An evidence-based approach to the prevention and initial management of skin tears within the aged community setting: a best practice implementation project

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Executive summary

Background

Maintaining skin integrity in a community setting is an ongoing issue, as research suggests that the prevalence of skin tears within the community is greater than that in an institutional setting. While skin tear prevention and management principles in these settings are similar to those in an acute care setting, consideration of the environmental and psychological factors of the client is pivotal to prevention in a community setting. Evidence suggests that home environment assessment, education for clients and care givers, and being proactive in improving activities of daily living in a community setting can significantly reduce the risk of sustaining skin tears.

Objectives

The aim of this implementation project was to assess and review current skin tear prevention and management practices within the community setting, and from this, to implement an evidence-based approach in the education of clients and staff on the prevention of skin tears. As well. the project aims to implement evidence-based principles to guide clinical practice in relation to the initial management of skin tears, and to determine strategies to overcome barriers and non-compliance.

Methods

The project utilized the Joanna Brigg's Institute Practical Application of Clinical Evidence System (PACES) audit tool for promoting changes in the community health setting. The implementation of this particular project is based in a region within Anglicare Southern Queensland. A small team was established and a baseline audit carried out. From this, multiple strategies were implemented to address non-compliance which included education resources for clients and caregivers, staff education sessions, and creating skin integrity kits to enable staff members to tend to skin tears, and from this a follow-up audit undertaken.

Results

Baseline audit results were slightly varied, from good to low compliance. From this, the need for staff and client education was highlighted. There were many improvements in the audit criteria following client and staff education sessions and staff self-directed learning packages (Appendix I, II and III). Future strategies required to sustain improvements in practice and make further progress are to introduce a readily available Anglicare Skin Integrity Assessment Tool to the nursing staff for undertaking new client admissions over 65 years, and to provide ongoing education to staff members, clients and care givers in order to reduce the prevalence of skin tears in the community setting.

Conclusions

This implementation project demonstrated the importance of education of personal care workers, clients and their caregivers for prevention of skin tears in the community setting. This in turn created autonomy and empowered clients to take control of their health.

Keywords

skin tears; skin integrity; community nursing; prevention; management; education; wound care; aged care; aged adult; healing; implementation

Background

The skin is the largest organ of the human body and is made up of multiple layers the dermis and epidermis, which work closely together to carry out various functions. Skin contains collagen for strength and elastin to allow stretching. Functions of skin include protection from wear and tear and infection, as well as protection from ultraviolet rays, sensation and regulation of body temperature through absorption and excretion.[1]

In the elderly population, there are many underlying pathological changes as well as external influences that directly impact on the skin's ability to perform these functions effectively.[2] Pathological changes that can cause atrophy, such as thinning and weakening of the epidermis, can cause a

decrease in the cohesiveness between the layers of the skin.[3] Aging skin is correspondingly at risk of skin tear occurrence due to a reduction in blood supply and decreased subcutaneous fat. The reduced number of nerve endings in skin can also diminish the aged adult's ability to identify tactical and temperature stimulation, which can increase the probability of injuries that cause skin tears directly.[4]

A 2007 review suggests that skin tears are frequently-occurring, common injuries in the older adult,[3] and the authors continue to discuss how skin tear injuries are often not identified as major wounds in the 65 years and older aged group, primarily due to the incidence of injury and association with the above-mentioned normal aging processes.[3] Despite this, it should be recognized that skin tears cause substantial pain and discomfort associated with the injury, prolonged hospital stays, and poor mobility.[5,6] Stephen-Haynes also discussed how skin tears can lead to infection and the vascular status being compromised, which in turn increases risk of secondary morbidities and mortalities in the sufferer.[2] With this in mind, health care professionals must be well-prepared to treat and manage skin tears.[7]

In the community setting the basic principles of skin tear prevention and management are largely the same as those within the acute care setting; however the client's environment and state of mind may be quite different. Research suggests that the prevalence of skin tears within the community is greater than in an institutional setting because of the many factors that are very individual to a client's at-home environment.[8] Within the home, for example, furnishings such as slippery floors, rugs, tables and uncovered hard edges may be common causes of skin tears.

Prevention, assessment and client education to understand skin tear risk and management are key factors in assisting to reduce the prevalence of skin tears in the community setting. Studies indicate that assessment of home environments and education of clients on improving activities of daily living, such as using appropriate body washes and moisturization, can significantly reduce the risk of acquiring a skin tear.[9]

When initially assessing a skin tear, it is imperative for health care workers to use a validated research tool such as the Skin Tear Audit Research (STAR) classification system.[10] Following assessment, early management is vital for optimal wound healing. At present, there is limited availability of evidence in the field of skin tear management specific to the community setting; however there is a new systematic review within the Joanna Briggs Institute currently underway examining the effectiveness of wound care treatments for skin tears among older people.[11] Expert opinion states that initial skin tear management should include cleansing with warm saline or tap water, re-aligning the skin flap where possible, applying a non-adherent dressing and securing with a lightweight bandage.[9] Within an acute care setting it is best practice for a registered nurse to review a skin tear 24-48 hours after it occurs.[2] In the community setting this is not always achievable due to a diverse range of variables which includes availability to review a skin tear in the appropriate timeframe, and having a registered nurse available when required.

For active prevention of skin tears, it is vital to also be mindful of the factors that may predispose a client to sustaining a skin tear in their unique home environment. There are many ways which personal care workers, clients and their family can reduce the risk of developing a skin tear. These include education, an adequate diet, protecting limbs, and the use of appropriate moisturizers or emollients.[13] (Appendix I, II and IV).

Anglicare Southern Queensland is a not-for-profit organization which aspires to be an advocate for the most vulnerable people living in the community and to help them live their lives in fullness.

Anglicare provides care and support services in partnership with government and other support organizations in response to identified needs throughout Southeast Queensland. The organization is passionate and determined in their commitment to achieve exceptional outcomes for clients, their families and the community. Anglicare currently has procedures, guidelines and documentation tools in place that conform to evidence-based practice.

Aims and objectives

The primary intent of this evidence implementation project was to ascertain a reduction in the prevalence of skins tears in the community setting through the promotion of evidence-based strategies.

The specific aims were:

1. To assess and review current practices around the prevention and management of skin tears.
2. To implement an evidence-based approach to educate clients and staff on skin tear prevention.
3. To implement evidence-based principles to guide clinical practice in relation to the initial management of skin tears.
4. To determine/identify strategies to overcome barriers to best practice non-compliance by the client and their family.

The project endeavored to assess compliance with evidence-based criteria regarding skin tear prevention and initial management amongst people over the age of 65 years living independently in the community setting.

Method

The demographic location of this project was based in one region or “zone”, the southern area of Gold Coast, within Anglicare Southern Queensland. Within this zone the majority of clients are over the age of 65 years. The sample size consists of eight personal care workers, as well as 20 community care clients who had been identified as being at risk of skin tears by past wound care pathways and skin tear incidents documented by health care workers and registered nurses.

Through the utilization of the JBI Practical Application of Clinical Evidence System (PACES) as well as Getting Research into Practice audit and feedback tool (GRiP), a baseline audit was conducted. The PACES and GRiP framework for promoting evidence-based health care involved three phases of activity:

1. Establishing a team for the project and undertaking a baseline audit based on criteria informed by the evidence.
2. Reflecting on the results of the baseline audit and designing and implementing strategies to address non-compliance found in the baseline audit informed by the JBI GRiP framework.
3. Conducting a follow-up audit to assess the outcomes of the interventions implemented to improve practice, and identify future practice issues to be addressed in subsequent audits.

The project was identified as a tool for quality improvement within Anglicare Southern Queensland, and therefore did not require ethical approval.

Phase 1

During the Phase 1 period, the project team of five staff members was established and included: Clinical Nurse Rebekah Beechey, Registered Nurses Laura Priest, Kate Dunn and Andrea Johnson, and Personal Care Worker Team Leader Toni O'Donnell. Additionally there was involvement by a number of scheduling staff members, Service Manager Josie Sproull, Nurse Manager Arna Williamson and Nurse Coordinator Nigel Aberdour of Anglicare Southern Queensland. Finally, Clint Moloney from The University of Southern Queensland assisted with support in the implementation of this project.

An evidence summary based on a structured and indepth search of the literature and selected evidence-based health care databases was developed to inform this project.[12] Table 1 below displays the evidence-informed audit criteria used in the project (baseline and follow-up audit), inclusive of the description of the sample and approach to measuring compliance with best practice for each audit criterion.

Audit criteria

1. A skin integrity assessment is conducted on admission.
2. A validated tool (such as STAR- Skin Tear Audit Research or Payne-Martin) is used to assess skin tears.
3. Skin flap (the pedicle) is viable to be approximated.
4. An autramatic, non-adherent dressing material is used for skin tears.
5. Assessment of the wound is carried out and documented in the individuals' care plan.
6. An arrow is drawn and documented to indicate the direction of the skin tear on the dressing.
7. A physician or wound care consultant is contacted if the wound becomes infected or extensive.
8. Staff are educated regarding management techniques for skin tears.
9. Clients are educated on prevention strategies to prevent future skin tears.
10. Families and caregivers are educated on prevention strategies to prevent future skin tears.
11. Clients and their families are educated on strategies to create a safe home environment.

Phase 2

Through the guidance of the GRiP tool, the identified project team:

- arranged a debriefing time to review the results and summarized areas of excellent performance, moderate performance and low performance from the baseline audit;
- identified barriers to best practice delivery, and identified strategies and possible resources to overcome the barriers; and
- developed practical strategies to implement over a four-month period in the setting.

The barriers that were faced during the early phases of the project included: lack of staff availability, staff compliance to the project, client compliance, family compliance, the time allowed in client's home to conduct assessments and education, lack of staff time to conduct assessments, available resources for implementation, poor knowledge of skin tears among clients and some staff, limited time for the project team to be able to assist in the implementation of the project, and many clients either being admitted in to hospital or moving in to residential aged care during the course of the project.

Strategies for overcoming the above barriers included creating educational resources for the staff and clients. Staff received an educational session, and clients received one-on-one education in their

homes. An Anglicare approved Skin Integrity Assessment that was not specific to community settings was utilized by registered nurses in the zone, which helped staff members to identify the needs for clients to receive greater education and referral. The results of GRiP are shown in the Results section (see Table 2).

Phase 3

After implementation of the project (Phase 2), a follow-up audit was conducted which used the same evidence-based audit criteria as in the baseline audit, to assess whether or not the change in practice reflected an improved outcome. The staff members who participated in the implementation period were eight personal care workers and 20 clients over a period of four months. From this, the results from the baseline audit were compared to the follow-up audit for reflection.

Results

Phase 1: Baseline audit

As can be seen in Figure 1, the results of the baseline audit were slightly varied from good to low compliance. The best performance (over 70% compliance) was seen for criteria 3, 5 and 11. These criteria looked at whether the skin flap was viable to be approximated, whether an arrow is drawn and documented to indicate the direction of the skin tear on the dressing, and whether the client and caregivers are educated on the strategies to create a safe home environment.

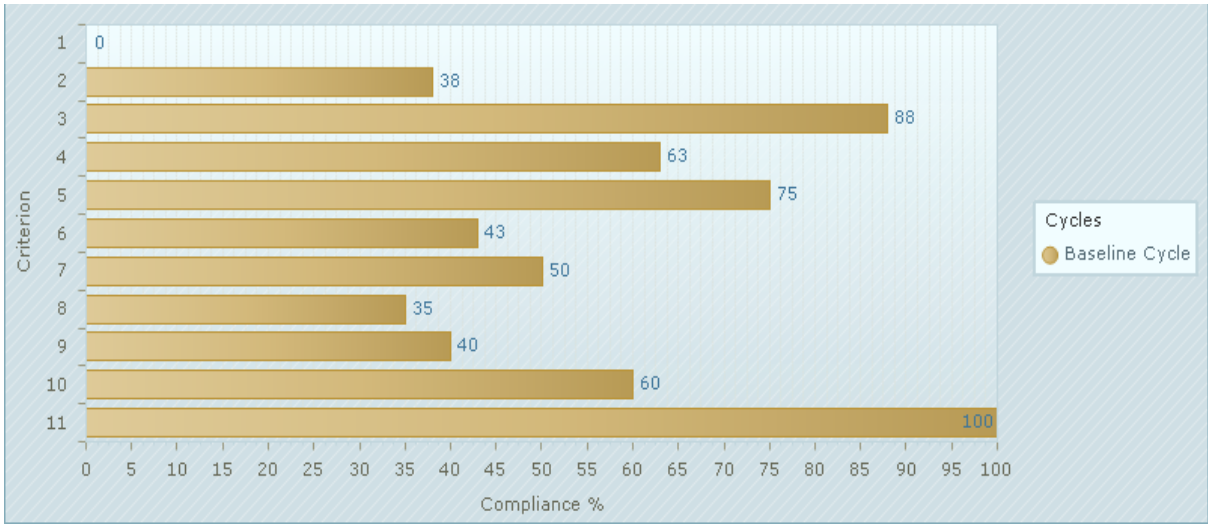

Figure 1: Compliance with best practice audit criteria in baseline audit (%)

The perfect compliance of criteria 11 was expected, as a home and environment risk assessment is carried out at every new admission and annually, as per the organization's protocol. Moderate performance was found for criteria 4, 6, 7, 9 and 10, which ranged from whether the right type of dressing was used, if clients' nails were cut and whether a physician was contacted in cases of infection, to the education of clients and staff. The remaining three low performing criteria were anticipated. Criteria 8 and 9 were similar in that it was evident that clients and carers were not educated on strategies to prevent future skin tears. Criterion 2 was disappointing as the STAR classification tool was widely used in the organization to identify the classification of a skin tear by the

registered nurses; however many personal care workers had not been given the education and resources to treat skin tears.

Phase 2: Strategies for Getting Research into Practice (GRiP)

The main barriers, strategies, resources and outcomes identified are presented in Table 2 below. There were ten strategies identified to overcome barriers to best practice in this particular project.

Table 2: GRiP matrix

Barrier	**Strategy**	**Resources**	**Outcomes**
Time for undertaking the implementation project	Seek management approval and scheduling availability for allocation of time to conduct project	Organizational program called Procura	Allocation of time weekly
Health status of client	N/A	Monitored dated notes through Procura to ascertain client's health	Unable to complete follow-up audit on five clients due to death, respite and hospital admissions
Staff availability	Accessed approved leave of staff Informed scheduling of the staff involved in project	Checked with administration upcoming staff leave Requested that scheduling change run sheets of involved staff to ensure they were able to attend education days and meetings when needed, through Procura	Staff were available when required, and adjustments were made for staff members who had approved leave
Staff compliance	Use of purposive sampling Increased duration of team meetings	Introduced project at team meeting, and allowed staff to volunteer for the project Sought management approval to increase duration of meeting by 30 minutes	Staff compliant

Client compliance	Use of purposive sampling Fee exemption for clients involved	Selected clients who had regular registered nursing visits, and agreed to participate in project Sought approval from organization	Good client compliance Visits were fee-exempt
Family compliance	Informed family of scheduled visit time	Phone call to next of kin Educational and informational brochure left in client homes	Moderate compliance of next of kin
Time in clients home to conduct assessments and education	Seek management approval to increase duration of the client's visit and added specific comments to run sheets	Advised scheduling of involved client's through Procura	Appropriate amount of time allocated
Time for staff	Implemented self-directed learning workbook Increased meeting times	Anglicare-approved Skin Integrity Assessment Prevention and Management PCW and AIN Workbook and Assessment Provided education at the end of team meeting	Staff satisfaction of educational time during team meetings with self-directed learning in own time
Staff knowledge	Education at team meetings; Self-directed learning	Practical demonstration of skin tear prevention and management Utilization of the STAR classification tool Providing information pack Brochures Implemented	Staff knowledge improved

		organizational procedures and self-directed workbooks	
Financial costs of purchasing kit equipment	Seek approval from funding bodies	Wound care supplies ordered through Independent Solutions	Staff provided with wound care kits

Phase 3: Follow-up audit

As can be seen in Figure 2, there were improvements with compliance with each criterion, some being quite substantial performance improvements, though there was a marked deterioration in compliance for criterion 9, which addressed whether family members or caregivers were educated on the prevention of future skin tears. This was disappointing as there was great investment in the education for clients and caregivers; however a particular barrier was the difficulty of having caregivers at home with the client during the scheduled nursing visit time. In summary, a follow-up audit for this particular criterion could not be obtained for all clients.

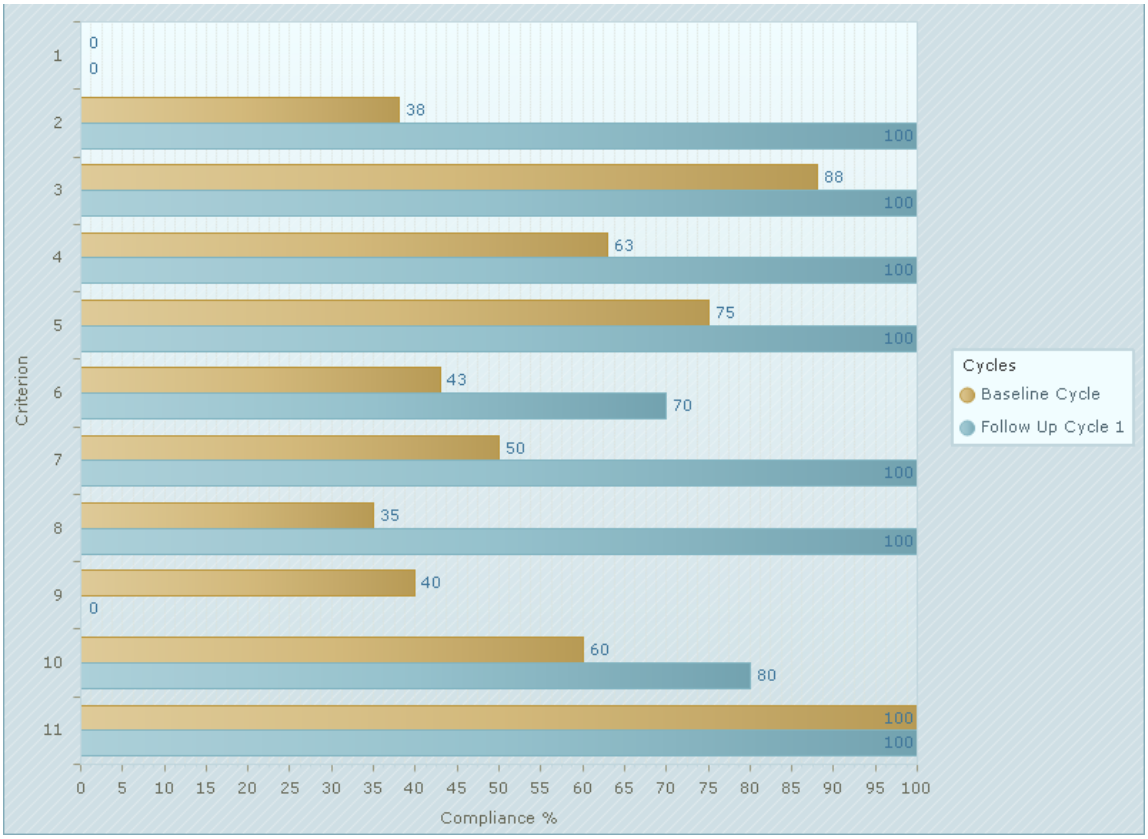

Figure 2: Compliance with best practice audit criteria in follow-up audit compared to baseline audit (%)

The greatest percentage of improvement can be seen in Figure 2 for criteria 2 and 8 – which addressed the need for the use of a validated classification tool (STAR), and educating clients on prevention strategies to avoid future skin tears respectively. It is evident that education for the clients and personal care workers was very successful in this regard after implementation of the project.

There was also marked improvement in six of the criteria, where an improved rate of 100% was attained in the follow-up audit.

With respect to criterion 1, which was concerned with whether a skin integrity assessment is conducted on admission, although there is a validated skin integrity assessment tool approved by Anglicare, it is related directly to aged care residential, and therefore had not been used on an admission in the community setting in the past, and a validated tool specific to community had not been created and introduced at the time of the project. Because of this, a 0% compliance rate was measured.

The sampling size of 20 clients unfortunately had to be reduced to 15, due to loss of follow-up brought about by hospital admissions and transfers to residential aged care facilities during the period of the project.

Discussion

Many improvements were evident in compliance with best practice, as was the goal at the beginning of the project. However there is always room for improvement in this particular area, and the aim is to continue to achieve further improvement.

In the community setting, the incidence rate of skin tears is based on skin tears that are sustained during direct scheduled care time. By reviewing current practices, it can be said that the majority of skin tears treated at Anglicare are those that are acquired outside scheduled visits by staff and therefore the prevalence of skin tears cannot be truly measured in the community setting. In the community setting, prevention of skin tears could then generally be of higher importance than treatment.

When admitting clients to Anglicare, a compulsory home and environment risk assessment is undertaken as a preventative measure. This assessment is completed by the first health professional that enters the home, whether it is a registered nurse, allied health professional, team leader or senior personal care worker. If the assessment identifies a risk, the professionals work with the clients in the community to minimize the potential hazard, thus potentially preventing injury. Other preventative measures that utilized in the project included educational brochures for family, clients and care workers (Appendix IV).

The initial plan for providing education was through educational sessions and practical simulated environments. After the project team met with the stakeholders it was identified that this was not possible. This was primarily due to the distribution of staff across a 40km by 10km zone and the difficulty of coordinating travel time and client schedules to ensure all staff involved would be available to attend. As a result, staff were provided self-directed learning resource packs which included self-directed workbooks, organizational procedures, the STAR classification charts, and wound care instruction cards. Once the work books were completed, staff then received skin tear kits and a practical competency assessment was carried out.

The audit criteria included a skin integrity assessment for skin tear prevention. However, our audit results identified 0% compliance with registered nurses not completing this assessment in the past

due to time constraints and the adaptability and transferability of the organizational assessment to the community setting. As a large organization, one assessment tool has been assigned to be utilized across a variety of different care facilities including youth work, residential facilities and community care. Unfortunately this particular tool only focuses on residential aged care facilities. The registered nurses who completed the skin integrity assessment during the project confirmed that the tool was comprehensive and user friendly, but time consuming to use in the community setting. An effective tool that is streamlined for efficient use within the community setting may be advantageous. In addition, nurses stated that it is easier to control the environment in a health care institution as opposed to the community setting, as assessment of risks in the home that may contribute to skin tears is more difficult due to many variables.

The treatment of skin tears is a vital component within the community setting and research confirms that there are many types of skin and wound care interventions for managing and treating skin tears. Initially, a validated tool is required to determine the severity of a skin tear. The organization has already implemented the Skin Tear Audit Research tool (STAR) for assessing skin tears, and therefore the project team chose to continue to use this tool for the project.

As personal care workers, family and clients are the first to identify a skin tear, it is imperative that best practice education and appropriate resources are available to these groups. Determining skin flap viability, and selecting dressing products and the technique of dressing skin tears are important factors to consider when treating a skin tear. As discussed, current practice is largely based upon expert opinion and consensus rather than upon the findings of research or systematic reviews. As well as this it was deemed of high importance by the project team to ensure prevention begins with the personal care workers, clients and their families. This would help to ensure that the clients receive appropriate recommendations to ensure a safer home environment and acting on these recommendations, as well as receive education on skin care, skin protection and diet recommendations.

In the general community nursing setting the registered nurse makes the educated decision on what dressing product best suited the skin tear, taking into consideration the clients coexisting factors.[12] However in the context of the implementation project it is often not a registered nurse that identifies and initially treats a skin tear. This can be due to the fact that many community clients are receiving non-health related services, and therefore do not have a regular nursing visit. Clients may be visited by staff members from non-health backgrounds who may not be able to easily identify skin tears, or the issue is not addressed with staff members, and therefore not acknowledged. The consequences of this generally can lead to simple wounds that become ulcerated or infected when not treated altogether or not treated properly, which can lead to lengthy hospital admissions, depending on the severity of the wound.

For this implementation project the financial cost of dressing products largely impacted on the type of dressing products used. In the community setting, the organization provides staff with skin tear kits; however it is the client's responsibility to purchase dressing products independently. Although research seems to indicate that the use of silicone, hydrocolloids, and foam dressings may be the most effective dressings[12], and this was deemed inappropriate in the community setting due to the higher cost associated with these products for the client and the lack of understanding about the particular mechanisms of action of these dressings. Simple, cost-effective products supported by best practice were selected for this project. Please refer to Appendix I for the dressing products selected and the overall management of skin tears as recommendation for future practice.

In summary, the main limitations of the project were:

- It was found during our initial literature review that there was more information on the treatment and management of skin tears and less on prevention measures. However, the primary focus with skin tear management in the community setting is prevention.
- The existing literature is based on registered nurses conducting assessments; however in the community setting, initial assessment and management is conducted by personal care workers with Certificate 3 qualifications as well as families and clients themselves.
- The literature recommends the use of multiple dressing products with varying financial costs. In the community setting clients are expected to purchase dressing products independently.
- Unstructured distribution of staff created difficulty with gathering groups for education. As a result, education was tailored to individuals in addition to the use of self-directed learning tools.
- Purposive sampling was used when selecting clients for the implementation project due to the demographic location of clients and existing clients of the nursing service who were happy to consent.

The main successes of the project were:

- The project received very good support from the organization and key stakeholders and had an enthusiastic uptake from the personal care workers and clients involved.
- The project led to the increased awareness of allied health services within the organization and increased internal referrals.
- Improved compliance with implementing evidence-based practice in the community setting was seen when comparing baseline and follow-up audits.

Future directions for promoting best practice highlighted by the project as priorities are:

- Disseminate this project across all zones within the organization by implementing ongoing education, training and competencies.
- To conduct a review with Anglicare's Quality Team to establish appropriate documentation in the community setting to be utilized for skin tear prevention, management and future audit.

Conclusion

The aims of the project were realized, as it was observed that an increased compliance in evidence-based strategies, which was deemed a great achievement. This project assisted in providing future direction for sustainable evidence-based practice change. Current practices were reviewed and improvement was seen in the follow-up audit. An evidence-based approach was implemented to educate clients and staff on skin tear prevention which appears to have also been successful, with almost 100% compliance in the audit criteria specific to education. Though barriers were identified, those that could be overcome were addressed successfully.

The project has ultimately demonstrated how important education of personal care workers, as well as client and caregivers, is to improve the outcomes in skin tear prevention and management in future. This project has also highlighted the need for a community-focused skin tear assessment tool, as the limited literature focused on community nursing does not yet explore this.

It is evident from the follow-up audit that this project was successful in increasing knowledge, and providing future direction for sustainable evidence-based practice change within the community

setting. Ideas and recommendations for future practice have been discussed within the project team. These include reviewing the Skin Integrity Assessment Tool for Residential Aged Care that Anglicare has available, and creating a community-focused tool which will be more relevant and assist in future practice. Another plan discussed is for ongoing education for staff and client/caregiver to promote future prevention. Further research on the most effective wound care products that are also cost-efficient and cost-effective for the clients would be beneficial in achieving improved client care outcomes. Future audits will be important to guarantee sustained evidence-based practice changes, as well as ensuring the aims and objectives behind this project are implemented elsewhere.

Conflict of interest

The authors have no conflict of interest to declare.

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Appendix 1: Self-directed learning package for personal care worker

CHAMPIONS for Skin Integrity

How to champion skin integrity as a Personal Care Worker

"Promoting skin integrity means we aim to maintain intact, healthy skin able to perform its normal functions"

Introduction

The skin is the largest organ of the body and often the most forgotten. Skin tears are one of the most commonly occurring wounds in the elderly population (Murray 2005). With an increasingly elderly population, assessment, management and prevention of skin tears often presents a clinical challenge for clinicians, as even the simplest intervention can result in damage to the skin (Baranoski 2003). Whilst skin tears are seemingly minor compared to leg ulcers, they may be painful and can lead to complications if not treated appropriately (Murray 2005). As with all wounds, selecting an appropriate treatment is dependent upon obtaining an accurate assessment of the wound and client to guide interventions and prevent further trauma.

Definition

A skin tear is a traumatic wound that occurs as a result of friction alone or shearing and friction which separates the epidermis from the dermis (partial-thickness wound) or separates both the epidermis and dermis from the underlying structures (full-thickness wound) (Payne and Martin 1993).

Aetiology of skin tears

It is commonly recognized that skin tears are a common wound particularly in the elderly population. A study by Malone (1991 in White 2001) found that in aged care residential facilities, the incidence of skin tears is approximately one skin tear per resident per year. However, only one in three skin tears was reported suggesting that the actual incidence may be much higher. Further research is required in order to provide baseline data on the incidence of skin tears in the acute, aged care and community settings.

Most skin tears occur in the upper extremities while nearly half have no apparent cause (Baronoski 2003). Wheelchair injuries account for approximately 25% of skin tears and accidentally bumping into objects accounting for 25%. Transfers and falls contribute 18% and 12.4% of skin tears respectively. Whilst skin tears can occur on other areas of the body, approximately 80% of skin tears are located on the arms and hands, 14% on the shin or foot and 4% on the head (Baranoski 2003).

Physiology of skin tears

The literature suggests that skin tears occur mainly due to skin changes associated with ageing. Changes include reduced dermal thickness, thinner subcutaneous layers of fat (particularly on the face, shins and back of hands), weakened epidermal-dermal junction due to flattening of the epidermal papillae (Baranoski 1993; Murray 2005). These changes lead to a decrease in the skin's ability to withstand the forces of pressure, shear and/or friction (Murray 2005).

Collagen and elastin in the skin reduces with age and the glands of the skin, eccrine, sweat, aprocine and sebum glands all diminish in function often resulting in dry, itchy, inelastic skin (Murray 2005).

Microcirculation decreases and capillary fragility is evident in the form of purpura and ecchymosis of the skin following minor trauma and reduced blood supply prolongs healing time (Murray 2005).

Epidermal turnover of cells reduces with ageing. The turnover time increases from 21 days in young uncompromised adults to up to 40 days in adults in their mid-thirties, slowing even further with advancing age (Murray 2005).

In addition to age related changes, the increased prevalence of comorbidities, associated medications, nutritional status, declining functional ability and sensory alterations, elderly people are more susceptible to skin tears (Murray 2005). Compounding all of this is the daily exposure to environmental risks of irritants and chemicals as well as physical and mechanical injury (Murray 2005).

Factors that contribute to skin tear formation

According to the literature, dependent clients who require total care for all activities of daily living are at greatest risk for skin tears because these clients frequently acquire skin tears during routine activities of bathing, dressing, positioning and transferring (Baranoski 2003). Independent clients sustain the second highest number of skin tears and these occur mostly on the lower extremities (Baranoski 2003). The most common causes of skin tears include the following:

- History of previous skin tears
- Presence of ecchymosis (bruising, discoloured skin)
- Advanced age
- Immature skin (premature infants)
- Poor nutritional status
- Cognitive impairment/dementia
- Dependency
- Multiple medications
- Impaired mobility
- Dry skin/dehydration
- Presence of friction/shearing/pressure
- Impaired sensory perception
- Disease processes (renal failure, chronic heart failure, cerebrovascular accident)

(Bryant 2000; McErlean, Sandison, Muir, Hutchinson and Humphreys 2004).

Prevention strategies

There is little written in the literature about the prevention of skin tears however a common sense approach is recommended in light of minimal clinical evidence. Skin tear prevention should involve the following:

- Assess and recognize fragile, thin, vulnerable, bruised and discoloured skin
- Use extreme caution and a gentle touch when bathing, dressing and/or transferring individuals at risk
- Avoid wearing rings that can snag the skin and keep nails short

- Use proper positioning, turning, lifting and transfer techniques to prevent shear or friction. Utilise slide sheets to move and turn clients. If the client is being cared for at home ensure that carers understand and use these techniques also.
- Use pillows and blankets to support arms and legs
- Protect fragile skin (wear long sleeves, pants) and use/or limb protectors
- Avoid using soaps that can dry the skin and apply pH neutral moisturizers to keep skin adequately hydrated. Pat skin dry instead of rubbing it.
- Avoid using adhesives
- Pad bed rails, wheelchair arms and leg supports
- Provide a well-lit environment to help minimize the risk of people bumping into things
- Provide continuing education to staff to help understand the importance of identifying, treating and preventing skin tears
- Ensure optimal nutrition and hydration

(Bryant 2000; Payne and Martin 1993; Coleman 2001; McErlean et al 2004)

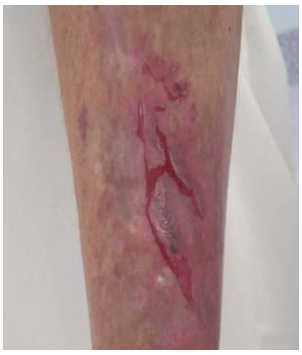
Classifying Skin Tears

Skin tears vary considerably in size, location, depth of injury, and amount of tissue loss (Morey 2003). It is important that each skin tear is assessed according to its aetiology, wound characteristics and goals of care including an understanding of factors impacting on the wound healing process that may contribute to further trauma (Morey 2003).

In the late 1980s, a study by Payne-Martin led to the development of the Payne-Martin Classification for Skin Tears system (Coleman 2001). This was the first evidence-based guideline to provide guidelines for the assessment, prevention and treatment of skin tears. Research to validate the effectiveness of this tool is ongoing but in the absence of a more appropriate tool the Payne-Martin classification system provides clinicians with a clear description of skin tear injuries and a common language for further discussion and research (White 2001).

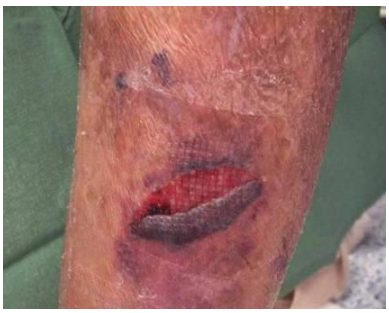
The Payne-Martin classification system primarily relates to the amount of skin loss sustained with a category 1 skin tear the least severe, whilst a category 3 represents skin tears with complete tissue loss (Morey 2003).

Category 1 – Skin tear without tissue loss



- Epidermis and dermis separated
- Ability to approximate wound edges to within 1mm of the wound margin
- Includes linear and flap type skin tears

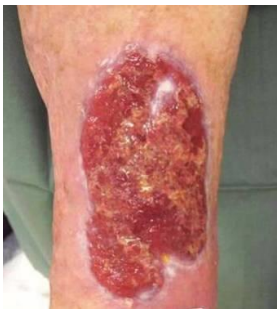
Category 2 – Skin tear with partial tissue loss



- Scant tissue loss
  More than 75% dermis covered by flap
  Less than 25% loss of epidermal flap
- Moderate to large tissue loss
  More than 25% loss of epidermal flap
  More than 25% of dermis exposed

Category 3 – Complete tissue loss

- Epidermal flap is absent



Treatment principles

The management of skin tears varies and there is a paucity of published literature regarding the optimum treatment for skin tears. However, assessment and management strategies based on the Payne-Martin classification system provide clinicians with limited wound assessment experience with a guideline that ensures appropriate management *(McErlean 2004)*

Skin Tear Management Guideline For PCWs & AINs

1. Stop bleeding

- Apply firm pressure with a clean, damp washer and elevate

2. Apply infection control principles

- Wash hands, wear plastic apron and protective eyewear if risk of splash or contamination by blood/body fluids

3. Cleanse

- Irrigate the wound with normal saline, clean under the flap to remove foreign debris, blood clots and excessive exudate.
- Pat dry surrounding skin

4. Approximate

- Gently realign skin flap by rolling skin with moist sterile cotton bud. The use of a moistened cotton bud assists with approximation of the flap edge.
- DO NOT stretch skin to 'make it fit'. Leave wound open where skin is absent.

5. Apply dressing

- Non-adherent dressing like Cuticerin firstly
- Cover with Melolin over the Cuticerin
- Ensure dressing extends over wound edge by at least 2 cm
- Draw arrows on top of the dressing with a felt pen prior to application of the dressing to indicate direction of the skin flap and due date for removal

6. Limb Protection

- Apply limb protector (e.g. Samafrottee™) or Tubular retention bandage (e.g. Tubifast™) if available

7. Notify RN

8. Documentation

- Document in client/resident progress notes: how skin tear occurred, location of skin tear, approximate size (length, width), condition of the surrounding skin (red, bruised, dry),

what you did (notified RN, submitted incident report, how you cleaned the wound, what dressing you applied, any instructions you gave the client/resident, preventative strategies you may have taken (limb protector, pad wheelchair leg supports, applied moisturiser). Remember to sign, date and time your entry.

- Submit incident report

9. Monitor

- Check dressing and surrounding skin regularly for signs of complication / infection but leave dressing intact. If you are concerned contact the RN.
- Advise client / carer to report problems such as any increase in:
    - Pain
    - Warmth
    - Odor
    - Redness
    - Purulent exudate
    - Fever

YES – seek medical advice

10. Dressing change

- Change dressing weekly or as directed and under supervision of the RN

  Remove dressing slowly in direction of arrow. Apply saline or warm tap water to wound contact layer to 'float' dressing and release adherence if required

11. Implement preventive strategies to prevent further skin tears

ACTIVITY: Case study

Mrs Jones is an 82 year old female living in an independent living unit. She has arthritis and has had recent surgery to repair a broken hip. Mrs Jones has poor mobility and you assist twice weekly with her showers and general housework. As she was walking to the front door she knocked her leg on her wheelie walker and got a skin tear on the front of her right leg. The wound is bleeding lightly and the surrounding skin is bruised and red. Mrs Jones does not even know that she has hurt her leg.

- Write down what you would do in this situation in the space provided below

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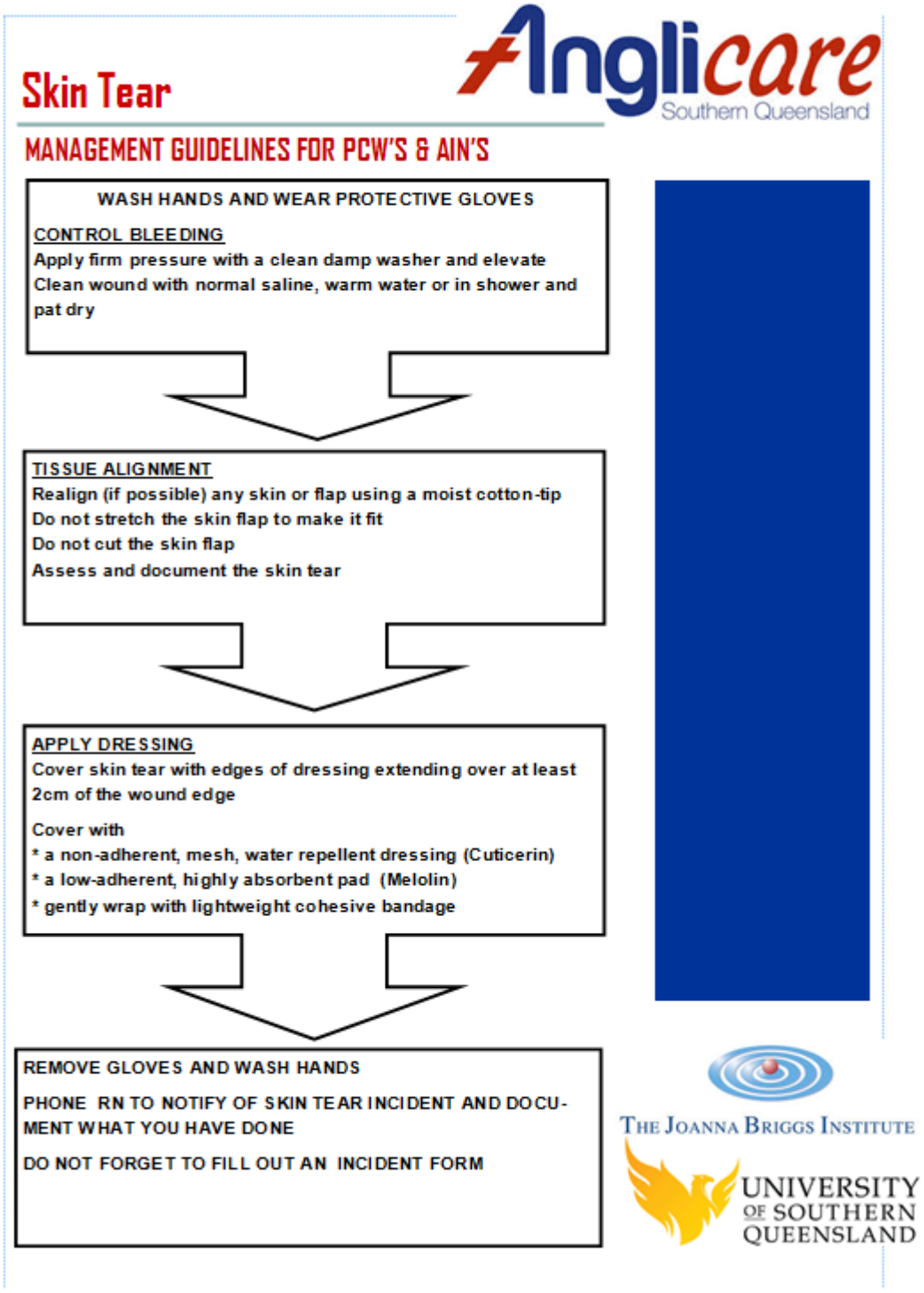
Appendix II: Personal care worker's pamphlet located in wound care kit



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Appendix III: Staff questionnaire used for baseline audit and follow-up audit

Evidence based approach to the prevention and initial management of skin tears within the aged community setting: A best practice implementation approach

12/11/2014

Dear

Thank you for volunteering your time to be involved in a fantastic project. Please find enclosed your skin tear packs, education workbooks, skin tear management plan and follow up questionnaire. Once you have completed your workbook scenario and questionnaire please return them to myself or Laura Priest.

In order to capture a true understanding of your baseline knowledge we ask if you could kindly complete the questionnaire independently.

Question 1: How is a skin tear assessed?

_____

_____

Question 2: Do you know what the STAR classification tool is?

Yes No

Question 3: Do you know if/when the skin flap should be re-aligned?

Yes No

Question 4: Do you know what dressing products should be used for skin tears?

Yes No

Question 5: Do you know what direction to draw the arrow on a skin tear dressing?

Yes No

Question 6: What are the signs of a skin tear getting worse or infected? And what would you do?

_____

_____

_____

Question 7: Have you had prior education of skin tear prevention and management?

Yes No

Appendix IV: Educational pamphlet for clients and caregivers

"We are excited to be able to provide our staff and client of Anglicare SQ with the best evidence based research to prevent and manage skin tears in the community." Rebekah Beechey and Laura Priest (Registered Nurses)

This brochure provides education for staff, clients and families on how to prevent skin tears from occurring and instructions on what to do if a skin tear is sustained.

THE JOANNA BRIGGS INSTITUTE

UNIVERSITY OF SOUTHERN QUEENSLAND

Skin Tear Prevention and Management in the community Setting

Anglicare Southern Queensland

Contact Us

Phone: 07 55535200

Fax: 07 55625258

Prevention

Use a **soap-free** body wash
Moisturise skin twice daily
Pad or **cushion** equipment and furniture (e.g. walkers, wheelchairs)
Drink 6-8 glasses of **fluid** every day
Wear long sleeves and pants or limb **Protectors** to protect the skin
Ensure adequate **lighting** to avoid bumping in to furniture

Do not use **soap**
Avoid **tapes** and adhesives on the skin

Management

WASH HANDS AND WEAR PROTECTIVE GLOVES

CONTROL BLEEDING
Apply firm pressure with a clean damp washer and elevate
Clean wound with normal saline, warm water or in shower and pat dry

TISSUE ALIGNMENT
Realign (if possible) any skin or flap using a moist cotton-tip
Do not stretch the skin flap to make it fit
Do not cut the skin flap
Assess and document the skin tear

APPLY DRESSING
Cover skin tear with edges of dressing extending over at least 2cm of the wound edge

Cover with
* a non-adherent, mesh, water repellent dressing (Cuticerin)
* a low-adherent, highly absorbent pad (Melolin)
* gently wrap with lightweight cohesive bandage

REMOVE GLOVES AND WASH HANDS

PHONE RN TO NOTIFY OF SKIN TEAR INCIDENT AND DOCUMENT WHAT YOU HAVE DONE

DO NOT FORGET TO FILL OUT AN INCIDENT FORM

Anglicare Southern Qld has a team of health care professionals that would be happy to review your current situation and provide you with suggestions on how to decrease your chance of sustaining a skin tear.

Registered Nurses
Dieticians
Occupational Therapists
Physiotherapist
Social workers

ONLY $9

Signs of an Infected Wound ?

REDNESS
Swelling
Odour
Pain
Temperature

If you are experiencing any of the above please seek medical attention.

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