

Appendix A: Glossary of terms

Active Charcot neuro-osteopathy: “The presence of a red, warm, swollen foot with osseous abnormalities on imaging in a person with diabetes mellitus and neuropathy. During the course of the disease, as long as there are signs of inflammation in the affected foot, the Charcot neuro-osteopathy is presumed to be ‘active’” (10).

Amputation: “Resection of a segment of a limb through a bone or through a joint.

- Major amputation: Any resection proximal to the ankle.
- Minor amputation: Any resection through or distal to the ankle” (10).

Best practice guidelines (BPG): “Best practice guidelines are systematically developed, evidence-based documents that include recommendations for nurses and the interprofessional team, educators, leaders and policy-makers, persons and their families on specific clinical and healthy work environment topics. BPGs promote consistency and excellence in clinical care, health policies and health education, ultimately leading to optimal health outcomes for people and communities and the health system” (154).

Best Practice Spotlight Organization[®] (BPSO[®]): A health service or academic organization that has partnered formally with RNAO over a three-year time period with a goal of creating evidence-based practice cultures through the systematic implementation and outcome evaluation of multiple best practice guidelines (155).

Callus: “Increased thickness of the outer layer of the skin caused by excessive mechanical loading” (10).

Care partner: A care partner provides physical, psychological and emotional support, as deemed important by the person. This care can include support in decision making, care coordination and continuity of care. Care partners can include family members, close friends or other caregivers and are identified by the person or substitute decision marker (9). In other RNAO BPGs, care partners have been called caregivers, families or family members.

Chiropodist, podiatrist: Regulated health professionals who assess, diagnose and treat a broad range of medical conditions of the foot (156). Chiropodists and podiatrists are registered with the College of Chiropodists and hold protected titles (156). Chiropodists and podiatrists can perform similar but distinct authorized acts. Chiropodists represent the largest number of foot specialists in Ontario. Practitioners in the US, or those who came to Ontario before 1993, are referred to as Podiatrists (156). See the College of Chiropodist of Ontario website for more information on scope of practice.

Clinical pathway: Robust protocols and clear pathways for the continued and integrated care of people across all settings including emergency care and general practice. The protocols should establish the relationship between the primary health provider and the specialized wound care team (120).

Corn: A thick round skin lesion with a hardened central core that forms from repetitive rubbing or pressure or over a bony prominence (157).

Co-design: A reconceptualization of the role of persons and a structured process for involving them throughout all stages of quality improvement. There is a strong emphasis on the importance of the persons', care partners' and health providers' experiences and emotions to understand and improve health services (158).

Complementary and alternative medicine: "A broad set of health care practices that are not part of that country's own tradition or conventional medicine and are not fully integrated into the dominant health-care system. They are used interchangeably with traditional medicine in some countries" (159).

Cultural safety: Cultural safety is an outcome based on respectful engagement that recognizes and aims to address power imbalances inherent across the health system. Cultural safety creates an environment free of racism and discrimination where people feel safe when receiving health care (56).

Debridement: The removal of callus or dead and devitalised tissue (necrosis and slough) through various methods (10).

See wound debridement

Diabetes: "Diabetes mellitus is a heterogeneous metabolic disorder characterized by the presence of hyperglycemia due to impairment of insulin secretion, defective insulin action or both" (160). Type 1 and Type 2 diabetes are the two main types of diabetes (160).

See Type 1 diabetes and Type 2 diabetes

Diabetic foot ulcer (DFU): "A foot ulcer in a person with current or previously diagnosed diabetes mellitus, and commonly accompanied by peripheral neuropathy and/or peripheral artery disease in the lower extremity" (10).

See foot ulcer

Diabetic foot ulcer in remission: "Intact skin, and absence of infection, of the complete foot after healing of any foot ulcer(s)" (10).

Diabetic foot ulcer occurrence: "A foot ulcer occurring in a person who has never before had a foot ulcer" (10).

Diabetic foot ulcer recurrence: "A new foot ulcer in a person who has a history of foot ulceration, irrespective of the location and time since the previous foot ulcer" (10).

Evidence-based practice: The integration of research evidence with clinical expertise and patient values. It unifies research evidence with clinical expertise and encourages the inclusion of patient preferences (161).

Evidence-to-Decision (EtD) frameworks: A table that helps guideline panels make decisions when moving from evidence to recommendations. The purpose of the Evidence-to-Decision framework (EtD) is to summarize the research evidence, outline important factors that can determine the recommendation, inform panel members about the benefits and harms of each intervention considered and increase transparency about the decision-making process in the development of recommendations (19).

External reviewer: Individuals or groups who commit to reviewing and providing feedback on the draft RNAO best practice guideline prior to publication. External reviewers often include individuals or groups directly impacted by the guideline topic and recommendations (e.g., people accessing health services, people working in health service organizations or people with subject-matter expertise).

Foot deformity: “Alterations or deviations from the normal shape or size of the foot, such as hammer toes, mallet toes, claw toes, hallux valgus, prominent metatarsal heads, pes cavus, pes planus, pes equinus, or results of Charcot neuro-osteoarthropathy, trauma, amputations, other foot surgery or other causes” (10).

Foot infection: The presence of manifestations of an inflammatory process involving a foot wound located below the malleoli (131).

Foot screening: To test for the presence or absence of diabetes- related foot disease or dysfunctions (10).

Foot ulcer: “A break of the skin of the foot that involves as a minimum the epidermis and part of the dermis” (10).

Gangrene: “A condition that occurs when the body tissue dies because of insufficient blood supply, infection or injury. Without infection this generally results in dry and black tissue, frequently called dry gangrene; when the tissue is infected, with accompanying putrefaction and surrounding cellulitis, it is often called wet gangrene” (10).

Good practice statement: Good practice statements are directed primarily to nurses and the interprofessional teams that provide care to persons and their families across the continuum of care, including (but not limited to) primary care, home and community care, acute care and LTC.

Good practice statements are actionable statements that should be done in practice (14). These are believed to be so beneficial that summarizing the evidence would be a poor use of the expert panel’s time and resources (14). Moreover, researchers may no longer be conducting studies on the topic, or the alternative to the action may be unethical or studying them may go against human rights (14,15). Given the high level of certainty that the benefits derived from the good practice statement outweigh the harms, they are not based on a systematic review of the evidence, and they do not receive a rating of the certainty in their evidence or a strength (i.e., a rating of conditional or strong) (16). This does not diminish certainty in the evidence. While they are often supported by indirect evidence, there is a well-documented, clear and explicit rationale connecting the indirect evidence to the statement (14). As such, good practice statements should be interpreted as strong recommendations as there is an underlying assumption that there is high certainty in the benefits of implementing the action (14).

Grading of Recommendations Assessment, Development and Evaluation (GRADE): A methodological approach to assess the certainty of a body of evidence in a consistent and transparent way and to develop recommendations in a systematic way. The body of evidence across identified important and/or critical outcomes is evaluated based on the risk of bias, consistency of results, relevance of studies, precision of estimates, publication bias, large effect, dose-response and opposing confounding (19).

When using GRADE, five components contribute to the assessment of confidence in the evidence for each outcome. These components are as follows:

1. Risk of bias, which focuses on flaws in the design of a study or problems in its execution.
2. Inconsistency, which looks at a body of evidence and assesses whether the results point in the same direction or if they are different.
3. Imprecision, which refers to the accuracy of results based on the number of participants and/or events included and the width of the confidence intervals across a body of evidence.
4. Indirectness, whereby each primary study that supports an outcome is assessed and a decision is made regarding the applicability of the findings to the population, intervention and outcome outlined in the research question.
5. Publication bias, where a decision is made about whether the body of published literature for an outcome potentially includes only positive or statistically significant results (19).

Guiding principles: Overarching concepts that denote a philosophy, belief, value and/or standard of behaviour that nurses, members of the interprofessional team and health service organizations should apply to their practice when implementing recommendations and good practice statements.

Health provider: Refers to both regulated (e.g., nurses, physicians, dietitians and social workers) and unregulated (e.g., personal support workers) workers who are part of the interprofessional team.

Regulated health provider: In Ontario, the *Regulated Health Professional Act, 1991* (RHPA) provides a framework for regulating 26 health professions, outlining the scope of practice and the profession-specific controlled or authorized acts that each regulated professional is authorized to perform when providing health care and services (11).

Unregulated health provider: Unregulated health providers fulfill a variety of roles in areas that are not subject to the RHPA. They are accountable to their employers but not to an external regulating professional body (such as the College of Nurses of Ontario). Unregulated health providers fulfill their roles and tasks that are determined by their employer. Unregulated health providers only have the authority to perform a controlled act as set out in the RHPA if the procedure falls under one of the exemptions set out in the Act (12).

See primary health provider and specialized health provider

Health service organizations: Organizations delivering health-care services to defined communities or populations. This includes, but is not limited to, family health teams, home care organizations and hospitals.

Implementation science: “The scientific study of methods to promote the systematic uptake of research findings and other evidence-based practices into routine practice, and, hence, to improve the quality and effectiveness of health services and care” (162).

Indigenous: Introduced and used in a global context following the international efforts of Aboriginal peoples to achieve a greater presence in the United Nations (UN). The UN broadly defines Indigenous persons as peoples of long settlement and connection to specific lands who practise unique traditions and retain social, cultural, economic and political characteristics that are distinct from those of the dominant societies in which they reside (163). Under the UN definition, Indigenous is generally understood to include the following: self-identification at the individual level and acceptance by an Indigenous community as a member; historical continuity with pre-colonial or pre-settler societies; strong links to territories and surrounding natural resources; distinct social, economic or political systems; and distinct language, culture and beliefs. Indigenous peoples form non-dominant groups within society and resolve to maintain and reproduce their ancestral environments and systems as distinctive peoples and communities (163).

The Canadian Constitution recognizes three groups of Indigenous peoples: First Nations, Inuit and Métis. These are three distinct peoples with unique histories, languages, cultural practices and spiritual beliefs (164).

Interprofessional team: A team comprised of multiple health providers (regulated and unregulated) who work collaboratively to deliver comprehensive and quality health services to persons within, between and across health care (165). Key interprofessional team members supporting persons at risk of or living with a DFU may include: nurses, primary health providers, chiropractors, podiatrists, dietitians and pharmacists. It is important to emphasize that persons and their care partners are at the centre of the interprofessional team as active participants.

See specialized wound care team

Ischemia: “Blood supply to the foot or part of the foot that is insufficient to meet the metabolic demands of tissue, associated with signs or symptoms of reduced perfusion” (10).

mHealth: “The use of mobile and wireless technologies to support health objectives” (166).

Necrosis: A form of irreversible cell injury that is almost always associated with inflammatory responses, which leads to the premature death of cells in living tissue (167).

Neuropathy: Diabetes-induced neuropathy is a symmetric polyneuropathy that affects the sensory, motor and autonomic components of the peripheral nerves. Diabetes-induced neuropathy results in loss of protective sensation (27).

Motor neuropathy causes atrophy of foot muscles by denervation of muscle groups and typically presents with sensory damages that result in unequal foot load and unequal gait with pain insensitivity, causing hyperkeratosis and promoting DFUs. Autonomic neuropathy is the impairment of peripheral autonomic nerves that may affect multiple organ systems (27).

Non-randomized study: A quantitative study estimating the effectiveness of an intervention, where participants are allocated to different interventions using methods that are not random (168).

Nurse: Refers to registered nurses, licensed practical nurses (referred to as “registered practical nurses” in Ontario), registered psychiatric nurses and nurses in advanced practice roles, such as nurse practitioners and clinical nurse specialists (169).

Offloading: “The relief of mechanical stress (pressure) from a specific region of the foot. Techniques can include surgical offloading techniques, offloading devices, footwear, and other offloading techniques” (10).

Osteomyelitis: “An infection of the bone, with involvement of the bone marrow” (10).

Outcomes: A dependent variable, or the clinical and/or functional status of a patient or population, used to assess if an intervention is successful. In GRADE, outcomes are prioritized based on whether they are: a) critical for decision making, b) important but not critical for decision making or c) not important. The use of these outcomes helps make literature searches and systematic reviews more focused (19).

Peripheral artery disease: “Obstructive atherosclerotic disease of the arteries from the distal aorta to the foot, with clinical symptoms, signs or abnormalities on non-invasive or invasive vascular testing or medical imaging, resulting in disturbed or impaired circulation in one or both of the lower extremities” (10).

Peripheral neuropathy: “The presence of symptoms or signs of peripheral nerve dysfunction” (10). Common symptoms include: loss of sensations in the toes and feet, sharp shooting pains, burning, tingling, a feeling of being pricked with pins, throbbing and numbness (170).

Person: An individual with whom a health provider has established a therapeutic relationship for the purpose of partnering for health. Replaces the terms “patient,” “client” and “resident” that are used across health service organizations (13).

Person- and family-centred care: An “approach to care [demonstrating] certain practices that put the person and their family members at the centre of health care and services. Person- and family-centred care respects and empowers individuals to be genuine partners with health-care providers for their health” (13).

Person-engagement strategies: A process through which people gain greater control over decisions and actions affecting their health and increase their desire, ability and confidence in actively participating in their own care (82).

Person with lived experience: Members of the community who have first-hand experience and knowledge of the topic of interest either as a person, unpaid caregiver or advocate. Persons with lived experience are a diverse group with an array of backgrounds and experiences (171).

PICO research question: A framework to outline a focused question. It specifies four components:

1. Patient or population being studied
2. Intervention to be investigated
3. Comparison or alternative intervention
4. Outcome of interest (19).

Plan of care: A written or electronic plan that is created and maintained by the person, care partners and health providers that outlines the person's short- and long-term needs, goals and coordination requirements and identifies who is responsible for each part of the plan (124).

Primary health provider: A nurse practitioner or family physician who provides primary health-care services that typically involve routine care, care for urgent but minor or common health problems, chronic disease prevention and management, mental health care, maternity and child care, psychosocial services, liaison with home care, health promotion and disease prevention, nutrition counselling and end-of-life care (172).

Qualitative research: An approach to research that seeks to convey how human behaviour and experiences can be explained within the context of social structures, and through the use of an interactive and subjective approach to investigate and describe phenomena (173).

Quantitative research: An approach to research that investigates phenomena with tools that produce statistical measurements/numerical data (174).

Randomized controlled trial (RCT): An experiment in which the investigator assigns one or more interventions to participants who are randomly allocated to either the experimental group (receives intervention) and the comparison (conventional treatment) or control group (no intervention or placebo) (168).

Recommendation: A course of action(s) that directly answers a recommendation question (also known as a “PICO research question”). A recommendation is based on a systematic review of the literature and is made in consideration of its a) benefits and harms, b) values and preferences and c) health equity. All recommendations are given a strength — either *strong* or *conditional* — through panel consensus.

It is important to note that recommendations should not be viewed as dictates, because recommendations cannot take into account all of the unique features of individual, organizational and clinical circumstances (19).

Recommendation question: A priority research area of practice, policy or education identified by expert panel members that requires evidence to answer. The recommendation question may also aim to answer a topic area around which there is ambiguity or controversy. The recommendation question informs the research question, which guides the systematic review.

Retinopathy: Retinopathy involves changes to retinal blood vessels that cause them to bleed, leak fluid, or distort vision and is defined by the extent of retinal vascular disease detected by ophthalmoscopy. Diabetic retinopathy is the most common cause of blindness (175).

Scoping review: A form of knowledge synthesis that addresses an exploratory research question aimed at mapping key concepts, types of evidence and gaps in research related to a defined area or field by systematically searching, selecting and synthesizing existing knowledge (176).

Self-efficacy: A cognitive process where persons learn new behaviours that affect their ability to improve future events through environmental and social influences (177).

Self-management: This term is often associated with self-care and includes an array of activities that persons undertake to live well with one or more chronic conditions (44).

Self-management education: Educational activities that equip persons with the necessary knowledge and skills to inform healthy choices and build capacity in skill application (79).

Self-screening: A screening refers to screening performed by a person at risk of a DFU or their care partners to identify potential risk factors that may lead to the development of a DFU.

For example:

- Checking feet daily for cuts, cracks, bruises, blisters, sores, infections, unusual markings
- Using a mirror to see the bottom of the foot
- Checking the colour of the legs and feet
- Checking legs and feet for swelling, warmth, redness and pain (178)

Slough: “Non-viable tissue of varying colour (e.g., cream, yellow, greyish or tan) that may be loose or firmly attached, slimy, stringy or fibrinous” (179).

Social determinants of health and wellness: “Non-medical factors that influence health outcomes. They are the conditions in which people are born, grow, work, live and age, and the wider set of forces and systems shaping the conditions of daily life. These forces and systems include economic policies and systems, development agendas, social norms, social policies and political systems” (180).

The social determinants of wellness offers an opportunity to identify strengths associated with health promotion (54). This concept aligns with Indigenous beliefs and values about health, where health is an overarching concept that comprises physical and mental wellbeing, as well as spiritual and cultural cohesion (55). The determinants of wellness recognize elements of self-determination, identity, language and land as fundamental to health (54).

Social media: “Various user-driven platforms that facilitate diffusion of compelling content, dialogue creation, and communication to a broader audience. It is essentially a digital space created by the people and for the people, and provides an environment that is conducive for interactions and networking to occur at different levels (for instance, personal, professional, business, marketing, political, and societal)” (181).

Social movement for knowledge uptake and sustainability: “Various user-driven platforms that facilitate diffusion of compelling content, dialogue creation, and communication to a broader audience” (2).

Specialized wound care team: A team consisting of two or more health providers who possess the competencies and scope of practice required to be involved in the care of persons at risk of or living with DFUs (based on the person’s risk levels).

Specialized health provider: In this BPG, a specialized health provider refers to one educated, trained and competent in advanced lower limb assessment, prevention, and treatment (e.g., an advance foot care nurse holding International Interprofessional Wound Care Course [IIWCC], or Nurse Specialized in Wound, Ostomy and Continence [NSWOC] certifications, or other country-specific formally recognized certificates or a chiropodist or podiatrist).

Stigma: Labelling of persons to devalue them so that discrimination occurs (36). Self-stigma refers to “negative attitudes, including internalized shame, that people with mental illness may have about their own condition” (182).

Systematic review: A comprehensive review of the literature that uses clearly formulated questions and systematic and explicit methods to identify, select and critically appraise relevant research. A systematic review collects and analyzes data from the included studies and presents them, sometimes using statistical methods (168).

See meta-analysis

Telepractice: The use of communications technologies to provide health care at a distance (152). “The delivery, management and coordination of care and services provided via information and telecommunication technologies. This may include the use of telephone and cell phone communication; email; video and audio conferencing; instant messaging (e.g., texting, multimedia, online chat); teleradiology; and telerobotics” (153).

This term is also referred to as telehealth, teleconsultation or telemedicine in this BPG.

Type 1 diabetes: A condition characterized by high blood glucose levels caused by a lack of insulin. This occurs when the immune system attacks the insulin-producing beta cells in the pancreas and destroys them. The pancreas then produces little or no insulin. Type 1 diabetes develops most often in young people but can appear in adults (183).

Type 2 diabetes: A condition characterized by high blood glucose levels caused by either a lack of insulin or the body’s inability to use insulin efficiently. Type 2 diabetes develops most often in middle-aged and older adults but can appear in young people (183).

Virtual care: “Interaction between patients and/or members of their circle of care, occurring remotely, using any forms of communication or information technologies, with the aim of facilitating or maximizing the quality and effectiveness of patient care” (184).

Wholistic: Includes balancing the mental, emotional, spiritual and physical aspects of health. The term “wholistic” is used by many Indigenous communities to reflect the wholeness of the person, and a focus on wellness of the person rather than focusing on an illness or disease. This can include relationships with a person’s family, community, spirituality, culture and the land (185).

Wound debridement: “Debridement from a wound in order to create a clean wound bed. There are several different types of debridement including physical (e.g., surgical, sharp, hydro or gaseous), biological (larvae), autolytic (hydrogels) or biochemical (enzymes)” (10).