

Prevention and management of skin tears: A survey of nurses in French-speaking Switzerland

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ABSTRACT

Background

Skin tears are common in many care settings. Clinicians' practices show a lack of knowledge on skin tear classification, prevention and treatment; documentation problems; and a lack of uniform language.

Aim

The aim of this study is to investigate nurses' perceptions, opinions, knowledge and practices on the prevention and management of skin tears in French-speaking Switzerland.

Method

A survey was conducted among nurses and wound care specialists in Western Switzerland. Data were collected between 17 November and 14 December 2020 and analysed using descriptive statistical and thematic analyses.

Result

A total of 117 nurses and wound care specialists participated in this survey; 89% described skin tears as common. Skin tear definitions (18%, n=15), clas-

sification systems (7%, n=6) and risk factors were not well known. Prevention measures were often non-existent (87%, n=82). A standard of care was infrequent (5%, n=6). Pain (76%, n=70), delayed healing (75%, n=70) and frequent dressing changes (72%, n=67) were common issues and complications. Education on dressing choices (89%, n=80); prevention measures (88%, n=79); and aged skin issues (86%, n=77), were identified as important teaching topics.

Conclusion

The results contribute to our understanding of wound care specialists' clinical judgment on preventing and managing skin tears in French-speaking Switzerland and highlight the importance of wound care education.

Implication for clinical practice

To enhance nurses' knowledge of wound care and ensure evidence-based practices, we recommend implementing standard, unified wound curricula for nurses at the undergraduate and post-graduate levels, based on the existing European curricula.

INTRODUCTION

Skin tears are defined as ‘a traumatic wound caused by mechanical forces, including removal of adhesives. Severity may vary by depth (not extending through the subcutaneous layer)’.¹ Skin tears occur across all healthcare settings and are related to mechanical trauma such as wheelchairs, adhesive tapes’ removal, transfers or falls.^{1–5} Their prevalence ranges from 3% to 41% in long-term care settings^{5–14}, 1.1% to 11.4% in acute care^{15–20}, 3.3% to 27% in palliative care^{19,21,22} and 0.10% to 17% in paediatrics.^{23,24} Evidence shows that these wounds are often unreported, misdiagnosed and that their clinical and financial impact on the healthcare system is not clearly described.^{25,26} In addition, the impact of skin tears on the individual is poorly described, but they appear to cause pain and impair quality of life.^{25,26}

Current guidelines recommend an interdisciplinary team approach to implementing a systematic skin tear prevention programme.¹ Good skin tear management includes interventions involving both the patient and the caregivers^{1,27}, such as ensuring safe patient handling techniques/equipment or a secure environment; wearing long sleeves, long pants/trousers or knee-high socks; and keeping fingernails and toenails short.^{3,27} The knowledge base used in skin tear care requires an understanding of the physiology of the skin, which helps in the management of people with skin tears. When a skin tear occurs, effective care should be based on preserving the skin flap and the surrounding tissue and the re-approximation of the wound’s edges, reducing the risk of infection and further injuries while considering any comorbidities.¹

Studies have demonstrated a gap between evidence and clinical practices regarding skin tear prevention and management^{13,28}, due to a lack of information and expertise, inadequate communication and limited access to evidence on assessment.¹³ White²⁸ investigated the knowledge, opinions and clinical practices about skin tears of nurses working in nursing home/residential aged care facilities using a survey method. The results showed that fewer than 50% of the nurses documented the shape of the skin tear, amount of skin lost, depth of the wound or condition of the surrounding skin, and only 24% indicated that their facility had a ‘standard’ for the treatment and management of skin tears.²⁸ Another survey evaluating skin tear knowledge of acute care nurses working in two hospitals showed improved knowledge in skin tear identification and assessment, classification and

treatment (97.1%, versus 99.1%).²⁹ A larger study investigated current practices in assessing, predicting, preventing and treating skin tears among health care providers from 16 countries and revealed problems with the current methods for skin tear assessment and documentation (69.6%). Fully 80.9% mentioned that tools or classification systems are not used.³⁰ A survey on acute care nurses’ knowledge of skin tear assessment, prevention and treatment found a lack of knowledge and awareness of risk factors, prevention strategies and skin tear treatment based on the literature.³¹ A recent study from Germany confirmed nurses’ lack of knowledge on the international classification system, prevention and treatment.³²

With the above in mind, we aimed to investigate nurses’ perceptions, opinions, knowledge and clinical practices related to the prevention and management of skin tears in French-speaking Switzerland.

METHODOLOGY

A quantitative, non-experimental descriptive research approach with a survey was employed. A survey questionnaire developed by White²⁸ was identified and translated into French.³³ It was distributed among wound care nurses who hold a Certificate or a Diploma of Advanced Studies degree (CAS/DAS HES-SO) in wound care recruited via the University of Applied Sciences and Arts Western Switzerland and the Swiss Association for Wound Care (SAfW-Romande) between 17 November and 14 December 2020. The survey was sent via an email that also explained the purpose of the study. Prospective participants were invited to answer the online survey through the link provided in the email. Since the survey was anonymous, there was no follow-up on the respondents and non-respondents. Two weeks later, a reminder was sent to all participants. The survey was closed after four weeks.

The questionnaire was divided into four sections, with the first focussed on general information about the nurses’ education and the institution within which they worked. The second section assessed their perceptions of skin tears; the third inquired about knowledge of skin tears’ definition and classification; the fourth section addressed clinical issues and difficulties relating to the prevention, management and treatment of skin tears. We analysed the data using descriptive statistical analysis. All open-ended questions were analysed using thematic analysis with a deductive approach, according to Braun and Clarke’s

recommendations.³⁴ First, the lead author familiarised herself with the data, generated initial codes and identified themes from the skin tear definition¹ and risk factors for skin tear development identified in the literature.^{1,35,36} Second, LC highlighted words from the respondents' answers, and the codes and themes were compared and grouped for the final analysis. Third, the thematic analysis was reviewed by SP and GG.

Quality criteria for studies on developing and evaluating health status questionnaires exist.³⁷ White's original survey²⁸ and the updated survey used in this study provided a clear description of the aspects of the development of the questionnaire to grade the content validity. The measurement aims of the survey used were evaluative, and the items were valid for assessing nurses' knowledge and clinical practices related to skin tears. The survey was adapted to the target population, as the updated version was clearly addressed to nurses and wound care specialists. Item selection and reduction choices were made through the pilot test as part of the translation process.³³ Criterion validity refers to the degree to which scores on a particular instrument relate to a gold standard.³⁷ The survey development and update were based on evidence-based guidelines; therefore, it had a positive rating because it was related to a gold standard. The study was approved by the Ethics Committee in the Canton of Geneva, Reference number: Req-2020-01021.

RESULTS

A response rate of 45% (117/258) was achieved. Participants were almost exclusively from the French-speaking part of Switzerland (97%, n=113), with the

remainder from the Italian part. Half (50%, n=59) worked in a hospital environment – either a university hospital, a general hospital or a clinic. Only 34% (n=40) worked in a home care setting or private practice. Complete information on respondents' working specialities is summarised in Figure 1.

Nurses' educational backgrounds

Of the respondents, 56% (n=66) had a Diploma of Nursing, 20% (n=23) a Bachelor of Nursing and 3% (n=4) a Master of Science degree. Fifteen per cent (n=17) had been nurses for 3 to 10 years, 60% (n=70) for 11 to 30 years and 23% (n=27) for 31 to 40 years (median = 21–30 years). The majority (83%, n=97) had completed a Certificate of Advanced Studies in wound care. Sixty-eight per cent (n=79) had up to 10 years of experience as wound care specialists (median = 3–10 years).

Nurses' perceptions of skin tears

Of the respondents, 89% (n=102) indicated skin tears were 'common' to 'extremely common'. Sixty-five per cent (n=75) indicated being aware of 1–2 skin tears per week, and 7% (n=8) reported knowledge of 3–5 new skin tears per week.

Nurses' knowledge of skin tears

Of the respondents, 78% (n=90) described a skin tear in their own words. Words from these definitions and similarities were highlighted and grouped for analysis (Table 1). All participants used the words 'wound' or 'injury' to describe a skin tear, but only a few described a skin tear as a 'traumatic wound'. More than half (56%, n=50) specified that 'mechanical forces, shear, friction or trauma' cause skin tears. The 'removal of dressings or adhesive dressings'

Figure 1: Nurses' working specialities

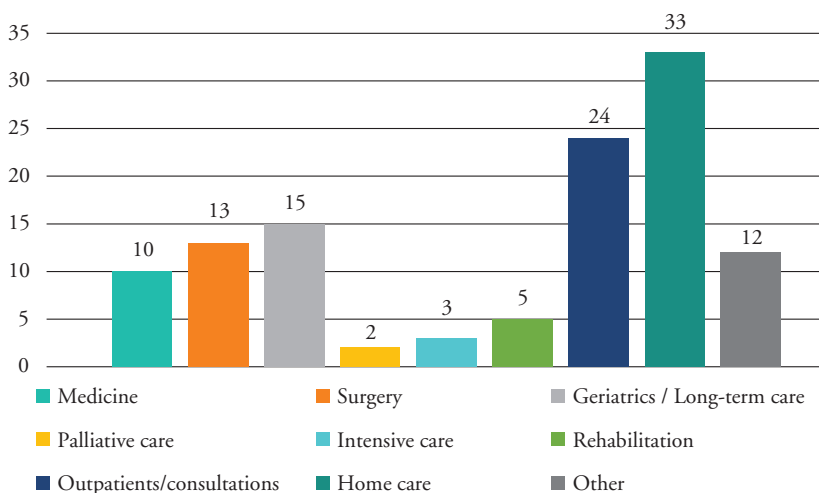


Table 1: Words or concepts to describe a skin tear

How would you describe a skin tear, in your own words?	% (n)
Traumatic wound	29 (26)
Mechanical forces, shear, friction or trauma	56 (50)
Removal of dressings or adhesives dressings	3 (3)
Superficial or deep, touching epidermis and dermis, separation of skin layers, varies in depth	46 (41)
Full or partial and flap	26 (23)
Skin frailty, elderly and dermatoporosis	21 (19)

were elements that only a very few nurses included in the definition. Participants used phrases such as 'superficial or deep', 'touching epidermis and dermis', 'separation of skin layers' and 'varied in depth' to relate to the notion that the tears' severity may vary by depth, as in the International Skin Tear Advisory Panel (ISTAP) definition. Although not in the definition, words such as 'full or partial' and 'flap', or the concept of 'skin frailty, elderly and dermatoporosis', were used in the descriptions of skin tears. Ninety-one per cent (n=85) indicated not using a classification system in their care setting, and only 7% (n=6) used the ISTAP classification system.

Risk factors and prevention

Out of 80% (n=93) of respondents, 68% (n=63) declared having no workplace policy for identifying a person at risk of skin tears. Risk factors for skin tear development identified in the literature^{1,35,36} were noted by participants and grouped for the analysis (see Table 2). Eleven per cent (n=10) identified alcohol use, smoking and sun exposure as risk factors, and 2% (n=2) listed domestic pets as risk factors for skin tears. Eighty-seven per cent (n=82) of nurses indicated no existing preventive procedure in their organisation. Soap and water (90%, n=83), emollients (8 %, n=7) or other products (e.g., cleansing

Table 2: Risk factors for skin tears identified in the literature

Risk Factors	% (n)
Impaired mobility	58 (53)
Pharmacological therapies	53 (49)
Malnutrition	51 (47)
Age	48 (44)
Dehydration	46 (42)
Mechanical factors related to skincare practices	46 (42)
Falls and accidental injuries	41 (38)
Cognitive deficit/dementia	34 (31)
Sensory changes	30 (28)
Skin changes (immature skin in neonates, senile purpura, ecchymosis, haematoma)	26 (24)
Previous skin tear	9 (8)
Oedema	9 (8)

Table 3: Products used in skin tear treatment

Products (n = 112 if not specified)	Always % (n)	Mostly % (n)	Occasionally % (n)	Never % (n)	Don't know % (n)
Non-adherent mesh dressing	23 (26)	54 (61)	21 (23)	2 (2)	0 (0)
Foam dressing	9 (10)	38 (42)	47 (53)	5 (6)	1 (1)
Calcium alginate (n=111)	0 (0)	12 (13)	54 (60)	34 (38)	0 (0)
Skin glue (n=111)	0 (0)	2 (2)	8 (9)	90 (100)	0 (0)
Hydrogels (n=111)	0 (0)	5 (6)	35 (39)	59 (66)	0 (0)
Gelling fibre dressing (n=111)	0 (0)	7 (8)	42 (47)	51 (56)	0 (0)
Acrylic dressing (n=111)	4 (4)	13 (14)	32 (36)	50 (55)	2 (2)
Film dressing (n=110)	1 (1)	3 (3)	32 (35)	65 (71)	0 (0)
Hydrocolloid (n=110)	0 (0)	3 (3)	21 (23)	75 (83)	1 (1)
Skin closure strips (n=110)	9 (10)	26 (29)	37 (41)	27 (30)	1 (1)
Dry dressing	6 (7)	16 (18)	25 (28)	51 (57)	2 (2)
Sutures (n=111)	0 (0)	2 (2)	42 (47)	54 (60)	2 (2)
Left open to the air (n=110)	0 (0)	2 (2)	21 (23)	75 (82)	3 (3)
Tap water (n=110)	5 (5)	13 (14)	35 (39)	45 (50)	2 (2)
Saline (n=111)	43 (48)	32 (35)	20 (22)	5 (5)	1 (1)
Cleansing solution (n=110)	5 (5)	15 (16)	54 (59)	27 (30)	0 (0)
Antiseptic solution (n=111)	6 (7)	21 (23)	48 (53)	25 (28)	0 (0)

oils) (2%, n=2) were used to wash or bathe patients, and 93% (n=85) 'mostly' to 'always' used skin moisturisers on all patients daily.

Documentation of skin tears

More than 60% of nurses indicated 'always' recording the details of the skin tear injury in their nursing notes, care plans and wound charts, whereas 68% (n=75) 'never' recorded details in incident forms or risk management software. More than half indicated 'always' recording the type, cause and size of a skin tear, the site on the body, exudate and the condition of the surrounding skin.

Treatment

Only 5% (n=6) of 96% of respondents (n=112) declared having a 'standard of care' treatment for all skin tears in their care settings. As shown in Table 3, a wide range of products was identified to treat a skin tear, such as non-adherent mesh dressings, foams, calcium alginates or skin closure strips for skin tears'

treatment in their clinical practice.

When choosing a dressing for a skin tear, the most important consideration was that it should not cause any trauma on removal. In addition, more than 70% considered 'very important' the fact that a dressing provides a physiological healing environment and is easy to apply and remove.

Pain, delayed healing/chronic wound-ulcer formation and frequent dressing changes were 'common' to 'extremely common' issues and complications for the respondents when managing skin tears. However, clinical infection was a rare issue/complication in skin tears (Table 4).

Nurses' education

For future educational programmes for Registered Nurses, the first three topics related to skin tears requested by the nurses were: dressing choices (89%, n=80); prevention measures (88%, n=79); and ex-

Table 4: Issues and complications in skin tear management

(n = 93 if not specified)	Rare % (n)	Common % (n)	Extremely Common % (n)	Don't know % (n)
Delayed healing/chronic wound – ulcer formation	23 (21)	58 (54)	17 (16)	2 (2)
Persistent bleeding	43 (40)	48 (46)	6 (6)	2 (2)
Maceration to surrounding skin	46 (43)	43 (40)	8 (7)	3 (3)
Frequent dressing changes	25 (23)	61 (57)	11 (10)	3 (3)
Trauma to the skin or skin tear on dressing removal	30 (28)	46 (43)	23 (21)	1 (1)
Pain (n=92)	23 (21)	53 (49)	23 (21)	1 (1)
Clinical infection (n=92)	59 (54)	34 (31)	4 (4)	3 (3)
Cost issues for the organisation (n=92)	35 (32)	43 (40)	12 (11)	10 (9)
Cost issues for the person and/or family (n=92)	30 (28)	43 (40)	18 (17)	8 (7)
Inconsistent approach by various clinicians (n=92)	30 (28)	37 (34)	28 (26)	4 (4)

tremes of aged skin issues, such as dry/fragile skin (86%, n=77). Only 66% (n=59) of the nurses identified patient and caregivers' education and awareness as a topic for nurses' educational programmes.

DISCUSSION

The overall response rate was 45%; however, evidence demonstrates that surveys involving health-care professionals are known to have relatively low response rates, with an estimated overall survey response rate among this group at 53%, with varying rates of response of 57% for mail surveys and 38% for web-based surveys.³⁸ If the topic is highly salient to potential respondents, they are more likely to respond to the survey³⁹, and one or two follow-ups have been proven effective for increasing response rates.³⁸ An introductory text to the survey explaining the purpose of the research, the researcher's identity and affiliation and the implications of participation should be the first step of any online survey.⁴⁰ In this study, the overall response rate was slightly low, even though the survey began with a welcome message and one follow-up email was sent to all prospective participants two weeks after the survey was launched. Drop-out rates can reach 15–20% in some Internet surveys and could be related to the use of open-ended questions or questions arranged in tables⁴¹, as was the case in this survey research. Scheele et al.³² noted many drop-outs in their study and suggested that this

could be related to participants' insufficient knowledge of skin tears.

This study revealed that education on skin tears and their management should be a part of future education programmes for Registered Nurses. Several implementation project studies have described the importance of staff education for reducing the prevalence and incidence of skin tears.^{13,36,42} For example, an implementation project for patients in acute aged care and rehabilitation units with pre- and post-implementation audits showed a significant change in staff compliance to the skin tear guidelines, with a considerable increase in staff education regarding their prevention (from 20% to 98%) and a decrease of the point prevalence rate from 10% to 0.15%.⁴² Another study from Australia demonstrated that ongoing training and education positively impacted the management of skin tears and improved awareness of skin integrity as a crucial element of skin tear prevention among people at risk.⁴³ Edwards and colleagues¹³ supported the implementation of the Champions for Skin Integrity model to reduce wound prevalence, specifically skin tears (23% vs 19%), and increased evidence-based wound assessment, prevention and treatment. Providing education to all multidisciplinary team members, patients and their carers is essential for raising awareness of the problem.^{1,44–46}

Research has shown that education is needed to improve the prevention, assessment, treatment and management of wound types, including skin tears.⁴⁷ In addition, the rapid evolution in treatment strategies and the increasing complexity of care are creating a need for greater knowledge among nurses. Thus, institutions need to develop a comprehensive understanding of the factors that hinder the transfer of wound care knowledge into practice.⁴⁸

The study's results highlighted a lack of knowledge on skin tear definition, classification and risk factors. This might be related to the fact that the first certificate wound course (CAS HES-SO) began in 2005, but the specific topic of skin tears has only been taught since 2017. Only half of the wound care specialists with up to two years of experience could describe a skin tear using terminology related to the skin tear's definition. Additionally, the term 'skin tear' is not unanimously used, and professionals often use general terms such as 'laceration' or, in French, *lacération* or *dermabrasion*^{1,49,50}, making awareness problematic. Only one third identified a skin tear as a 'traumatic wound', and slightly more than 50% referred to 'mechanical forces, friction or shear'. Terms like 'skin frailty', 'elderly' and 'dermatoporosis', when used in describing a skin tear, are inappropriate because they relate to skin conditions and should be identified by nurses as risk factors for developing skin tears.^{35,36,51}

Concerning skin tear classification, most participants (91%) did not use a classification system in their clinical practice, and more than half (55%) declared not knowing the three types of skin tears based on ISTAP classifications; this is similar to findings in other studies.^{30,32} For example, in LeBlanc and colleagues' survey³⁰, 80.9% of respondents did not use any classification system, and 96% of nurses reported no knowledge of any classification system in the German survey.³²

More than two-thirds (68%) of the respondents declared having no workplace policies concerning the identification of patients at risk of skin tears. The top four most frequent risk factors were impaired mobility, pharmacological therapies, malnutrition and age. Characteristics of older patients that are highly associated with having developed a skin tear are ecchymosis (bruising), senile purpura, haematoma and evidence of a previously healed skin tear, oedema and the inability to reposition oneself independently.³⁵

Risk factors identified are age-related skin changes, dehydration, malnutrition, sensory changes, mobility impairment, pharmacological therapies and mechanical factors related to skincare practices.³⁶ Surprisingly, few nurses identified skin changes (26%), previous skin tears (9%) and oedema (9%) as risk factors. Addressing skin tear risk factors should be part of a common-sense approach to patient care.^{1,2,27} Appropriate knowledge of the risk factors could reduce, or even avoid, the occurrence of skin tears.³⁶

The results showed no institutional policies for nurses to declare skin tears (75%) on an incident form/risk management software. Furthermore, there is no specific coding for a skin tear in the World Health Organization International Classification of Diseases (ICD) 11th edition, but there is coding related to all types of laceration with or without a foreign body.⁵² The lack of coding contributes to the perception that skin tears are insignificant injuries and leads to the poor frequency reports of these injuries.⁴⁹ In addition, the previous literature has reported problems with skin tear documentation because of a lack of consistent and universal language for their documentation and assessment.^{28,30–32,53,54}

Only 6% of the respondents declared having preventive measures for skin tears in their care settings. Nonetheless, a substantial number of respondents (93%) reported using skin moisturisers daily on all patients, and soap and water (90%) to wash patients. Regular moisturising should be seen as an essential part of skincare for people presenting frail skin, to promote general skin health and reduce the risk of skin damage, restore the skin's barrier function, reduce itching and increase the level of hydration.⁵¹ A randomised controlled trial evaluating the effectiveness of a twice-daily moisturising regimen showed a nearly 50% reduction in the incidence of skin tears in residents living in aged care facilities.⁵⁵ Supporting these findings, the application of a pH-friendly, non-perfumed moisturiser twice daily to the extremities resulted in a significant reduction of the incidence of skin tears.⁵⁶ Furthermore, a systematic review on the efficacy and effectiveness of basic skincare interventions for maintaining skin integrity in the aged suggest that liquid soaps are better than traditional soaps, and the application of moisturisers with humectant has a clear positive effect of reducing dry skin conditions and enhancing the skin's barrier function.⁵⁷ Our results show that only six participants followed a 'standard of care', and physicians were not often

involved in wound treatment prescriptions. However, even though nurses cannot prescribe wound dressings in Switzerland, they frequently propose the local wound's treatment in clinical practice.

Additionally, the survey results revealed that pain, delayed healing/chronic wound-ulcer formation and frequent dressing changes were common issues and complications when managing skin tears. Pain and decreased quality of life have been reported by individuals suffering from skin tears.^{25,58} This is problematic when skin tears occur on the lower limbs, or in patients with multiple comorbidities.¹ Thus, traumatic wounds can become chronic wounds.⁵⁹ In addition, frequent dressing changes may prejudice wound healing, lower patient satisfaction, cause pain or lead to cross-contamination or infection due to frequent exposure of the wound.⁶⁰ Therefore, selecting a comfortable dressing that does not cause pain, anxiety and stress when changed or while worn, and a possible extended wear time, is important for patient acceptability and comfort.⁶⁰

Strengths and limitations of the study

To our knowledge, this was the first study in French-speaking Switzerland on this topic. It is limited by including only wound care nurse specialists. Although not intended to be generalised, the results are not valid for a German- or Italian-speaking Swiss cohort. Point-prevalence studies on skin tears might have enlightened the scope of the problem in clinical settings; however, access to nurses and patients in different clinical settings was restricted during this study, due to the COVID-19 pandemic.

CONCLUSION

The results identified a lack of nurses' knowledge on skin tears, insufficient prevention measures, inadequate treatment measures and a need for education. It highlights the importance of wound care education at all levels to enhance the implementation of evidence-based practice guidelines.

RECOMMENDATIONS

To enhance nurses' knowledge of wound care in general and to ensure evidence-based practices in particular, we recommend the implementation of standard and unified wound curricula for nurses at the undergraduate, graduate and post-graduate levels, based on the existing European curricula. Additional research should be done to explore non-specialised wound care nurses' perceptions, opinions, knowledge and clinical practices on the prevention and management of skin tears. Point prevalence studies are recommended to gain insights into the scope of the problem of skin tears in clinical settings.

Key messages

- Although skin tears are common in French Switzerland, their definition, classification and risk factors are not well known among nurses.
- Implementing standard and unified wound curricula for nurses at the undergraduate and post-graduate levels is needed to enhance nurses' knowledge of wound care in general and to ensure evidence-based practices.
- Research is required to gain insights into the scope of the problem of skin tears in clinical settings. ■

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