure ulcer from a written description, as shown in Table 5. Many were also able to identify appropriate strategies for the prevention of pressure ulcers, but few could correctly list the extrinsic or intrinsic factors known to be associated with the development of pressure ulcers, as shown in Table 6.

Table 4. Ulcer acquisition.

When individual cared for	No. ulcers acquired
By Silver Chain	138
By other agency	26
Undetermined	3
Total	167

Table 5. Percentage of nurses able to correctly identify pressure ulcer stages.

Stage	% nurses
1	94%
2	96%
3	94%
4	98%

Table 6. Nurses’ knowledge of pressure ulcer etiology and treatment: correct answers.

Question	n	Min	Max	Mean
List six categories of intrinsic factors	49	0	6	2.9
List four extrinsic factors	49	0	4	1.6
List four preventative strategies	49	1	4	3.5

Only 56% of nurses had attended any post basic education on pressure ulcer, aetiology, intervention, prevention and management in the last 2 years and many identified that they did not consider they always had the knowledge they needed to predict, prevent and manage pressure ulcers as shown in Table 7.

The knowledge deficits were reflected in nurses' reports of their current practice. Thirty one percent stated that either they were not sure that there was an agreed process for assessing pressure ulcer risk in their service centre or that there was none. Fifteen percent said that they would use clinical judgement only to determine risk and not use a formal assessment tool.

Non-clinical staff

As expected, few (just 13%) of the non-clinical staff had received any education on the cause and prevention of pressure

ulcers in the last 2 years. Whilst most (94%) were familiar with the term pressure sore, only 74% had heard of pressure ulcers and 18% decubitus ulcers. Nevertheless, 40% of the staff felt they had a good understanding of pressure ulcers and 60% of what causes them. How confident they felt about predicting and identifying pressure ulcers and in using pressure relieving or reducing equipment is shown in Table 8.

Discussion

The findings from both surveys not only provided the baseline data but also clearly supported the need for the project and provided more than adequate justification for the associated expenses.

Whilst the prevalence of pressure ulcers appears extremely high, it should be understood within the context of the study – only individuals who were considered to be at high risk of

Table 7. Nurses' ratings of their own knowledge.

Knowledge	Never	Sometimes	Mostly	Always
To use lifting and turning devices	4%	13%	50%	33%
To use appropriate equipment	4%	19%	44%	33%
To assess risk	4%	–	48%	48%
To plan and provide prevention or care	–	12%	44%	44%
To document risk, care plan and outcomes	4%	8%	46%	42%

Table 8. Non-clinical staffs' self ratings of ability and knowledge.

Ability/knowledge	Never	Sometimes	Mostly	Always
To determine if client at risk	8%	36%	37%	19%
To recognise a pressure ulcer	8%	24%	35%	33%
To identify the early signs of development	11%	36%	33%	20%
To use lifting and turning devices appropriately	25%	20%	22%	33%
To use pressure related equipment safely	34%	28%	18%	20%

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pressure ulcers, for reasons of their restricted mobility, were surveyed. Thus these data cannot be directly compared with the results of surveys of individuals not similarly pre-selected. These data do, however, clearly indicate that there is room for improvement; this is expected to be achieved by the introduction of the AWMA guidelines in terms of specific work processes defined within Silver Chain's quality management system across our metropolitan services.

The findings from the survey of staff knowledge and current practice provide clear support for the need to accompany the introduction of new work processes based on the AWMA guidelines with a comprehensive education/training programme for both clinical and non-clinical staff. This programme, which has already been designed and is in the process of being implemented, includes education on the aetiology, prevention and management of pressure ulcers as well as training in risk assessment and the appropriate selection and use of equipment.

The ability of the current study to provide as accurate an estimate of the current prevalence of pressure ulcers amongst Silver Chain's most disabled clients can unfortunately be considered to have been limited by the lower than hoped for participation rate. It is considered likely that the selection bias was in terms of individuals or their carers who thought they neither had an ulcer nor were at serious risk of developing an ulcer choosing not to participate. Should this in fact be the case, the prevalence found may be an overestimate of the prevalence in the population as a whole.

It can also be expected that this will become evident over time as the new work processes are implemented which will include regular skin and risk assessments for all individuals who were eligible to take part in the present study because of their restricted mobility.

Conclusion

This baseline study clearly demonstrated that, at any point in time, Silver Chain is providing home care to significant numbers of clients that are at risk of developing, or who have already developed, pressure ulcers. In addition, it found that the majority of staff caring for these clients have not recently received any education or training on this topic and that they have gaps in their knowledge which have the potential to inhibit their ability to provide appropriate care. Both findings provide clear support for the ongoing project.

Stage 2, which is reaching completion, involves the implementation of the AWMA guidelines by their

incorporation into everyday work processes. Clinical and non-clinical staff have undergone comprehensive education, and new documentation, reporting and equipment selection processes have been developed in preparation for implementation at the beginning of June.

Stage 3, which is the post implementation measurement (a repeat of everything described here), is planned for December 2003 and significant improvements on all measures are expected.

Acknowledgements

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