AUSTRALIAN STANDARDS FOR WOUND PREVENTION AND MANAGEMENT

4th Edition

2022

Suggested citation

To be confirmed

Disclaimer

The *Australian Standards for Wound Prevention and Management* (4th edition) represent the best available evidence at the time of publication related to wound prevention and management. The *Australian Wound Standards* reflect best clinical practice, to be implemented by regulated health professionals and unregulated health care workers subject to their scope of practice and skills, clinical judgment, local policies and in consideration of the personal preferences of the person with or at risk of a wound. The *Australian Wound Standards* should be implemented in a culturally aware and respectful manner in accordance with the principles of protection, participation and partnership.

Printed copies of the *Australian Standards for Wound Prevention and Management* (4th edition) can be ordered from [organisation and/or website]

Preface

This fourth edition of the *Australian Standards for Wound Prevention and Management* provides a framework for delivering best practice in wound prevention and management. The *Australian Wound Standards* are relevant to regulated health professionals, unregulated health care workers, educators, researchers and service providers across Australia.

The *Australian Wound Standards* reflect the best available evidence in wound prevention and management at the time of development and provide a valuable tool to underpin clinical practice and service delivery, policies and procedures, quality improvement initiatives, research initiatives and education programs.

The aim of the *Australian Wound Standards* is to facilitate high quality clinical practice that achieves good health outcomes for people with wounds or at risk of wounding. The document is intended for use by organisations delivering wound care services, wound care practitioners, people receiving wound care and their family carers.

Acknowledgements

The fourth edition builds on the work completed for previous editions of the *Australian Wound Standards*. Appreciation and recognition are extended to previous development teams for their contributions to development of the *Australian Wound Standards*. The contributions of Australian individuals, peak bodies and organisations who responded to the invitation to review draft editions of the *Australian Wound Standards* are acknowledged with gratitude.

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Contents

Introduction

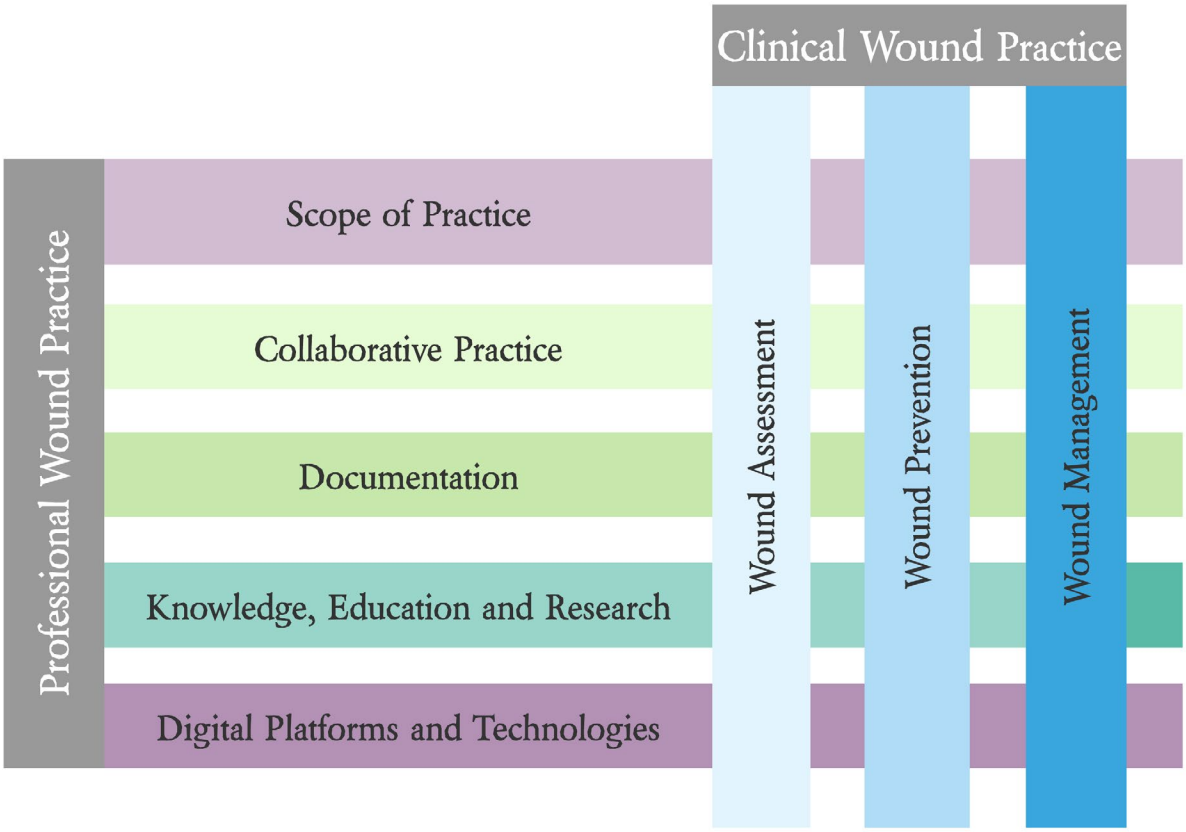
The *Australian Standards for Wound Prevention and Management* presented in this document outline quality care for people with wounds or at risk of wounding. Quality wound care is outlined across eight core standards that exemplify wound care delivery in the Australian context.

What is a Standard?

A professional clinical standard is a statement that identifies an expectation regarding care that should be delivered to an individual. Standards set out practices, procedures and behaviours that reflect exemplary ways in which wound service providers, health professionals and health workers should deliver care. Standards define expectations of service delivery, knowledge, competency, and proficiency that promote safe, consistent, and reliable care. The information outlined in a standard provides criterion by which the quality of health care can be evaluated. Standards provide a valuable tool, not only for guiding clinical practice, but also for informing the development of policies, procedures, education, research initiatives and continuous quality improvement programs (including auditing and staff appraisal). Standards therefore play an important role in improving the safety of the individual and promoting positive care outcomes.

The *Australian Wound Standards* consist of eight core standards addressing the key concepts/domains of professional and clinical practice, as outlined in Figure One. These standards should be considered and used in conjunction with other clinical care standards, accreditation standards and professional standards.

Figure One: The eight core Australian Standards for Wound Prevention and Management



The eight core *Australian Wound Standards* address the ways in which wound care practitioners deliver clinical wound practice, as well as expected standards for professional wound practice. These two areas of practice interact closely, as demonstrated in Figure One. In this edition of the *Australian Wound Standards*, three core domains of wound practice have been highlighted—wound assessment (including care planning and evaluation), wound prevention, and wound management. These three standards outline best practice in these domains based on current evidence. Exemplifying professional standards of care, which encompass practice within legal, moral and ethical frameworks as well as judiciously applying evidence, is core to delivering best wound practice.

Within the eight core domains, specific principles are outlined in 64 standards (41 for wound care practitioners and 23 for wound service providers), each of which details a level of care that reflects best practice and evidence criteria that demonstrate that the core standard has been reached. Because the concepts throughout core domains are all closely related, some evidence criteria have been included in more than one of standard. For example, documentation requirements are specified in the *Documentation Standard*, and specific requirements for documenting wound assessments are also included as evidence criteria in the *Wound Assessment Standard.*

Each core standard includes a rationale, criteria for achievement background and context as extended information, and a table of relevant resources that can be used to guide clinical performance that meets the core *Australian Wound Standards*. Resources were classified according to type and are coded throughout the document, as outlined in Table One.

The Standards express attributes that reflect quality of wound care applied across different contexts and clinical disciplines. They are not intended to be an exhaustive list of qualities that reflect best practice, but rather they are intended as contemporaneous guidance to the way wound care is considered, reflected upon and delivered for people in Australia.

Table One: Resource types and coding

Type of document	**Code**
Standard or similar over-arching principle, including legislation	S
Evidence-based Clinical Practice Guideline	EBG
Consensus Document or Consensus-based Clinical Practice Guideline	C
Position Document	P
Primary Research	R

Terminology in the *Australian Wound Standards*

The *Australian Standards for Wound Prevention and Management* are relevant at the wound service (organisational) level and for individual wound care practitioners.

This edition of the *Australian Wound Standards* includes standards that are specific to health organisations delivering services to people with or at risk of wounds. Throughout the document, the term *wound service provider* is used to refer to organisations, facilities and services that

provide care to individuals with or at risk of wounding. Unless specifically stated, the term refers to any service provider with admitted/registered care recipients (e.g., community health services, primary practice, residential aged care facilities, long term care facilities, day centres or hospitals).

A range of wound care practitioners, from both regulated health professional groups and unregulated health care workers with different training levels are involved in wound prevention and management in different clinical settings. Throughout the document, the term *wound care practitioner* is used to refer to any person employed in the care of individuals with or at risk of wounding. The term *regulated health practitioner* is used to refer to a person involved in wound prevention and management who has completed professional education in a health discipline that is regulated in Australia (e.g., medical practitioner, nurse practitioner, registered and enrolled nurses, or allied health professional). The term *unregulated health care worker* is used to describe any person involved in wound prevention and management who is working in an unregulated field (e.g., Aboriginal health worker, assistant in nursing, support worker, aged care worker, etc.). When referring to the full team of wound care practitioners (across clinical disciplines and professions, and care workers) who deliver care to individuals, the term *interdisciplinary team* is used.

The term *individual/s* has been used to refer to people receiving wound care and the term *family carers* has been used to refer to family members, friends and/or other significant supports who are involved in an individual's care.

The term *wound care* is used has been used to refer to wound assessment, prevention and management.

Development of the *Australian Wound Standards*

The *Australian Standards for Wound Prevention and Management* and the supporting evidence sources presented in this fourth edition build on those in previous editions. For the fourth edition, a scoping review was undertaken to identify existing relevant standards, supporting clinical guidelines and other key evidence sources.

A search strategy was developed to identify free text terms associated with the key concepts/domains relevant to the *Australian Wound Standards.* Next, a search was undertaken in NLM MeSH Browser to identify MeSH and EBSCO terms associated with the free text terms. A limited search of Pubmed was conducted using the MeSH terms and relevant papers were reviewed for additional keywords used by evidence sources that could further add to the search. Next, the full development team reviewed the search strategy and offered additional relevant search terms. The final search strategy was undertaken using MeSH terms in Medline and Embase, EBSCO terms in CINAHL and JBI Database of Systematic Review and Implementation Reports and adapted for the Cochrane Library and Google to identify relevant references published since the previous edition in 2016. Additionally, a search was undertaken of websites of relevant professional bodies that publish standards, professional guidance and related regulatory documents, and any additional key documents known by the development team were also retrieved. Sources identified in the search were imported into Endnote, duplicates removed and full texts were retrieved.

Each source was reviewed for its relevance as a supportive document for the core wound care professional and practice domains. Additional prominent concepts/domains included in other standards and guidelines were also identified for potential inclusion in the next edition of the *Australian Wound Standards*. The development team reviewed the identified concepts and proposed domain structure to ensure their currency and reflection of practice. Next, sources were classified based on their level of relevance to the domains and goals of the *Australian Wound Standards*. The references included in the previous editions were also reviewed for their ongoing relevance to current practice. All evidence of the highest relevance has been included to support this edition of the *Australian Wound Standards*, with evidence of lower relevance used as a supporting citation when relevant.

The full development team reviewed the draft version and comments were addressed. The revised *Australian Standards for Wound Prevention and Management* then underwent an extensive stakeholder review advertised on [website] in [dates] 2021. Over [number] key organisations (e.g., professional bodies, educational organisation and peak bodies) were also invited to review the draft. All feedback was reviewed by the development team and where appropriate incorporated into the final fourth edition of the *Australian Wound Standards*.

Companion audit tools to support the *Australian Wound Standards*

Regular review of performance against the eight core standards can be conducted by wound care practitioners seeking to evaluate their practice. At the organisation level, the *Australian Wound Standards* can be used within quality improvement and research activities to monitor the safety and quality of care being delivered. The *Australian Wound Standards* are also relevant for use in the health education sector for advancing knowledge and skills amongst the interdisciplinary team, as a component of accreditation and to inform local policy and procedure development. People receiving wound care and their family carers (i.e., family members, friends and/or other significant supports) may also use the standards to further understand and/or evaluate the context and quality of wound care delivery.

To help evaluate whether a wound care practitioner or a wound service provider has met the criteria that demonstrate a core wound standard has been reached, *The Australian Wound Standards* are accompanied by a companion set of audit tools.

The *Audit Tools for the Australian Standards for Wound Prevention and Management* (4th edition) can be accessed at: [organisation and/or website]

STANDARD 1: SCOPE OF PRACTICE

Wound prevention and management are delivered in a way that respects and complies with legislation, regulations, scope of practice, local policies, current evidence and ethical decision making.

Rationale

Wound prevention and management should be delivered within the legal boundaries of scope of practice and must comply with legislation, regulations, and local policies of professional and ethical practice. Implementing wound prevention and management that reflects current best practice is associated with maximised wound healing potential, positive clinical outcomes, and safety.

Criteria for wound care practitioners

To meet the criteria for the *Scope of Practice Standard*, the wound care practitioner:

1.1. Performs in accordance with relevant legislation, regulations, scope of practice and policies of the wound service provider.

Evidence Criteria

1.1.1. Functions in accordance with the relevant scope of practice as determined by regulatory authorities and within the scope of employment as defined by the wound service provider.[1-10]

1.1.2. Meets regulatory requirements of relevant registering authorities.[1-13]

1.1.3. Has appropriate qualifications, clinical skills and level of practice to perform professional and/or practice role related to wound care, including any additional responsibilities (e.g., has qualifications and skills necessary to supervise staff/students when this responsibility is included in role).[1, 3-5, 9, 13-17]

1.1.4. Is accountable for practice.[1-5, 10, 11, 15, 17, 18]

1.1.5. Recognises limitations of scope of practice for regulated and non-regulated practice.[1-3, 5, 9, 11, 17, 19]

1.1.6. Has knowledge of, and compliance with, policies and procedures of the wound service provider.

1.2. Delivers evidence-based wound care.

Evidence Criteria

1.2.1. Accesses current evidence from reputable sources in order to maintain a knowledge base appropriate to professional and/or practice role.[1, 9, 10, 15, 19-21]

1.2.2. Makes care decisions that reflect evidence-based practice.[1, 2, 5, 9, 10, 15, 17]

1.2.3. Evaluates the benefits and risks of using wound-related products, pharmaceuticals, therapies and devices.[1, 2, 16, 22, 23]

1.3. Provides care within an ethical practice framework.

Evidence Criteria

1.3.1. Recognises the responsibility to prevent harm to the individual and their family carers.[1-5, 7, 8]

1.3.2. Recognises the rights and responsibilities of the individual, family carers and the multidisciplinary team.[1-5, 17, 19, 24]

1.3.3. Delivers evidence-based wound prevention and management that is sensitive to beliefs, values, ethnicity, culture and dignity.[1-5, 10, 11, 17, 18, 24, 25]

1.3.4. Considers moral and ethical dilemmas in delivery of wound care.[1, 3-5, 10, 11, 26]

1.3.5. Maintains trust, privacy and confidentiality of the individual and family carers.[3-5, 15, 17, 18]

1.3.6. Considers equitability and sustainability in the delivery of wound care.[5, 21]

Criteria for wound service providers

To meet the criteria for the *Scope of Practice Standard*, the wound service provider:

1.4. Defines and monitors the scope of practice associated with professional and/or practice roles within the wound service.

Evidence Criteria

1.4.1. Develops and regularly reviews roles and responsibilities that reflect scope of practice determined by regulatory authorities.[14, 18, 27, 28]

1.4.2. Ensures an appropriate skills-mix within the work force to enable delivery of optimal wound prevention and treatment.[12, 15, 16, 24]

1.4.3. Ensures staff receive education and training when professional and/or clinical role changes (e.g., when new technology or procedures are introduced).[5, 14, 16, 18, 19]

1.5. Endorses evidence-based wound care.

Evidence Criteria

1.5.1. Provides access to contemporary, evidence-based, documented protocols to guide delivery of wound prevention and management within the wound service.[13, 14]

1.5.2. Facilitates and supports access to evidence-based learning for the multidisciplinary team.[14]

1.5.3. Provides or facilitates access to the necessary resources for the implementation of cost effective, evidence-based practice in the care of individuals with or at risk of wounds.[13, 14, 16, 29]

1.6. Endorses ethical wound care.

Evidence Criteria

1.6.1. Recognises the rights and responsibilities of the individual, family carers and the multidisciplinary team.[30]

1.6.2. Promotes sensitivity to beliefs, values, ethnicity, culture and dignity throughout the wound service.[31]

1.6.3. Considers equitability and sustainability in local positions, policies and procedures.[31]

Related resources

Australian Commission on Safety and Quality in Health Care. (2021). The National Safety and Quality Health Service (NSQHS) Standards: Clinical Governance Standard. https://www.safetyandquality.gov.au/our-work/clinical-governance/clinical-governance-standard	S
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Ahpra and National Boards. (2014). For registered health practitioners: Code of conduct. https://www.ahpra.gov.au/News/2014-02-13-revised-guidelines-code-and-policy.aspx	S
Ahpra and National Boards. (2018). Guideline - Informing a National Board About Where you practise. Ahpra: https://www.physiotherapyboard.gov.au/documents/default.aspx?record=WD18%2f25927&dbid=AP&chksum=qOhXlXRXWGdw%2bKB%2bw055Dw%3d%3d	S
Ahpra and National Boards. (2019). Social media: How to Meet your Obligations Under the National Law. Ahpra: https://www.ahpra.gov.au/Publications/Social-media-guidance.aspx	S
Ahpra, & National Boards. (2020). Guidelines: Mandatory notifications about registered health practitioners. Ahpra: https://www.ahpra.gov.au/Notifications/mandatorynotifications/Mandatory-notifications.aspx	S
Continence Nurses Society Australia. (2017). Practice Standards for Nurse Continence Specialists. Melbourne, Australia: Continence Nurses Society Australia	S
International Council of Nurses. (2012). The ICN Code of Ethics for Nurses. https://www.icn.ch/sites/default/files/inline-files/2012_ICN_Codeofethicsfornurses_%20eng.pdf	S
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Nursing and Midwifery Board of Australia. (2018). Code of conduct for nurses. https://www.nursingmidwiferyboard.gov.au/Codes-Guidelines-Statements/Professional-standards.aspx	S
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Medical Board of Australia and Ahpra. (2020). Good Medical Practice: A Code of Conduct for Doctors in Australia. Retrieved from https://www.medicalboard.gov.au/Codes-Guidelines-Policies.aspx	S

Background and Context

Scope of practice

Scope of practice refers to the area of practice in which a wound care practitioner is educated and trained, competent and legally permitted to perform services. Scope of practice is determined by educational background, status with an Australian health care registration body and the law and regulations pertaining to the clinical field. Scope of practice may be influenced by the level of competency and confidence of a wound care practitioner in performing specific duties,[3-5, 17, 32] and may also be influenced by the workplace, with limitations defined by job description, roles and responsibilities provided by the wound care service provider.[2, 14]

Standards for practice outline the minimum expected quality of wound care delivered. Standards of practice primarily relate to regulated health professionals, and include professional attributes that underpin competent performance in a health discipline.[2] The values, knowledge and skills expected of a regulated health professional are outlined in relevant national core competency standards. The concepts reflected within professional standards of practice are ubiquitous, with professional regulatory bodies across health disciplines and countries adopting very similar professional expectations.[1, 2, 9, 10, 12, 21]

Beyond outlining the education, legal and competency requirements and standards, scope and standards of practice promote the respect, dignity, safety and wellbeing of the individual, their family carers and the multidisciplinary team.[4, 5, 19, 25] It is recognised that the scope of practice varies according to the individual's role. For example, regulated health professionals work within a professional framework that requires ongoing development, self-reflection, professional judgement and decision making. [1, 2, 9, 10, 12, 21] While accountable for their practice, unregulated health care workers are not expected to have the same knowledge level, experience or decision making responsibilities as regulated health professionals.[33] It is expected that all wound care practitioners have a strong understanding of the scope and standards defining their own practice and that of their colleagues, and are able to identify and negotiate breaches of practice scope in order to promote safe and quality wound care. Being aware of the limitations to the practice of others is particularly important for those who have delegation roles.[1, 2, 10]

Evidence-based practice

Regulated health professionals have a responsibility to engage in evidence-based practice through implementing care strategies that have been shown to be efficacious. An important component of clinical practice is engagement in evidence-based practice. Evidence based wound

practice involves conscientious and judicious evaluation of the best available evidence to inform the way in which wound prevention and management is delivered.[20, 22, 34] Evidence-based practice requires continuous professional development through the ongoing questioning of one's clinical practice, seeking out evidence from a range of reputable sources to inform and evaluate practice and, where possible, engaging in research to add to the body of evidence in wound prevention and management.[34-37] Wound service providers have a crucial role in providing structures and processes that support evidence based practice. Facilitating continuing professional development for the multidisciplinary team, ensuring allocation of required resources, supporting continuous quality improvement activities and implementing root cause analysis are some ways in which wound service providers endorse evidence-based practice.[36, 38-41]

Evidence-based practice incorporates the safe and effective delivery of interventions.[22, 34] Members of the multidisciplinary team who prescribe and/or deliver pharmacological and non-pharmacological therapeutic interventions are accountable for ensuring therapies are selected in the best interest of individuals, and are delivered safely and in accordance with manufacturer directions, Therapeutic Goods Administration licensing and are evaluated for effectiveness.[42]

When planning wound care, consideration should be given to achieving meaningful outcomes for individuals with a wound or at risk of wounding (e.g., preventing, healing and /or maintaining wounds, maximising quality of life, promoting cost effectiveness, etc.) while minimising adverse outcomes.[35, 43] Selection of interventions should be based on optimising the individual's outcomes through application of a structured approach to wound prevention, assessment and management.[44]

Clinical practice guidelines developed using evidence-based approaches provide one source by which the multidisciplinary team can review evidence underpinning care options and recommendations for prevention and management of wounds.[44] However, implementation of evidence-based principles requires a multidisciplinary approach, with consideration to the knowledge and skills of the entire team, the individual's preferences, the resources available, local policies and procedures and the context of care.[20, 43, 45]

Context of care includes context elements at the individual, community and global level. Consideration should be given to the care delivery setting, the individual's beliefs, psychosocial status, experiences and living situation. At a higher level, consideration should also be given to health equity and sustainable wound care relevant to the context.[46] Health equity seeks to prevent social determinants of health acting as a barrier to individuals achieving positive outcomes. Health equity requires the multidisciplinary team and the wound service provider ensuring individuals do not experience poorer outcomes due to disadvantage in wound care delivery.[36] Sustainable care achieves quality outcomes with minimal social, financial or environmental costs. Increasingly, evaluation of the impact of care delivery on the environment is expected of wound care practitioners and wound service providers. Areas for consideration include waste production and management, energy use, care delivery models and procurement of resources.[21, 47]

Ethical practice

Ethical practice requires consideration of what is morally right and wrong, and the potential outcomes of actions.[26] Fundamental principles guiding health care is the recognition of the individual's rights and promotion of dignity. Guiding principles in delivering ethical care include valuing the individual, valuing respect and kindness and valuing diversity. Promoting on behalf of

individuals access to quality wound prevention and management, informed decision-making, safety, privacy and sustainable wellbeing are core strategies through which the multidisciplinary team delivers ethical care.[1-5, 19, 48] The wound service provider has a pivotal role in ensuring the wound care delivery environment is safe for all stakeholders, and that fundamental ethical and moral principles underpin the service's philosophy, policies and practices.[14]

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STANDARD 2: COLLABORATIVE PRACTICE

Wound prevention and management are delivered using a collaborative approach between the individual, their family carers and the multidisciplinary team.

Rationale

Collaborative practice in wound prevention and management is associated with optimal outcomes, including wound-related outcomes, quality of life outcomes, participation in care and more efficient and effective care delivery from the multidisciplinary team and health care system.[1-7]

Criteria for wound care practitioners

To meet the criteria for the *Collaborative Practice Standard*, the wound care practitioner:

2.1. Empowers the individual and their family carers to participate in wound care decisions and wound management.

Evidence Criteria

2.1.1. Recognises the individual's wishes with respect to involvement of family carers in wound care.[8]

2.1.2. Recognise the importance of family, community, partnership and collaboration in the wound care decision-making of Aboriginal and/or Torres Strait Islander peoples. [9-11]

2.1.3. Communicates in a manner that is consistent with the individual's values, preferences, language and health literacy.[9, 11-14]

2.1.4. Assesses the health literacy of the individual and their family carers, including their capacity to engage in informed decision making.[2, 9, 14]

2.1.5. Provides relevant information, education and support to the individual and their family carer to enable informed participation in wound care planning and delivery.[2-4, 13-19]

2.1.6. Provides individuals with non-concordant behaviours with education, support and respect that will guide future care directives and access to service delivery.[2, 15]

2.2. Practises person-centred wound care.

Evidence Criteria

2.2.1. Partners with individuals and their family carers in planning, delivery and evaluation of wound care.[1, 15, 16, 20, 23]

2.2.2. Discusses and respects the care goals, beliefs, practices and preferences the individual and their family carers.[9 2, 3, 12, 14, 20, 21]

2.2.3. Discusses and assesses skills, knowledge, willingness to participate in care decisions, and self-care skills with the individual and their family carers.[2, 6, 18, 22]

2.2.4. Uses information received from the individual and their family carers in planning and delivering wound care, including decisions on responsibility for different aspects of care.[2, 9, 12, 14, 18, 23, 24]

2.3. Works collaboratively with the multidisciplinary team with respect to wound care.

Evidence Criteria

2.3.1. Uses a multidisciplinary approach to wound assessment, planning, delivery and evaluation.[1-3, 5, 12, 13, 18, 22, 25-29]

2.3.2. Makes appropriate referrals to other multidisciplinary team members.[1-3, 9, 13, 16, 24, 25, 27]

2.3.3. Supports the ongoing professional development of the multidisciplinary team.[12, 13]

2.4. Communicates in a way that facilitates collaborative delivery of wound care.

Evidence Criteria

2.4.1. Creates a positive and safe environment that respects the diversity of individuals, their family carer and the multidisciplinary team to promote effective collaboration.[9, 14, 21]

2.4.2. Regularly communicates with the individual and their family carer regarding wound care.[9, 12, 21]

2.4.3. Regularly communicates with the multidisciplinary team regarding care planning, delivery and evaluation.[1, 8, 9, 12]

2.4.4. Engages in timely communication when there are changes that impact on the individual, their wound and/or their wound healing environment.[8, 9, 30]

Criteria for wound service providers

To meet the criteria for the *Collaborative Practice Standard*, the wound service provider:

2.5. Promotes person-centred care models in wound care.

Evidence criteria

2.5.1 Outlines mission, goals and/or philosophy that focus on improving the experience of the individual.[15, 20]

2.5.2 Communicates with individuals and their family carers in ways that support engagement in wound care.[20]

2.6. Implements and supports a wound service delivery model based on multidisciplinary care.

Evidence criteria

2.6.1. Ensures access to services from a range of health disciplines.[1, 3, 17, 23, 31]

2.6.2. Implements structures that support multidisciplinary interaction and communication.[1-3, 17, 30]

2.7. Facilitates and supports a wound service environment of mutual respect.

Evidence criteria

2.7.1. Recognises the importance of family, community, partnership and collaboration in the wound care decision-making of Aboriginal and/or Torres Strait Islander peoples.[9, 10, 15, 32, 33]

2.7.2. Promotes an environment that accepts diversity among staff, individuals and family carers.[16, 33]

2.7.3. Promotes an environment and culture that focuses on satisfaction of staff, individuals and family carers.[1, 15, 21]

Related resources

Australian Commission on Safety and Quality in Health Care. (2021). The National Safety and Quality Health Service (NSQHS) Standards: Partnering with Consumers Standard. ACSQHC: https://www.safetyandquality.gov.au/standards/nsqhs-standards/partnering-consumers-standard	S
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Background and Context

Collaborative care

Adopting a collaborative approach to care delivery is recognised as a core component of professional practice across health disciplines and clinicalsettings.[23, 34, 35] A collaborative approach to wound care that includes wound care practitioners from a range of disciplines, the individual and their family carers is considered to be a gold standard for wound care and is fundamental to patient-centred care models.[1, 36]

A collaborative and multidisciplinary approach to wound care is associated with improved outcomes for individuals with and at risk of all types of wound. Multidisciplinary collaboration is associated with:[1-7, 24, 37, 38]

- decreased incidence of preventable wounds,
- improved wound healing times,
- reduction in amputation rates,
- increased adherence to management plans,
- improved health-related quality of life, and
- cost-effective care delivery.

Wound care is a multifactorial clinical issue that encompasses the scope of practice of numerous health disciplines. Wound care practitioners in a range of health disciplines have the expertise to contribute to the assessment, prevention and management of wounds and related co-morbidities.[39] Evidence-based wound management guidelines highlight that collaboration between the individual, multidisciplinary team and family carers is as an essential component of high quality care.[7, 17, 18, 40]

Collaborative wound management promotes integration into care of complementary perspectives, philosophies and strategies derived from expertise from a range of professional and clinical backgrounds.[25] This includes timely and appropriate address of intrinsic and extrinsic factors that influence an individual's wound healing, early consideration of risk indicators and wound deterioration, prompt referral, and comprehensive documentation.[41] Significant direct and indirect cost savings have been noted, particularly when multidisciplinary care is co-located, and referrals are streamlined.[37]

Working as a team

Successful collaboration requires individuals to work together as a group within and across health care disciplines and settings. Effective communication requires team members to make appropriate and timely referrals, share information; negotiate, plan and act; give and receive feedback; respect one another; and resolve conflict in order to achieve identified mutual goals and optimum outcomes for the individual with or at risk of a wound.[1, 42]

Personal characteristics including clinical expertise, communication and leadership skills, and self-reflection are core facilitators to collaborative team work.[43, 44] Having a thorough appreciation and acknowledgement of the scope of practice and skills set of other multidisciplinary team members is a fundamental principle of successful collaboration.[25, 45] Supporting other members of the team in their professional development (e.g. through sharing of educational opportunities, discussing research or supporting opportunity to engage in professional development activities) is a part of successful collaboration.

Wound service providers play a significant role in supporting collaborative wound care. The model of care supported within the service drives the level of multidisciplinary input to care.[31] Bringing together wound care practitioners from a range of disciplines can be supported via recruitment policies, service delivery models, strategic partnerships, outreach programs and co-location arrangements.[31] Strong collaborative care requires an investment by the wound service provider in administrative systems to support communications, referrals, clinical care meetings and inter-discipline education.

Empowering individuals

The right of individuals to independence, choice, and control over their health care are enshrined in quality standards for acute care, sub-acute care, aged care and community-based care in Australia.[20, 46, 47] A person-centred approach to care requires the multidisciplinary team to maintain respect for individuals and support and promote engagement in their own care. In order to make choices about their wound management, to contribute to goal and care planning and to actively engage in self-care activities individuals require an appropriate level of health literacy, education and support. Promoting quality care involves key strategies at a system, service, team and individual level.[15, 46] These strategies include (but are not limited to):[15, 20, 48]

- recognising and promoting roles and responsibilities within the wound service,
- developing service policies that promote partnerships with the individual and family carers,
- assessing the individual's ability to engage in care decisions and self-care activities,
- providing education and support to allow individuals and family carers to develop decision-making and self-care skills, and
- recognising the diverse backgrounds of individuals with or at risk of a wound.

Cultural awareness is recognised as a prerequisite for a strong multidisciplinary team and service delivery of holistic care.[33, 49] Cultural awareness and partnerships are associated with improved perceptions of health services by people from culturally and linguistically diverse backgrounds, including Aboriginal and Torres Strait Islander people. Developing and implementing effective approaches to achieving cultural awareness in any health service requires an ongoing, planned strategic direction that is driven and modelled by all stakeholders.[33, 49]

Such a patient-centred approach is associated with improved preventive care, improved functional status, concordance in goals and wound care interventions, reduced complication rates and fewer adverse outcomes.[15]

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STANDARD 3: WOUND ASSESSMENT

A comprehensive, ongoing assessment of the individual, their wound and the healing environment is performed and used to develop an individualised wound prevention and management plan.

Rationale

Clinical decision making is underpinned by comprehensive initial and ongoing assessments of intrinsic and extrinsic factors that influence the risk of wounding and the ability of a wound to heal. A comprehensive assessment of the individual, their wound/wound risk and the healing environment is required to develop an individualised wound prevention and management plan, and to monitor outcomes and effectiveness of the individualised plan.

Criteria for wound care practitioners

To meet the criteria for the *Wound Assessment Standard*, the wound care practitioner:

3.1. Conducts a comprehensive and ongoing assessment of the individual.

Evidence Criteria

3.1.1. Regularly assesses the individual's general health and wellbeing related to risk of wounding and/or wound healing, which may include:[1-11]

- Reason for presentation.
- Cultural sensitivities, language and need for interpreter service.
- Health literacy, socioeconomic status and wound-related knowledge.
- Health history and co-morbidities that impact wound healing.
- Age and specific age-related changes.
- Vital signs.
- Previous wound history, management and outcomes.
- Previous relevant diagnostics and investigations.
- Prescription and over-the-counter medications (including vitamin supplements), recreational/social drug use, skin and wound products, and alternative preparations (e.g. homeopathic medication).
- Sensitivities and known allergies.
- Perceptions, preferences, goals, concerns and self-care ability.
- Capacity to heal.[12-15]

3.1.2. Screens or refers for nutritional risk assessment,[6, 7, 16, 17] which may include:

- Quantity, quality and nutritional content of food and fluid intake.[16]
- Weight status, including weight history (e.g. weight loss ≥ 5% in 30 days or ≥ 10% in 180 days).[16]
- Anthropometric assessment, including:[1, 16]
  - Height.

  - Waist circumference.
  - Waist to hip ratio.
  - Objective estimates of subcutaneous fat (e.g., body mass index) and skeletal muscle stores.
- Formulas such as the Harris-Benedict equation to measure and evaluate basal metabolic rate or basal energy expenditure.[16]
- Hair and skin changes.
- Ability to eat, including any assistance or diet requirements.[16]
- Additional specific biochemical tests (e.g., albumin, transferrin, zinc or vitamins).[16]

3.1.3. Conducts or refers for cognitive and psychosocial assessments, which may include:[4, 8, 9, 18]

- Cognitive screening.
- Psychological screening.
- Wellbeing, quality of life, social and wound impact assessment.

3.2. Conducts a comprehensive and ongoing assessment of the individual's risk of wounding.

Evidence Criteria

3.2.1. Performs skin and wound-related risk assessments as appropriate to the individual. These may include:[6, 7, 10, 16, 19, 20]

- Assessment of risk for:
  - Pressure injuries.
  - Falls.
  - Skin tears.
  - Incontinence-associated skin damage.
  - Skin and hair infestations.
  - Infection.
  - Skin cancer.
- A skin assessment, that includes:[7, 16, 21-23]
  - Skin integrity (observation of rashes, lesions, wounds and dryness).
  - Skin colour (observation and palpation or use of transparent disc press methods to assess blanching of erythema).
  - Skin texture (palpation).
  - Skin temperature (palpation).
  - Skin care/hygiene practices.
- A lower leg vascular assessment that includes:[1, 3, 6, 8, 9, 16, 22, 24-34]
  - Vascular history.
  - Limb temperature.
  - Skin colour changes.
  - Palpation of pulses.
  - Leg and foot size and shape.
  - Signs of venous insufficiency (e.g., oedema, hyperpigmentation, varicose eczema, atrophie blanche).

- Signs of arterial insufficiency (e.g., cold, leg numbness or weakness, cramping).
- Mobility and ankle movement.
- Ankle brachial pressure index (ABPI) using hand held Doppler and/or toe brachial pressure index (TBPI) or absolute toe pressures to evaluate arterial insufficiency.[34-36]
- Photoplethysmography to determine venous refill time.
- Transcutaneous oxygen pressure to evaluate local tissue perfusion.[34]
- Referral for appropriate investigations and imaging.

- A high risk, neurological foot assessment that includes:[1, 3, 11, 16, 24, 26, 27, 29, 37, 38]
  - Palpation of the foot to assess for bounding foot pulses and increased skin temperature indicative of autonomic neuropathy.[35, 36]
  - Observation for callus, wounds, xerosis, foot deformity and joint mobility.
  - Assessing for peripheral sensory neuropathy using a 10g or 5.07 Semmes-Weinstein monofilament to evaluate sensation and a 128 Hz tuning fork or biothesiometer to assess vibration perception.
  - Assessing for peripheral motor neuropathy using a patella hammer to evaluate patella and Achilles' reflexes and muscle weakness.
  - Referral for appropriate investigations and imaging.

3.3. Conducts and documents a comprehensive and ongoing assessment of the individual's wound.

Evidence Criteria

3.3.1. Performs and documents a comprehensive initial wound assessment, for example:[1, 8, 10, 11, 14, 16, 22, 26, 29, 39-41]

- Type of wound (e.g., leg ulcer, pressure injury).
- Aetiology and original mechanism of wounding (e.g., venous insufficiency, pressure).
- Duration of wounding.
- Anatomical location.
- Measurement of wound dimensions, for example:[8, 12, 16, 29]
  - Length, width and depth measured at the longest and deepest parts of the wound using a ruler or planimetry device.
  - Wound area measured by wound circumference tracing and planimetry.
  - Wound volume measured using sterile fluid or filler inserted into the wound.
  - Probing to determine any undermined edges or sinus tracking.
- Clinical characteristics of the wound bed (e.g., agranulation, granulation, hypergranulation epithelialisation, slough, necrosis/eschar, exposed bone or tendon, foreign body, fistula).
- Wound edge characteristics (e.g., level, raised, rolled, undermined, colour)
- Peri-wound and surrounding skin characteristics (e.g., erythema, oedema, induration, maceration, desiccation, dermatitis/eczema, callus, hyperkeratosis, changes in pigmentation, urticaria, temperature).

- Exudate characteristics, including:[10, 42, 43]
  - Type (e.g., serous, haemoserous, sanguineous, seropurulent, purulent).
  - Consistency (e.g., thick, thin).
  - Amount.
  - Malodour.
- Phase of wound healing (e.g., haemostasis, inflammation, reconstruction, maturation/remodelling).[12, 44]
- Signs and symptoms of inflammation or infection.[1, 3, 17, 24, 26, 37, 38, 43]
  - Clinical signs and symptoms of inflammation or infection.
  - Extent of infection (e.g., local infection, spreading infection, systemic infection).
  - Investigations (e.g., wound culture).

3.3.2. Classifies wounds based on aetiology using a validated tool for that wound type, where such a tool exists (e.g., pressure injuries, burns, skin tears, venous leg ulcers, diabetic foot ulcers).[1, 8, 9, 16, 26, 40, 41, 45-47]

3.4. Conducts a comprehensive and ongoing assessment of the individual's wound-related pain.

Evidence Criteria

3.4.1. Conducts and documents initial and ongoing assessments of wound pain, which consider both verbal and non-verbal cues and include assessment of:[1, 6, 8, 14, 16, 19, 24, 26]

- Aetiology and presentation, for example:
  - Non-cyclic wound pain (e.g. associated with suture removal or debridement).
  - Cyclic wound pain (e.g. associated with change of wound dressings).
  - Chronic wound pain (e.g. not related to intervention).
- Characteristics of pain, using a valid and reliable pain assessment tool and including:
  - Location, including any radiating or referred pain.
  - Character of the wound-related pain (e.g. burning, itching, stabbing, shooting).
  - Intensity of the wound-related pain.
  - Duration of wound-related pain.
- Factors that contribute to wound-related pain (e.g. repositioning).
- Factors that relieve wound-related pain (e.g. warmth, quiet, positioning).
- Impact of pain on quality of life and well-being.

3.5. Uses valid, reliable and appropriate tools and/or frameworks when undertaking wound-related assessments.

Evidence Criteria

3.5.1. Selects a valid and reliable tool and/or framework appropriate to the individual for undertaking assessments (when available), for example:[1, 2, 6, 8-11, 13, 16, 19, 20, 22-24, 48-52]

- Risk assessment tools (e.g., Braden Scale, Norton Scale, Waterlow Score, Braden-Q Scale, Glamorgan Scale).
- Wound assessment tools/frameworks (e.g. Pressure Ulcer Scale for Healing [PUSH]©, Bates-Jensen Wound Assessment Tool© [BWAT], Photographic Wound Assessment Tool© [PWAT], TIMES, Rule of Nines, Artz's criteria, PEDIS).
- Nutrition screening and assessment tools (e.g., Nutrition Risk Screening (NRS) 2002, Short Nutrition Assessment Questionnaire (SNAQ) Mini Nutritional Assessment® [MNA], Malnutrition Universal Screening Tool [MUST]).
- Cognitive screening tools (e.g., Mini Mental State Examination© [MMSE], Modified Mini Mental State Examination [3MS], Cognitive Abilities Screening Instrument).
- Psychological screening tools (e.g., Hospital Anxiety and Depression Scale, Beck Depression Inventory©, Hamilton Rating Scale for Anxiety [HAM-A]).
- Wellbeing and quality of life (QOL) assessment tools (e.g., Short Form 36™, World Health Organisation Quality of Life, Cardiff Wound Impact Schedule, VEINES-QOL, Chronic Venous Insufficiency QOL Questionnaire, Wound-QoL).
- Pain assessment tools (e.g., Numerical Rating Scale, Visual Analogue Scale, Wong-Baker FACES® pain rating scale, Verbal Rating Scale).

3.5.2. Uses a consistent assessment method to undertake repeat assessments to enable outcome monitoring over time.[6, 16, 19]

3.6. Refers for appropriate diagnostic investigations when indicated (e.g., to attain a definitive diagnosis or to identify reasons for delayed wound healing) and documents the outcomes.

Evidence Criteria

3.6.1. Requests biochemical analysis when indicated, for example:[1, 11, 16]

- Blood glucose and HbA1c.
- Haemoglobin.
- Plasma albumin.
- Lipids.
- Urea and electrolytes.
- Rheumatoid factor.
- Auto antibodies.
- White cell count.
- Erythrocyte sedimentation rate.
- C-reactive protein.
- Liver function tests.

3.6.2. Requests microbiology when indicated, for example:[1, 6, 16, 37, 38, 43]

- Wound swab for semi-quantitative and quantitative organisms.[43, 53, 54]
- Needle aspiration for quantitative organisms.
- Wound/bone biopsy for quantitative organisms.[17, 43]
- Blood cultures to evaluate systemic infection.[11]
- Skin and nail scrapings for culture and microscopy.

3.6.3. Requests histopathology when indicated, for example:[1, 11, 29, 47]
- Wound biopsy to identify pathological changes.

3.6.4. Requests diagnostic imaging and testing when indicated, for example:[1, 11, 16, 31, 32, 37]
- Doppler or colour duplex ultrasound to evaluate venous and arterial disease.
- Photoplethysmography to evaluate venous disease.
- Angiography to evaluate arterial disease.
- Laser Doppler flowmetry or video microscopy to evaluate burn depths.[50]
- Plain x-ray (e.g., fracture, gas gangrene and osteomyelitis).
- Magnetic resonance imaging or position emission tomography (e.g., osteomyelitis).[55]
- Bone scan (e.g., osteomyelitis if magnetic resonance imaging is contraindicated).
- Computed tomography (e.g., soft tissue infection).
- Sinogram and fistulagram to identify wound tracking.

3.7. Identifies factors in the individual's healing environment that could impact on wound healing.

Evidence Criteria

3.7.1. Assesses the safety of the environment for the individual, family carers and the multidisciplinary team.

3.7.2. Assesses the environment for risks to wound contamination or spread of infection.

3.7.3. Assesses the individual's lifestyle and identifies factors that may impact on wound healing or risk of wounding.

3.7.4. Assesses environmental factors that may influence wound healing (e.g., temperature, humidity).

3.7.5. Establishes privacy and security of the environment.

3.8. Establishes goals of care with the individual, their family carers and the multidisciplinary team.

Evidence Criteria

3.8.1. Works with the individual, their family carers and the multidisciplinary team when establishing goals of care.[6, 8, 16, 22]

3.8.2. Establishes and documents goals that are relevant to wound care.[6, 8, 16, 41]

3.8.3. Addresses optimisation of healing and the individual's capacity to heal when establishing goals of care.[8, 14, 16, 40]

3.8.4. Addresses conservative/palliative wound care when establishing goals of care.[16, 56, 57]

3.9. Monitors and documents wound status, wound healing progress and effectiveness of the wound care plan.

Evidence Criteria

3.9.1. Regularly screens for new wounds.[6]

3.9.2. Monitors wound healing outcome measures (e.g., complete healing, wound size/dimensions, percent of wound healing over time, infection status, etc.).[6, 16, 19, 24, 40]

3.9.3. Monitors patient related outcome measures (e.g., pain, quality of life, activities of daily living etc.).[19, 24]

3.9.4. Reviews and revises the wound care plan consistent with the changing status of the wound.[16, 19, 24, 40]

Criteria for wound service providers

To meet the criteria for the *Wound Assessment Standard*, the wound service provider:

3.10. Promotes a system of care that is consistent with individuals receiving a comprehensive clinical assessment.

Evidence Criteria

3.10.1. Develops and regularly reviews policies and procedures to guide assessment of the individual and their wound or risk of wounding.[3, 16]

3.10.2. Provides access to wound assessment tools, documentation systems, equipment and technology that is maintained according to manufacturers' directions.[8, 16, 30]

3.10.3. Identifies and supports those responsible for assessment of the individual and their wound or risk of wounding.[3, 16, 30]

3.10.4. Establishes and maintains collaborations and referral systems to promote access to interdisciplinary assessment and laboratory and diagnostic testing.[3]

Related resources

Australian Wound Management Association and New Zealand Wound Care Society. (2012). Australia and New Zealand Clinical Practice Guideline for Prevention and Management of Venous Leg Ulcers. Cambridge Media: Osborne Park, WA	EBG
Commons, R. J., Charles, J., Cheney, J., Lynar, S.A., Malone, M. and Raby, E. (2021). Australian Guideline on Management of Diabetes-related Foot Infection: Part of the 2021 Australian Evidence-based Guidelines for Diabetes-related Foot Disease, Version 1.0. Diabetes Feet Australia, Australian Diabetes Society: Brisbane.	EBG
European Pressure Ulcer Advisory Panel, National Pressure Injury Advisory Panel and Pan Pacific Pressure Injury Alliance. (2019). Prevention and Treatment of Pressure Ulcers/Injuries: Clinical Practice Guideline, ed. E. Haesler. EPUAP/NPIAP/PPPIA.	EBG
International Wound Infection Institute. (2016). Wound infection in clinical practice. Wounds International: London.	C
Lipsky, B.A., Senneville, E., Abbas, Z., Aragón-Sánchez, J. Diggle,M., Embil, J.M., Kono, S., Lavery, L.A., Malone, M., van Asten, S.A., Urbancˇicˇ-Rovan, V., Peters, E.J.G., on behalf of	EBG

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World Union of Wound Healing Societies. (2016). Florence Congress, Position Document. Local Management in Diabetic Foot Ulcer. Wounds International: London.	P
World Union of Wound Healing Societies. (2019). Consensus Document. Wound Exudate: Effective Assessment and Management. Wounds International: London.	C
Wounds UK. (2018). Best Practice Statement: Improving Holistic Assessment of Chronic Wounds. Wounds UK: London.	C
Wounds UK. (2019). Best Practice Statement: Ankle Brachial Pressure Index (ABPI) in Practice. Wounds UK: London.	C

Background and Context

A comprehensive and holistic assessment of the individual, their wound and the wound healing environment is an integral component of wound prevention and management. Assessment and diagnosis underpin decision-making, care planning and ongoing evaluation.

Assessing the individual, the wound and the healing environment

A comprehensive assessment of the individual acknowledges the contribution of a large range of intrinsic factors that influence both the risk of developing a wound and the ability of the individual to heal. Comorbidities, nutrition status, vascular status and infection all influence skin and tissue health and reparative processes. They require appropriate investigation to inform the development of a wound prevention and/or management plan that will address underlying factors that influence the risk of wounding and/or ability to heal.[1-11]

It is widely acknowledged that in addition to the physical factors that influence the healing, the cognitive and psychosocial status of the individual are important contributory factors to healing, wellbeing and quality of life for those who live with, or at risk of, a wound. Ascertaining the health literacy level, communication skills and cognitive ability of the individual relating to their general health and wound prevention and management is crucial in engaging the individual in both the assessment process and in ongoing decision making and care skills. Assessment of multidimensional factors, including the individual's social support and engagement, psychological health and quality of life provides context to that person's resources, abilities to engage in potential interventions and additional assistance they may require to prevent or manage wounds.[1, 8, 9, 18]

Initial and ongoing wound assessment is critical to promotion of healing. Certain characteristics of the wound can provide key indicators to the multidisciplinary team as to the wound's changing status and the success or otherwise of a management plan. Accurate and well-documented assessment allows wound care practitioners to identify early, covert signs of infection (e.g., hypergranulation, friable granulating tissue, wound breakdown or epithelial

bridging).[3, 16, 17, 24, 37, 43] and act accordingly. Regular documentation of the wound's dimension, appearance and characteristics allows monitoring of healing progress, which can provide an indication of effectiveness of treatment or suggest potential complications that are hindering normal wound healing (e.g., biofilm).

The surrounding environment is crucial to wound healing, and strategies the multidisciplinary team might implement when managing the wound and in promotion of healing in general. Attention to the risk of infection from the environment (e.g., from air borne contaminants, unclean surfaces or equipment, ventilation or water sources) is most critical when the wound is exposed. Environmental factors can influence the concordance of individuals with prevention and management interventions, for example, in a warm or humid environment, compression stockings or bulky wound dressings may impact on the individual's comfort.[1] Assessment of the local environment in community settings may provide indicators to factors that could influence healing (e.g. non-hygienic conditions, access to equipment, storage and waste facilities, presence of pets).[58-61]

Assessment and measurement tools

The way in which a health assessment is conducted can influence the reliability and relevance of the information that is collected. Best practice suggests that where possible, wound care practitioners use assessment tools that have been scientifically validated to guide a clinical assessment. Validity refers to the ability of an assessment tool or test to measure the factor that it purports to be assessing. Reliability of an assessment tool or test refers to the ability of the assessment strategy to produce the same result if it is administered repeatedly to the same individual.[62, 63]

Reliability and validity are important considerations because strong psychometric qualities of the assessment tool ensure the diagnoses arising from the assessment are based on accurate information. If the tools used to conduct an assessment have strong validity and reliability there can be greater certainty that the assessment is measuring the characteristics as purported, and that any changes in the assessment results are not random.[62, 63]

Selection of assessment tools should be individualised. Many assessment tools are developed for specific populations, and may not be valid and reliable for measuring the same criteria in a different population.[62] For example, a tool designed to measure severity of pain that has been developed for adults, may not have strong psychometric qualities if it is used to measure pain in children or adults with cognitive impairment. Where possible, assessment strategies should be selected based on psychometric qualities, the individual's characteristics (e.g., age, cognitive status, health status and health literacy), the appropriateness of the items on the tool to that individual, the individual's and wound care practitioner's preferences, resources available and local policies and procedures.

Emerging and advanced wound assessment and measurement techniques

Advanced wound measurement technologies (e.g., digital photography, digital software planimetry, 3D wound mapping) are becoming ubiquitous in well-resourced areas.[24]

Contemporary wound assessment has been aided by techniques that allow for more detailed evaluation of skin and tissue characteristics.[24] Recent research has explored the use of physical markers (e.g., skin and tissue moisture, wound and tissue temperature, and pressure), biochemical markers (e.g., pH and odour) and molecular markers (e.g., proteases, DNA of

micro-organisms, RNA, genes and their function).[8, 29, 64-68] A range of digital technologies are becoming available to undertake advanced wound assessment, with a varying but rapidly advancing volume of evidence supporting their use .It is important that the multidisciplinary team selects technology that is scientifically demonstrated to provide accurate assessment, and that wound care practitioners receive education in training to ensure advanced wound evaluation strategies are implemented accurately.

Goals of care

Developing goals of care collaboratively with the individual and their family carers is intrinsic to successful wound prevention and management. Goals of care should be specific, measurable, attainable, relevant and time bound. They should consider the individual's specific circumstances and the resources available. Goals that are measurable and time bound can be tracked and reviewed to determine the efficacy of interventions and review the management plan.[8, 69]

In individuals for whom ability to heal is significantly compromised (e.g., palliative care, inadequately perfused wounds, distal gangrene), conservative wound management is an option.[8, 15, 56, 70] Management of symptoms that concern the individual (e.g., pain and odour) and prevention of further skin breakdown are appropriate interventions for maintenance of non-healing wounds.[8] Aggressive sharp debridement is not appropriate in palliative care or for wounds without the ability to heal.[56]

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STANDARD 4: WOUND PREVENTION

Wound prevention is practised according to the best available evidence in order to achieve optimal outcomes for the individual and their wound.

Rationale

Prevention of wounds is a marker of high quality clinical care. Wound prevention is performed at both the organisation level as a component of risk reduction and continuous quality improvement, and at the individual level in accordance with identified risks.

Criteria for wound care practitioners

To meet the criteria for the *Wound Prevention Standard*, the wound care practitioner:

4.1. Promotes skin integrity and hygiene to reduce the individual's vulnerability to wounding.

Evidence Criteria

4.1.1. Implements a skin hygiene plan appropriate to the individual, with consideration to:[1-8]

- Avoidance of skin irritants.
- Moisturiser to manage dry skin.
- Use of pH friendly skin cleanser.
- Attention to foot hygiene.

4.1.2. Implements strategies to prevent excessive moisture on the skin, including moisture associated with incontinence.[3, 4, 9, 10]

4.1.3. Avoids interventions associated with increased risk of wounding (e.g., massage/rubbing, poor repositioning and manual handling techniques).[3, 10]

4.2. Optimises the individual's general physical health to reduce the risk of wounding.

Evidence Criteria

4.2.1. Manages and optimises systemic factors and comorbidities that may increase the individual's risk of wounding.[3, 7, 11-15]

4.2.2. Promotes adequate nutrition and hydration of individuals, with consideration to nutritional requirements for optimal health and correction of nutritional deficits.[3-5, 8, 11, 16, 17]

4.2.3. Promotes cessation of smoking.[11, 12, 18]

4.24. Encourages individuals to engage in regular mobility, activity and exercise as tolerated.[3, 7, 19, 20]

4.3. Implements individualised strategies to prevent wound development based on clinical assessment and need.

Evidence Criteria

4.3.1. Interprets the findings from a comprehensive assessment to inform, develop and document an individualised wound prevention plan.

4.3.2. Implements a wound prevention plan appropriate to the individual, that includes (as relevant):[2-8, 10, 12-17, 19, 21-27]

- Regular screening and risk and skin assessment for:
  - Malnutrition.
  - Pressure injuries.
  - Burns.
  - Diabetic foot ulcers.
  - Leg ulcers.
  - Falls.
  - Skin cancer.
- Skin inspection on admission, transfer or change in status.
- Strategies to prevent pressure, friction and shear.
- Strategies to avoid skin trauma.
- Appropriate manual handling techniques.
- Nutritional support.
- Strategies to prevent device related pressure injuries.
- Burn prevention.
- Falls prevention.
- Application of twice daily moisturiser to the extremities of elderly individuals.
- Application of compression therapy for chronic venous insufficiency.
- Protective footwear and off-loading devices.
- Sun safe activities.
- Referral for assessment of skin lesions.

4.4. Optimises the individual's cognitive and mental status, psychosocial health and knowledge to reduce the risk of wounding.

Evidence Criteria

4.4.1. Undertakes screening for mental health, cognitive and social factors that could impact wounding.

4.4.2. Facilitates access to specialist and support services.[3]

4.4.3. Collaborates with the multidisciplinary team to reinforce preventive strategies addressing cognitive status and psychosocial health (including mental health conditions) that may hinder the individual's ability to implement optimal wound prevention.[3]

4.4.4. Provides the individual and their family carer with relevant education about wound prevention strategies.[3, 26, 27]

Criteria for wound service providers

To meet the criteria for the *Wound Prevention Standard*, the wound service provider:

4.5. Supports and facilitates the delivery of individualised, evidence-based wound prevention strategies.

Evidence criteria

4.5.1. Maximises environmental safety to reduce the risk of accidental wounding.[19]

4.5.2. Provides systems that promote the implementation of individualised, evidence-based wound prevention strategies.[3]

4.5.3. Provides access to a range of products for maintaining optimal skin health.[3]

4.5.4. Provides access to medical equipment, products and devices used to prevent wounds.[3, 28]

4.6. Supports and drives the implementation of organisation level wound prevention programs.

Evidence criteria

4.6.1. Facilitates interventions aimed at reducing incidence and prevalence of wounds across the wound service.[3, 16]

Background and Context

Minimising harm

Minimising patient harm is a fundamental component of the *Australian National Safety and Quality Health Service Standards.* Preventing avoidable wounds is an important component of preventing harm to the individual and therefore is a concept enshrined in national service accreditation standards.[21]

Harm minimisation is delivered both at the level of the individual, and at the facility level. At the individual level, a proactive clinical approach that relies on assessment and identification of risk factors for wounds should be used by wound care practitioners to inform the development of an individualised wound prevention plan. For some individuals, prevention of wounds focuses on disease and comorbidity management. This includes venous leg ulcers and diabetic foot ulcers, the prevention of which requires intensive education and skills development of the individual and their family carer to address systemic disease, as well as promoting skin health. Other individuals are at an increased risk of preventable wounds such as pressure injuries or skin tears, due to pre-existing conditions (e.g., older age, reduced mobility or falls risk) that increase the likelihood of accidental wounding.[5] Understanding the complex nature of factors that lead to impairments to skin integrity and applying these to the individual is required to develop appropriate wound prevention plans at the individual level.[5, 10]

Wound prevention programs delivered at the facility level seek to prevent harm to all individuals within the facility through organisation-wide interventions. Facility-wide wound prevention programs focus on preventable wounds that are exacerbated by environmental

factors (e.g., pressure injuries and skin tears).[3, 29, 30] Introducing and maintaining a facility-level wound prevention program requires commitment and resources at the executive level, and motivation for change at all levels. Surveying and analysing the factors within the facility that are contributing to preventable wounds is the first step in designing a wound prevention program. Establishing a monitoring committee that regularly analyses, publishes and responds to wound incidence and prevalence results provides a driving force to maintain the program and inform facility-specific interventions.[3, 31] Preventive initiatives that are supported by current evidence are generally multi-faceted and require interdisciplinary engagement to implement in an ongoing capacity. Staff and consumer education, environmental surveillance, review of equipment and resources in the facility, innovative use of technology are recommended components of wound prevention programs.[3, 29, 30]

Related resources

Australian Wound Management Association and New Zealand Wound Care Society. (2012). Australia and New Zealand Clinical Practice Guideline for Prevention and Management of Venous Leg Ulcers. Cambridge Media: Osborne Park, WA.	EBG
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World Union of Wound Healing Societies. (2018). Consensus Document. Surgical Wound Dehiscence: Improving Prevention and Outcomes. Wounds International: London.	C
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STANDARD 5: WOUND MANAGEMENT

Wound management is practised according to the best available evidence in order to achieve optimal outcomes for the individual and their wound.

Rationale

Wound management aims to maximise healing potential and outcomes for the individual. Wound management is guided by comprehensive assessment and the implementation of evidence-based interventions designed to meet the goals of care.

Criteria for wound care practitioners

To meet the criteria for the *Wound Management Standard*, the wound care practitioner:

5.1. Interprets the findings from a comprehensive assessment to inform and develop an individualised wound management plan.

Evidence Criteria

5.1.1. Develops a wound management plan consistent with the assessment of the individual and their wound.[1-5]

5.1.2. Develops a wound management plan consistent with the individual's goals of care.[2, 6, 7]

5.2. Prevents and manages the impact of having a wound on the individual's quality of life.

Evidence Criteria

5.2.1. Implements a plan to minimise pain,[1, 2, 8-11] including for example:

- Non-pharmacological interventions (e.g., moist wound healing, psychological interventions, adjunctive treatments etc.)[2, 8, 12-16]
- Use of atraumatic wound dressings, pharmaceutical products and devices.[2, 8, 12, 13, 17-19]
- Topical analgesia (e.g., impregnated wound dressings, anaesthetic creams).[2, 8, 20]
- When non-pharmacological interventions and/or topical analgesia are insufficient to control pain, a systemic analgesia regimen.[2, 8, 13, 19, 21]
- Referral to members of the multidisciplinary team (e.g., chronic pain management team).

5.2.2. Implement a plan to minimise wound-related signs and symptoms, including pruritus, odour and exudate, including for example:[11, 14]

- Environmental interventions (e.g., temperature, odorisers, etc.).[2, 13]
- Judicious selection of skin and wound products.[13, 14]
- Advising the individual on appropriate clothing and laundering.[13]
- Promotion of health seeking behaviours

5.2.3. Implements strategies to promote the individual's wellbeing and quality of life,[9] including for example:

- Promoting relaxation and stress management.[13]
- Facilitating access to information and resources to promote role maintenance and socialisation.[13]
- Referral to the multidisciplinary team (e.g., psychologist, social worker, counsellor, etc.).[2]

5.3. Implements strategies to optimise the individual's healing capacity.

Evidence criteria

5.3.1. Manages and optimises systemic factors and comorbidities that may impair wound healing.[9, 11, 22-31]

5.3.2. Promotes adequate nutrition and hydration, with consideration to nutritional requirements for optimal health and correction of nutritional deficits.[2, 7, 11, 13, 22-26, 28, 31, 32]

5.3.3 Promotes cessation of smoking.[22, 27, 28, 30, 33]

5.3.4. Encourages individuals to engage in regular mobility, activity and exercise as tolerated.[2, 23]

5.3.5. Ensures that medications that could impair wound healing are reviewed with consideration to benefit versus risk.[11, 22]

5.3.6. Addresses psychosocial factors that may hinder optimal wound healing, including mental health conditions and cognitive impairment.[2, 23, 24]

5.4. Implements strategies to optimise the wound and periwound area for healing.

Evidence criteria

5.4.1. Promotes an optimal wound moisture balance.[2, 12-14, 16, 19, 24, 27, 28, 32, 34-38]

5.4.2. Protects the periwound area and surrounding tissue from moisture and other sources of damage.[2, 9, 12, 13, 16, 23, 28, 34, 35, 37-39]

5.4.3. Protects the wound bed tissue from toxins, pressure, friction, shear and other injury.[2, 12-14, 21, 25-28, 31, 32, 38, 40-43]

5.4.4. Promotes an optimal wound temperature.[2, 14, 35, 44]

5.4.5. Promotes an optimal pH of the wound and periwound area.[44-49]

5.4.6. Removes devitalised or infected tissue from the wound bed using appropriate cleansing and/or debridement methods with consideration to:[2, 7, 9-12, 18, 19, 23, 26, 27, 31, 32, 38, 43, 50]

- Clinical competence and scope of practice.

- Clinical contraindications to removing eschar.
- Wound assessment outcomes.
- Arterial insufficiency.
- Spreading or systemic infection.
- Uncontrolled comorbidities.
- Access to sterile equipment.
- Preferences and goals of the individual.

5.5. Attends wound hygiene in a manner that is appropriate to the individual, their wound and the clinical context.

Evidence Criteria

5.5.1. Performs a risk assessment before showering or washing approximated incisions, lacerations or chronic wounds.[14, 27, 51, 52]

5.5.2. Demonstrates proficiency when planning and performing wound hygiene.[4]

5.6. Selects a wound dressing aseptic technique that is appropriate to the individual, their wound and the clinical context.

Evidence Criteria

5.6.1. Considers the immune status of the individual when selecting a wound dressing technique.[53, 54]

5.6.2. Considers the size and location of the wound and the extent of visualisation of the wound bed when selecting a wound dressing technique. [54, 55]

5.6.3. Considers the complexity of the procedure including its anticipated duration when selecting a wound dressing technique.[54 , 55, 56]

5.6.4. Considers the clinical environment in which the procedure will be performed when selecting a wound dressing technique.[54, 55]

5.7. Performs wound dressing procedures in a manner consistent with best available evidence.

Evidence Criteria

5.7.1. Performs wound dressing procedures that are within own clinical competence and scope of practice.[4, 57]

5.7.2. Demonstrates proficiency when planning and performing a wound dressing procedure.[56]

5.7.3. Implements relevant universal and standard precautions when performing wound care.[55, 56]

5.8. Prevents and manages wound-related infection and cross infection.

Evidence Criteria

5.8.1. Implements relevant universal and standard precautions when caring for the individual and their wound.[55, 56, 58-60]

5.8.2. Optimises the individual's immune response through management of other health conditions and nutritional deficits.[9, 16]

5.8.3. Reduces the risk of wound bed contamination by:[2, 10, 11, 18, 24, 27, 28, 55, 56, 61]
- Using appropriate wound hygiene strategies.
- Using an appropriate wound dressing aseptic technique.
- Performing wound dressing procedures with appropriate frequency.
- Performing adequate wound cleansing.
- Performing adequate debridement.
- Educating the individual and their family carer regarding the care of wounds.

5.8.4. Initiates appropriate investigations to determine causative organisms in the presence of clinical indicators of local wound infection, biofilm, spreading infection, systemic infection and/or osteomyelitis, such as:[2, 6, 24, 55]
- Pathological investigations (e.g. semi-quantitative swab culture, wound biopsy, peptide nucleic acid fluorescent *in situ* hybridisation [PNA-FISH], light and electron microscopy).
- Radiological investigations (e.g. plain x-ray, magnetic resonance imaging, bone scan) and clinical assessment outcomes in determining causative organisms.

5.8.5. Initiates appropriate management in the presence of clinical indicators of local wound infection or biofilm, such as:[2, 10, 11, 16, 24, 26-28, 31, 32, 55, 61-66]
- Frequent and adequate wound cleansing.
- Frequent and adequate debridement of the wound bed.
- Use of topical antiseptics and/or antimicrobial dressings consistent with local policies and procedures, relevant guidelines and the principles underpinning antimicrobial stewardship.
- Biofilm based care.
- Other appropriate topical therapies.

5.8.6. Initiates appropriate management in the presence of signs and symptoms of spreading infection and/or systemic infection and/or osteomyelitis, such as:[2, 6, 10, 16, 18, 23, 24, 26-28, 32, 55, 59, 61-70]
- Frequent and adequate wound cleansing.
- Frequent and adequate debridement of the wound bed.
- Use of topical antiseptics and/or antimicrobial dressings in combination with targeted systemic antibiotic therapy, consistent with local policies and procedures and the principles underpinning antimicrobial stewardship.
- Biofilm based care.
- Other appropriate topical therapies.
- Referral to members of the multidisciplinary team (e.g. infectious diseases team).

5.9. Selects and uses products, pharmaceuticals and devices competently and safely.

Evidence Criteria

5.9.1. Selects and uses products, pharmaceuticals, therapies and devices in accordance with:
- Goals of care and clinical needs.[2, 9, 13, 14, 19, 21, 26, 27, 31, 42, 50]
- Current evidence.[63]
- The risk-benefit profile for the individual.[4, 5, 71-73]
- Local policies and procedures (e.g. antimicrobial stewardship program, wound dressing selection guidelines).[6, 55]
- The manufacturers' instructions.[2]
- Indications approved by the Therapeutic Goods Administration.[74]
- Appropriate ethics approval when used as a component of a research protocol.[75]
- Accessibility and cost.[2, 9]
- Preferences of the individual.[39]

5.9.2. Evaluates compatibility and efficacy when using products, pharmaceuticals, therapies and devices in conjunction with one another.[9]

5.9.3. Stores and maintains products, pharmaceuticals and devices in accordance with the manufacturers' instructions.

5.10. Considers adjunctive therapies and advanced innovations for stimulating wound healing.

Evidence Criteria

5.10.1. Evaluates the appropriateness of incorporating adjunctive biophysical technologies used to stimulate wound healing (e.g. negative pressure wound therapy, electrical stimulation, ultrasound and electromagnetic treatment) into the individual's wound management plan.[2, 7, 9, 14, 15, 18, 27, 28, 42, 43, 50, 69, 76, 77]

5.10.2. Evaluates the appropriateness of incorporating advanced innovations used to change the biology of the wound (e.g. skin grafts, biological dressings, growth factors) into the individual's wound management plan.[2, 6, 13-15, 18, 27, 28, 43, 50, 69, 76]

5.10.3. Refers individuals for surgical interventions when appropriate.[2, 18, 26-29, 31, 32, 42, 69]

Criteria for wound service providers

To meet the criteria for the *Wound Management Standard*, a wound service provider:

5.11. Supports and facilitates the delivery of individualised, evidence-based wound management strategies.

Evidence criteria

5.11.1. Supports an organised system of care for individuals with a wound. [2, 26, 31, 69]

5.11.2. Provides access to a range of regulated health professionals and/or multidisciplinary teams to support the multifactorial needs of individuals with a wound.[2, 26, 31]

5.11.3. Provides systems that promote the implementation of individualised, evidence-based wound management strategies.[2]

5.11.4. Provides access to a range of contemporary products for promoting wound healing.[9]

5.12. Supports and facilitates wound infection prevention and treatment.

Evidence criteria

5.12.1. Initiates a comprehensive and evidence-based infection control program within the wound service.[55]

5.12.2. Monitors key performance indicators related to infection prevention and control. [55, 59, 61, 69, 70, 78, 79]

5.12.3. Establish roles and responsibilities related to infection prevention and control outcomes.[55]

5.12.4. Promotes an organisational culture that strives to prevent and control wound infection. [55, 69, 70]

5.13. Provides an environment conducive to wound healing.

Evidence Criteria

5.13.1. Provides an environment with characteristics that are associated with healing (e.g. temperature, humidity, noise reduction, etc.).[2]

5.13.2. Maximises appropriate storage of wound-related equipment and products within the service.[2]

5.13.3. Maximises privacy of the environment.[80, 81]

Related resources

Australian Wound Management Association and New Zealand Wound Care Society. (2012). Australia and New Zealand Clinical Practice Guideline for Prevention and Management of Venous Leg Ulcers. Cambridge Media: Osborne Park, WA	EBG
Chen P, Carville K, Swanson T, Lazzarini PA, Charles J, Cheney J and Prentice J (2021). Australian Guideline on Wound Healing Interventions to Enhance Healing of Foot Ulcers: Part of the 2021 Australian Evidence-based Guidelines for Diabetes-related Foot Disease, Version 1.0. Diabetes Feet Australia, Australian Diabetes Society: Brisbane, Australia.	EBG
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Background and Context

Evidence based practice

Development of a wound prevention and management plan is underpinned by the individual's preferences, clinical history, wound and/or risk assessment and the goals of care. Wound prevention and management decisions should ideally be based on scientific evidence that provides objective data indicating the efficacy of the intervention. Maintaining a scientific and evidence-based approach when making clinical decisions regarding wound management and prevention is associated with superior clinical outcomes and more cost-effective care.[82] However, it is important that evidence is not used in isolation. A body of evidence on specific interventions requires interpretation and evaluation by the care team and individual team members to determine its appropriateness to the individual (e.g., co-morbidities, personal preferences), the multidisciplinary team (e.g., skill level) and the local setting (e.g., environment and resources).[82, 83]

Advances in knowledge, technologies and emerging wound therapies are ongoing. The multidisciplinary team should seek out the best evidence on effectiveness and implementation. Systematic reviews and evidence-based clinical practice guidelines are one source of evidence that provide comprehensive and concise guidance. These sources generally compile the best available evidence for interventions and develop recommendations for clinical practice based on the strength of the body of scientific evidence. However, guidelines provide an interpretation of the science and their relevance to the individual should be evaluated by wound care practitioners.

As highlighted in many wound guidelines and research,[2, 16, 84, 85] the current evidence base for many wound prevention and management strategies is limited in quality and/or quantity, and the availability of new evidence is ongoing.[2, 83] Wound care practitioners therefore have an obligation to maintain a contemporary knowledge base and to develop skills in evaluating and translating evidence into relevant clinical practice that is applicable to specific individuals in their care.[85, 86]

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STANDARD 6: DOCUMENTATION

Wound-related documentation provides a legal, comprehensive and chronological record of assessments, investigations, wound prevention and management planning and monitoring, and evaluation at the individual and organisation level.

Rationale

Accurate, comprehensive and chronological health records promote the safety of the individual, continuity of care and ability to determine if the care plan is effectively meeting the goals of care. Maintenance of health records in an accurate and clear manner is a legal requirement that protects the individual, their family carer and the multidisciplinary team. A comprehensive wound-related documentation system facilitates service level monitoring and auditing.

Criteria for wound care practitioners

To meet the criteria for the *Documentation Standard*, the wound care practitioner:

6.1. Maintains wound-related health records that meet legislative, regulatory and service provider requirements.

Evidence Criteria

6.1.1. Implements local documentation policies and procedures when collecting, storing, accessing, transferring and/or destroying health and wound-related information.

6.1.2. Maintains, stores, transfers and accesses health records in a manner consistent with relevant legislation.[1-7]

6.1.3. Maintains legible written health records that include name, designation, signature and date.[8-11]

6.2. Documents wound assessment, prevention and management comprehensively, chronologically and accurately.

Evidence Criteria

6.2.1 Documents assessments, care planning, care delivery and care evaluation[8, 9, 12-16] related to wound care,[10, 17-21] including:

- A comprehensive initial and assessment of the individual, the wound and the environment.[10, 13, 14, 17, 19]
- Diagnostic investigations and results.[9, 17, 19, 22]
- An evidence-based wound care plan.[10, 12-14, 17, 19]
- Evaluation of progress towards goals of care[23] using valid and reliable

documentation methods (e.g., assessment and monitoring tools, electronic records, digital photography) and effectiveness of the wound care plan.[6, 11, 24-30]

- Any changes to the wound care plan, including the rationale.[13, 14, 23]
- Any adverse effects or risks associated with wound care.[16]

6.2.2. Documents collaboration between the individual, their family carer and the multidisciplinary team, including:[8, 13, 14]

- The individual and their informal care givers' ability and willingness to participate in care decisions.
- The individual and their informal care givers' care preferences, expectations, goals of care and care decisions.[13, 14, 16]
- The individual and their informal care givers' ability and willingness to participate in care delivery.[21, 31]
- A record of multidisciplinary team meetings/care reviews.[31]
- Provision of information and education to the individual and their family carers.[8, 19, 31]

6.3. Consults with the individual and their family carer regarding the use of health information.

Evidence Criteria

6.3.1. Provides the individual and/or their family carer with information relating to collection, storage and transfer of health information and its use by the multidisciplinary team.[5, 9]

6.3.2. Obtains and documents informed consent relating to wound assessment and care delivery.[9, 31, 32]

Criteria for wound service providers

To meet the criteria for the *Documentation Standard*, the wound service provider:

6.4. Ensures that health and wound related records are maintained in a manner that meets legislative, regulatory and care provision requirements.

Evidence Criteria

6.4.1. Develops and regularly reviews documentation policy and procedures that include the ways in which health and wound-related information will be collected, recorded, accessed, and stored.[20, 21, 23, 27, 28, 33]

6.4.2. Provides for storage, access, and transfer of health records according to relevant legislative and regulatory requirements.[1-7]

6.4.3. Provides a wound-related documentation system that facilitates wound care delivery, monitoring and evaluation, auditing and research.[21, 23, 33, 34]

6.4.4. Provides for health records stored in a manner consistent with privacy legislation, with back-up mechanisms in place.[35, 36]

6.4.5. Ensures that wound documentation is accessible to current and future multidisciplinary teams.[11, 23, 27, 28, 37]

Related resources

Relevant Federal and jurisdictional legislation (Health Records Act, Health Privacy Principles, Health Records Regulations, Health Care Act, Privacy Act and/or Freedom of Information Act), including: • Commonwealth Government of Australia, Privacy Act 1988, Compilation No. 86, 17 February 2021, Schedule 1: Australian Privacy Principles. 2021. https://www.legislation.gov.au/Details/C2021C00139 • Australian Capital Territory Legislative Assembly, Health Records (Privacy and Access) Act 1997, Schedule 1: The Privacy Principles. Republication 27, Effective 01 April 2016. 2016. https://www.legislation.act.gov.au/a/1997-125/default.asp • New South Wales Government, Health Records and Information Privacy Act 2002, No 71. 2020, New South Wales Government. https://legislation.nsw.gov.au/view/html/inforce/current/act-2002-071 • Queensland Government, Information Privacy Act 2009, Reprint current from 1 July 2019. 2019. https://www.legislation.qld.gov.au/view/html/inforce/current/act-2009-014 • Victorian Government, Health Records Act 2001, Version No. 046, No. 2 of 2001, amendment 27 August 2020, in 046. 2020. http://www.austlii.edu.au/au/legis/vic/consol_act/hra2001144/sch1.html	S
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Background and Context

Documentation of wound assessment, prevention and management is important from a variety of perspectives. The individual's health record details the efficacy of the management plan and the progress toward care goals. It is one of many methods through which the multidisciplinary team communicate with each other regarding the individual's progress and any issues that may

arise in care delivery and referrals. Documentation also forms an ongoing legal account of the care provided.

Maintaining legible and lawful health records

Legible records are important to ensure continuity of care and are required from a medico-legal perspective. Record entries should be signed and dated, and the identity of the team member completing the record should be legible. Documentation should be accurate, specific and use only standard abbreviations. Documented health records should not be altered or erased. If changes are required, additional information can be added to a record (and dated) or information can be deleted by ruling through the mistaken entry and initialling and dating changes.[38, 39] These principles promote continuity of care and protect the individual, regulated health professionals and unregulated health care workers in the event of complaints or legal action.[6]

Under Australian Privacy Principle One[5] health service providers are required to clearly express how health-related information will be collected and managed. This information should be available for the individual, family carers and members of the multidisciplinary team. The kind of information that should be included in the health service's privacy policy includes the kind of information that is collected and how it is used, for what purposes information is disclosed to other people or service providers, the process for an individual to access their documented medical record, and how individuals can make a complaint if their privacy is breached.[5] Other Commonwealth and State legislation includes guidance on ways in which medical records must be stored, who may access records, the length of time records must be stored and how records are transferred or destroyed.[1-3, 5, 7, 35]

Documenting decision making

The right to engage in decisions regarding one's care is a foundation health care principle. Informed consent requires the individual to have engaged in an informed decision-making process with the support of the multidisciplinary team and their family carers. Counselling the individual about the role and outcome of wound assessment, risk assessment and options for care should be thoroughly documented in the health record, including the education with which the individual was provided, the individual's goals for care, alternative care strategies that have been discussed, and the choices the individual has made with respect to ongoing care planning and delivery. This documentation serves as a both a legal record, and communication to the regulated health professionals and unregulated health care workers regarding the education and consultation that has been undertaken.[31]

Documentation systems

An advanced documentation system provides a wound service with advantages in achieving best practice in wound care and working towards continuous quality improvement. Many facilities have introduced, or are developing, electronic medical records that provide the opportunity to integrate best practice into documentation, care planning and quality improvement. Evidence suggests that an advanced (and specifically, electronic) medical record is associated with more effective care delivery and superior patient outcomes.[40] An ideal comprehensive documentation system includes standardised assessment and monitoring tools, clinical decision tools or flow charts and flagging or alert systems to draw attention to assessment outcomes that are of concern (e.g., identified as having a high risk of pressure injuries).[41] An electronic documenting

system ensures that wound assessment is stored in one place, ensuring care continuity across the multidisciplinary team.[24, 41] More advanced documentation systems integrate wound photography, healing trajectory for wounds, consumer education material and relevant clinical guidelines and/or recommendations. Organisation level wound prevalence and incidence rates and healing outcomes can also be derived from wound documentation systems and are therefore useful for quality improvement planning and reporting.[41]

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STANDARD 7: KNOWLEDGE, EDUCATION AND RESEARCH

Wound-related knowledge, education and research capacity are maximised.

Rationale

Delivery of the highest standard of wound practice requires expert knowledge and skills. Formal education, research, continuous professional development and continuous quality improvement activities promote attainment of contemporary, evidence-based knowledge for wound care practitioners and the multidisciplinary team. Maximising the knowledge and skills of the individual and their family carer enables their participation in care decisions and activities.

Criteria for wound care practitioners

To meet the criteria for the *Knowledge, Education and Research Standard*, the wound care practitioner:

7.1. Demonstrates knowledge, skills and critical thinking with respect to wound-related practice.

Evidence Criteria

7.1.1. Demonstrates knowledge of wound assessment, prevention and management at a level commensurate with scope of practice, education background and experience.[1]

7.1.2. Demonstrates proficiency in delivering contemporary wound care.[2]

7.1.3. Thinks critically and analyses wound practice.[3-5]

7.1.4. Engages in reflective practice.[1, 3]

7.2. Maintains a current and evidence-based wound knowledge base.

Evidence Criteria

7.2.1. Identifies own wound-related learning needs and professional goals.[4, 6-8]

7.2.2. Engages in wound-related education and skills acquisition that reflects best practice.[2, 4, 8-10]

7.3. Contributes to wound-related research, quality improvement activities and other opportunities to translate evidence into practice.

Evidence Criteria

7.3.1. Engages in collaborative processes to identify needs for improvement in wound-related clinical care delivery.[1, 5, 11]

7.3.2. Engages in collaborative processes to evaluate wound-related clinical practice and quality indicators.[5, 11]

7.3.3. Engages in collaborative processes through which new evidence is critiqued and introduced into clinical practice.[1, 5, 12]

7.4. Contributes to the wound-related professional development of the multidisciplinary team.

7.4.1. Contributes to the education and learning opportunities of the multidisciplinary team.[3-5, 7, 13]

7.4.2. Demonstrates effective supervision, teaching, and performance appraisal, as applicable. [1, 2, 5, 14-17]

7.4.3. Demonstrates effective role modelling and mentoring.[1, 4, 5, 14, 15, 17]

7.5. Educates the individual and their family carer regarding the prevention and treatment of wounds.

Evidence Criteria

7.5.1. Assesses and documents the wound-related learning needs of the individual and their family carer.[18, 19]

7.5.2. Provides relevant and appropriate wound-related education, skills development and learning opportunities to individuals and their family carer.[1, 3, 5, 7, 13, 18-26]

7.5.3. Provides individuals and their family carer advice on accessing evidence-based wound-related information and support.[20]

Criteria for wound service providers

To meet the criteria for the *Knowledge, Education and Research Standard*, the wound service provider:

7.6. Identifies wound-related learning needs of the multidisciplinary team.

Evidence Criteria

7.6.1. Records and regularly reviews the knowledge and skills set of the multidisciplinary team.[27]

7.6.2. Facilitates a professional development review process that incorporates wound-related learning needs.[27]

7.7. Promotes wound-related education for the multidisciplinary team, individuals and family carers.

Evidence Criteria

7.7.1. Facilitates access to wound-related education.[9, 23, 28-33]

7.7.2. Provides opportunity for the multidisciplinary team to share their knowledge and skills. [20]

7.7.3. Promotes the education of individuals and their family carers on wound prevention and treatment.[9, 20-22, 30, 34-36]

7.8. Facilitates the multidisciplinary team to translate evidence into practice.

Evidence Criteria

7.8.1. Facilitates access to contemporary wound-related research and best practice guidance.[12, 27, 30]

7.8.2. Implements a wound-related quality improvement program that strives to reflect best practice in wound care.[11, 20, 30, 31]

7.8.3. Facilitates collaborative processes through which the multidisciplinary team critique and implement new evidence to practice.[11, 12, 30, 31]

7.8.4. Facilitates wound-related research.

7.9. Strives to achieve wound-related service level quality indicators.

7.9.1. Identifies appropriate service level wound-related quality indicators (e.g., reduction in wound prevalence).[20, 30]

7.9.2. Implements a wound-related quality improvement program that strives to reflect best practice in wound care.[20, 30, 31]

7.9.3. Monitors and regularly evaluates wound-related quality indicators within the wound service.[30, 37-39]

Related resources

Australian Commission on Safety and Quality in Health Care. (2017). The National Safety and Quality Health Service (NSQHS) Standards: Comprehensive Care Standard. ACSQHC. https://www.safetyandquality.gov.au/standards/nsqhs-standards	S
European Pressure Ulcer Advisory Panel, National Pressure Injury Advisory Panel, and Pan Pacific Pressure Injury Alliance. (2019). Prevention and Treatment of Pressure Ulcers/Injuries: Clinical Practice Guideline, ed. E. Haesler.: EPUAP/NPIAP/PPPIA.	EBG
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Background and Context

Education for the multidisciplinary team

It is essential that the multidisciplinary team have the skills they need to undertake evidence-based care required to optimise outcomes for the individual. Many individuals who sustain wounds have complex health care issues that influence their risk of wounds and ability to heal. These individuals require wound care practitioners with advanced skills to intervene appropriately to optimise healing.[40, 41] It is a professional responsibility to ensure that one's clinical skill set is contemporary, evidence-based and competent.

Specialised wound care practitioners not only perform advanced wound assessment and management, but also have a significant role in mentoring, role modelling and providing education to other members of the multidisciplinary team.[14, 40, 42] International research demonstrates that wound service providers that engage specialist trained tissue viability/wound/ostomy and continence nurses have lower rates of adverse skin events and improved healing outcomes for individuals with wounds.[30, 42, 43]

Optimising knowledge for individuals and family carers

Low health literacy has been associated with an increased risk of developing a wound in individuals at risk.[44] Without knowledge of factors associated with the prevention, development and management of a wound, the individual is limited in their ability to actively engage in wound care. Understanding the knowledge needs of the individual and their family carers provides the multidisciplinary team with a foundation for planning and delivering education. Learning needs extend beyond practical wound care skills and include knowledge regarding the influence of comorbidities and lifestyle on wound prevention and healing.

Individuals and their family carers should have access to contemporary wound care knowledge. This may be in the form of one-to-one or group formats,[45-47] and may be delivered using a range of strategies (face-face, web-based, pre-recorded, life, interactive, etc).[48, 49] However, evidence indicates that written education material reinforces verbal education and enhances ongoing learning. In developing written resources, consideration should be given to the format (e.g. hard copy, digital web-site, mobile app, etc.), language and reading level of the intended audience, contribution to development from health providers and consumers, inclusion of visual tools and referral information.[35, 50] Australian studies have shown that accessible consumer education on health and wound topics generally fails to deliver content at an appropriate reading level with helpful information and appropriate contributors and endorsements.[35, 50, 51]

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STANDARD 8: DIGITAL PLATFORMS AND TECHNOLOGIES

Digital platforms and technologies are used to facilitate the delivery of evidence based wound prevention and management.

Rationale

Digital health platforms and technologies are rapidly advancing. This includes physical technologies that are used to perform wound assessment, prevention and management, as well as technologies that transmit and broadcast wound-related information on a one-to-one basis (e.g., telehealth consultations) or more broadly (e.g., social media). It is important that wound care practitioners and wound service providers navigate the moral, ethical and social responsibilities associated with using digital technologies, as well as attain proficiency in using new technologies as they emerge.

Criteria for wound care practitioners

To meet the criteria for the *Digital Platforms and Technologies Standard*, the wound care practitioner:

8.1. Accesses and delivers telehealth in a manner consistent with professional standards and regulatory requirements.

Evidence criteria

8.1.1. Assesses the individual and the clinical situation to determine the appropriateness of using a digital telehealth platform.[1-4]

8.1.2. Implements digital wound care consultations in a way that enables consent, privacy, confidentiality and data security.[1, 4-8]

8.1.3. Documents telehealth care using a structured approach that promotes integrity of data.[1, 4-6]

8.2. Delivers telehealth in a manner consistent with best practice in wound assessment, prevention and management.

Evidence criteria

8.2.1. Uses telehealth platforms in a way that promotes evidence-based wound assessment, prevention and management.[2]

8.2.2. Integrates telehealth consultations with in-person wound care to achieve optimal clinical outcomes.[2, 4, 5]

8.2.3. Delivers telehealth in a manner that promotes collaborative and therapeutic relationships.[2-5, 9]

8.3. Implements digital technologies (e.g., photography) in a manner consistent with performing effective wound assessment, prevention and management.

Evidence criteria

8.3.1. Evaluates safety and efficacy of new technologies before implementing them in wound assessment, prevention and treatment.[4]

8.3.2. Undertakes training before using digital devices/technologically advanced equipment.[4, 6]

8.3.3. Considers the consent, dignity and privacy of the individuals when undertaking digital recording. photography.[6]

8.3.4. Performs digital photography/recording in a manner consistent with achieving a repeatable and comparable image for initial assessment and ongoing monitoring.[6]

8.3.5. Records and stores the digital wound assessment accurately.[6]

8.3.6. Uses a consistent method to assess a wound via digital record, particularly when the wound was not also evaluated in-person (e.g., when comparing serial wound photographs or assessing wounds documented via telehealth).[10]

8.4. Uses social media and other digital platforms in a professionally responsible manner.

Evidence criteria

8.4.1. Protects the privacy of patients, their family carers, colleagues and employers when using social media and other digital platforms.[7, 11-13]

8.4.2. Observes ethical and professional boundaries and obligations when using social media and other digital platforms.[7, 11-14]

Criteria for wound service providers

To meet the criteria for the *Digital Platforms and Technologies Standard*, the wound service provider:

8.5. Facilitates access to telehealth when it is appropriate to enable access to wound assessment, prevention and management.

Evidence Criteria

8.5.1. Has policies and procedures outlining the context in which telehealth will be used and procedures outlining its implementation.[1, 5, 15]

8.5.2. Maintains technology systems that ensure that telehealth can be delivered securely, privately and confidentially.[1, 2]

8.5.3. Provides access to technology support services.[3-5]

8.5.4. Facilitates education on delivery of telehealth, including use of supportive digital technologies (e.g., cameras).[1-3, 5]

8.6. Facilitates use of digital technologies to enable accurate wound assessment, prevention and management.

Evidence Criteria

8.6.1. Supports the use of evidence-based digital technologies in the wound service.[4, 6]

8.6.2. Provides access to reliable photographic and recording equipment.[6]

8.6.3. Facilitates education and training when introducing new digital technologies to the wound service.[4]

8.7. Promotes responsible use of social media and other digital platforms.

Evidence Criteria

8.7.1. Provides guidance on the use of personal devices, social media and other digital platforms within the wound service.

Related resources

Australian Nursing Federation, Telehealth Standards: Registered Nurses. 2013, Australian Nursing Federation: Australia	S
Ahpra and National Boards, Social media: How to meet your obligations under the National Law. 2019, Ahpra: https://www.ahpra.gov.au/Publications/Social-media-guidance.aspx	P
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Background and Context

The rapid development of technologies in all areas is mirrored in heath and wound care. Technological advance offers opportunities for more cost effective and timely delivery of wound care, with potential to eliminate redundancy, reduce variability, reduce errors, increase data access and promote greater time for the wound care practitioner to establish a therapeutic relationship with the individual and their carer.[16]

The *Digital Platforms and Technologies Standard* refers specifically to digital technologies that are commonly used in Australian wound practice at the time of publication. Recent reviews indicate that the most used digital technologies are photography and other digital imaging, and telehealth.[3, 4] Advanced wound measurement technologies (e.g., digital photography, digital software planimetry, 3D wound mapping) are becoming ubiquitous in well-resourced areas.[17] Other digital technologies support telecommunications (e.g., telehealth) and have improved the access of individuals in rural and remote areas to specialised general and wound-related care. However, many emerging technologies are being explored and adopted; for example, sensorised wound dressings, biophysical therapies, and nanotechnology-based therapy.[3] The broad principles outlined above, including maintaining professional, legal and ethical obligations, developing frameworks and guidelines for new resources and ensuring appropriate education and training, remain relevant to the introduction of other new technological advances.

The intersect between wound care and telehealth

Increasingly, digital technologies are being used to enable access to health care (including wound care).[3] Telehealth uses telecommunication technologies to facilitate remote delivery of health advice and health care.[2-4, 18] Telehealth presents an opportunity to connect more personally with an individual and their family carer when it is not possible to physically meet. As audio-visual technologies rapidly advance, and telecommunication technologies improve in ability to rapidly transmit data, telehealth is being used across Australia to connect wound care practitioners with consumers.[19] Telehealth services provide an option for people living in rural and remote regions, people living in regions with poor access to specialists, out-of-hours care and in more exceptional circumstances (e.g., during pandemics). Telehealth may be delivered in real-time (e.g., using web-conferencing platforms) or as a "store and forward" consultation in which information is conveyed across time (e.g., via email).[3] A recent systematic review that included world-wide data demonstrated that wound care delivered via telehealth is associated with no significant difference in clinical outcomes compared with in-person wound care. This included no statistically significant difference in wound healing and amputation rates.[19] However, the use of telehealth should be balanced with the potential impact on the accuracy of assessment, delivery of wound care and the therapeutic relationship.[18] For wound care practitioners and wound service providers, video conferencing and other internet-based platforms also offer opportunity for increased connectedness with colleagues, peers and other specialists for consultation and education.[3]

Although telehealth provides opportunities for greater connectedness with individuals with a wound, family carers and the multidisciplinary team, the use of digital platforms does not change the obligation to maintain professional and clinical standards in wound care delivery.[5] As noted in the *Digital Platforms and Technologies Standard* above, additional safeguards may be required to maintain privacy and confidentiality. Consideration of the physical environment, technological capabilities and education needs for all telehealth participants should be addressed when establishing services.

Digital information

A significant number of individuals access information via the internet; however, sources are not always complete, accurate, reliable or evidence based. An important role for regulated health

professionals and unregulated health care workers is educating individuals in appraising the reliability of information sources, identifying sound educational websites (e.g., government, university or health care organisation sites) to access, and discussing information that individuals have located to ensure it is reliable and accurately understood.[20]

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