

Identifying the problems in leg ulcer management in order to develop an education and competence framework.

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Abstract

This mixed methods study explored the problems in leg ulcer management in order to develop a clear definition of competence and an education framework for leg ulcer management. The views of nurses involved in leg ulcer education and assessing others as competent (Group 1 Assessors), and the views of nurses who have undergone leg ulcer management courses (Group 2 Students) were analysed to identify the problems and potential solutions to establishing effective education and competent practice.

Individual interviews and focus groups were held in a staged methodological approach where each stage informed the next. In Stage 1 an initial focus group with specialist nurses led to discussion of the findings at a conference workshop. These qualitative data led in Stages 2 and 3, to an online survey with qualitative and quantitative data from Group 1 and Group 2 participants. Analysis of these data enabled the development of semi-structured interview questions for Groups 1 and 2 comprising individual interviews and a focus group (Group 1) and individual interviews with Group 2 participants.

Data were analysed using descriptive statistics for quantitative data and thematic analysis for qualitative data using Braun and Clarke's (2006, 2013, 2022) framework.

There was unanimous agreement that there is a problem in leg ulcer management and the problems are multifactorial and centred predominantly in non-specialist areas and most specifically in general practice with hospital practice presenting challenges too. The perceptions were that there is a lack of investment in supporting staff who are trying to manage high and pressured workloads. There is insufficient support for staff to develop knowledge and skills and no structured approach to education or opportunities to consolidate skills following education. Competence is the most commonly used term in relation to clinical practice but there is no clear agreement of a definition of what this means generally or specifically in relation to leg ulcer management practice.

Findings from the data enabled a proposed detailed definition of competence and a framework for measuring this competence. Findings also led to a proposed educational structure for leg ulcer management with recommended content.

Recommendations for future research are also made to establish further insights and understanding of the nature of leg ulcer management problems and the nature of competent practice.

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Chapter 1 Introduction and Literature Review

1.1 Introduction

I am a Principal Lecturer in tissue viability and have been running a leg ulcer management course at the university for over 20 years alongside a variety of courses on wound care topics. I am a Registered Nurse and a substantial part of my career has been focused on the management of leg ulcers firstly from a clinical practice perspective in my early career and then predominantly in relation to education when I joined the university. Leg ulceration is a costly condition for health services, entails significant input from practitioners and has an enormously negative effect on the quality of life of the people who experience ulceration. Leg ulceration is estimated to affect 1.5 per 1000 of the general population with prevalence higher in the older population (Martinengo et al., 2019). Nurses learn about leg ulcer management in a variety of ways both informal and formal and often their ability to manage people with leg ulceration is established through an assessment of their competence. However, there is no consensus on the definition of competence and how it is measured. I developed a competence framework (Anderson, 2003) to try and introduce consistency in my course for students in view of the lack of any consensus or guidance on what constitutes competency in leg ulcer management. I established my definition of competence in leg ulcer management as “achievement of safe and effective practice” (Anderson, 2003, pg. 521). Despite the presence of various forms of leg ulcer management education there are significant problems in leg ulcer management practice which negatively affect patients’ outcomes (Guest et al., 2015, 2017) and there is a lack of research into why this may be the case which this study aims to address.

This chapter is in three sections. Section one explains leg ulceration, its management and why it matters to patients and health service provision. The section outlines the context of leg ulcer management education and the impact on outcomes for patients. Section two then explores the concept of competence through a literature review. The most common health practitioners involved in leg ulcer management are Registered Nurses and therefore nurses are the focus of this study. Section two explores the concept of competence, its myriad definitions, and variations of perspectives (please note that I return to the discussion of the context of, and an update on, competence in chapter 6). Other terms in relation to whether a person is able to carry out what is expected of them following education or training are also explored. Section two then concludes with a summary leading to section

three which contains the aims and research questions of this study. Leg ulcer management is problematic in relation to clinical practice and patient outcomes but there is little exploration in the literature of why this is the case which is the gap that my study aims to address. Competence is difficult to define and therefore difficult to measure. The presenting problem is set out in this chapter which leads to the rationale for my study and the subsequent research questions.

Section 1

1.1.2 Introduction To Leg Ulceration

Leg ulceration is a wound on the lower limb, above the malleolus (ankle bone) and below the knee, that is slow to heal (National Wound Care Strategy Programme, 2021). "Slow to heal" is defined in the context of leg ulceration as variously failure to heal in 4 weeks (SIGN, 2010) or 2 weeks (NICE, 2021). Venous disease is the most common cause of ulceration accounting for approximately 70% of cases. Venous leg ulceration is defined as *"an open lesion between the knee and the ankle joint....and occurs in the presence of venous disease"* (Scottish Intercollegiate Guideline Network [SIGN],2010). Diagnosis of the cause of the ulcer is through a structured and detailed patient assessment which includes the use of a hand-held Doppler ultrasound device (Doppler) which measures the Ankle: Brachial Pressure Index (ABPI). The ABPI helps determine whether the arteries are supplying sufficient oxygen to the lower limb or if arterial disease (narrowing of the artery) compromises the supply. The key treatment for a venous ulcer is compression therapy, most commonly through the application of high compression bandages, hosiery or wrap systems (Mosti, Labichella & Partsch, 2012; Bernatchez, Walker & Weir, 2021). If high compression is applied in the presence of significant arterial disease there is a high risk of harm to the patient which will cause pain and discomfort and could be limb or life threatening if the externally applied high compression further reduces a compromised arterial flow (Green and Jester, 2010, Rabe et al., 2020).

Wounds impact on patients' mortality, morbidity and quality of life with enormous costs to the health service; generally thought to exceed £1.3bn annually in the UK (Guest, Fuller & Vowden, 2018). The most common cause of leg ulcers is venous disease characterised by varicose veins, ankle swelling (oedema), skin changes and ulceration (Agren and Gottrup, 2007). Recurrence rates are high, and ulcers can take weeks or months to heal even with effective therapy. Compression therapy is very effective in reducing the effects of venous disease to prevent the ulcer developing or enabling it to heal if it does occur. Once the ulcer has healed,

compression therapy has to be maintained indefinitely, mainly by the use of compression hosiery, to reduce swelling which could lead to further ulceration (Todd, 2019). Management of active ulceration is supplemented with skin care, exercise, elevation of the legs when sitting and lifestyle changes where necessary such as weight loss and maintenance. The long-term aspect of care and the high risk of recurrence means that patients need high levels of support and encouragement (Cunha, Campos & Cabete, 2017). Although effective for most people the use of high compression therapy presents risks to patients of pain, skin damage, ulcer breakdown and in extreme cases limb amputation. Such damage is a consequence of poor clinical assessment of suitability for compression and/or poor application techniques; it is necessarily a very precise and skilled procedure (Moffatt et al., 2008; Partsch & Mortimer, 2015). In addition, there are many causes of ulceration including malignant cancers, and potential for rapid deterioration mainly due to arterial supply problems and/or infections (Todd, 2019). Therefore, there is a requirement for Registered Nurses managing these patients to have a wide knowledge, skills and the capacity to apply these to the patients.

1.1.3 Bandaging Skills

Healing rates in leg ulceration are variable but are generally low which is attributed to the low number of patients who have a full clinical assessment and compression therapy (Atkin, Schofield & Kilroy-Findley, 2019). There is very little research published about nurses' leg ulcer knowledge (Heyer, Protz & Augustin, 2017). There are studies of nurses' skills in bandaging demonstrating that skills are not maintained over time (Nelson et al., 1995, Reynolds, 1999, Feben, 2003). However, these studies are dated, very small, and have short follow up times. In addition, healthy volunteers were used as models and their legs bear little relation to the conditions associated with venous disease inherent in most patients requiring compression bandaging. An observational study in 2013 assessed 100 patients in compression therapy finding over half had an incorrectly applied bandage (Stansal et al., 2013). In February 2011 the National Patient Safety Agency issued a warning about the consequences for patients of inappropriate treatment and insufficient skills among health care personnel in this area of practice (National Patient Safety Agency, 2011)

General bandaging techniques are not taught in pre- registration programmes (Penn, 2002, NMC, 2018). In addition, most pre-registration clinical placements are in hospitals where there are relatively few patients having active leg ulcer therapies and many fewer nurses competent to apply such therapies (Aldeen, 2007, Anderson,

2017). Community nurses have more opportunities (and need, as that is where most patients are situated) for a variety of educational preparations for managing people with leg ulcers including formal courses in higher education institutions. However, many often have had no formal education or assessment of competence in specific patient assessment and bandaging skills particularly among General Practice Nurses (GPN) (Knight, 2008) and generally in GP settings (Friman et al., 2020). It is suggested that there may be a lack of appreciation for the need to ensure staff are properly supported to engage in education and skills development and to ensure patients have timely and evidence-based care. This deficit is compounded when managers and service funders do not understand the complexities of the care patients with lower limb problems need (Mitchell, 2017).

1.1.4 The Context of Changes In Healthcare On Leg Ulcer Management

Healthcare is constantly changing and the population is becoming older with many more complex health needs as a result. There is also more emphasis on avoiding hospital admissions where possible and discharging patients earlier from hospitals. In community settings this means that there are more patients requiring care in a climate of acute nursing shortages, especially in the community (Bliss and While, 2014, Mann et al., 2022). Patients deemed housebound receive care from District Nurses (DN) and patients assessed as being mobile (albeit with assistance) come under the remit of the General Practice Nurse (GPN), often referred to as a Practice Nurse (PN) attached to a General Practice (GP practice). In general, DNs have more experience and support from specialist nurses in managing patients with lower limb problems than GPNs as they are part of the same healthcare Trust whereas general practices are part of the NHS but act as discrete businesses. The changes in community nursing provision according to whether a patient is mobile or not often means that the mobile patient who has the most potential for healing (compared to a frailer housebound person) is being seen by the nurse with less experience (Gray et al., 2019). Evidence suggests that many patients do not receive adequate care for lower limb wounds in general practice and suffer due to delays in referral to specialist services (Green et al., 2020).

There is a political element to care and it is often the GPs who are the power brokers in services, affecting people with lower limb problems. When leg ulcer services were operated by and funded by DN services the nurses were generally supported in service provision. However, when changes were made to GP services and more GPNs were employed the emphasis was on other services and there was not

specific funding for patients with leg ulcers (General Medical Services, 2019) and GP practices could choose whether to offer lower limb services.

1.1.5 Leg Ulcer Management Guidelines

There are no national standards for leg ulcer courses and generally national guidelines for leg ulcer management are used as a loose framework for what to include in a programme. The only current national guideline is from the Scottish Intercollegiate Guideline Network (SIGN, 2010) and the previous most commonly used guideline from the Royal College of Nursing (RCN, 2006) has been archived and is no longer in circulation. Eraut (1994) states that higher education institutions are mandated to support the “worth” of a qualification and to “challenge long established professional practices” (pg. 8). The NMC acknowledges the role of higher education in nurse education by mandating that pre-registration nursing requires a 50:50 split between a higher education institution (HEI) and practice (NMC, 2018), and prescribing the curriculum and expected outcomes for student nurse to become a Registered Nurse. However, other than a very few NMC recordable qualifications there is no such prescription in CPD for the qualified nurse other than a requirement to complete 35 hours of CPD in three years, the content of which is left to the individual. In relation to clinical practice the governing body (NMC) requires that the Registered Nurse practices within the limit of their competence (Code, 2018). Leg ulcer management requires knowledge and skills in order to be effective. Eraut’s claim of the need for higher education institutions to challenge professional practice is enshrined in the need to practice in an evidence-based way but that sets other challenges when the evidence is not clear and there is variability in the nature of the education.

1.1.6 Leg Ulcer Management Education

Patient clinical assessment, determination of the ABPI and the application of compression therapy involves knowledge and clinical skills on the part of the practitioner (Regmi & Regmi, 2012; Heyer, Protz & Augustin, 2017). There are leg ulcer education opportunities in universities and workplaces which range from: formal accredited courses/modules; sessions lasting hours or days in the workplace; brief sessions in the workplace; study days or briefer events ranging from one-four hours. All or none of these may be supplemented by periods of supervision in the clinical assessment and management of patients with leg ulcers and related lower limb conditions including varicose eczema and oedema (fluid in the tissue causing

swelling), which may occur even if an ulcer is not present, and indeed may be a warning sign that the skin is about to break down (Mervis, Kirsner & Lev-Tov, 2019).

In leg ulcer management skills such as compression bandaging, some employers see it as a discrete procedure which is simply about performance and have no knowledge of the patient assessment and procedure adjustments that are inherent in the application of the bandage. This is clear by the number of healthcare assistants who apply bandages after simply being shown how to, and in some, but not all, having some kind of “sign off” of competence. However, many qualified nurses carry out this procedure despite having no “training” or competence assessment and may then in turn become responsible for delegating the task to others. This situation becomes a professional risk as the qualified nurse is held personally responsible for their own practice by the NMC, and that which they delegate to others (Code, 2018). It is clear the implications of this are not always understood by the individual nurse nor, often, by their managers. Evidence for this comes from healing rates and damage to patients from inappropriate bandaging and protracted healing times (Guest et al., 2017). Data on healing times, complications and patient harm are not collected nationally which is a major contributor to the difficulties for this area of practice. The Guest et al., (2017) retrospective analysis of 2000 patients’ records in the UK confirms that patients do not consistently receive effective assessment and management of their lower limb condition. It is uncertain whether this is as a result of problems with teaching, knowledge and understanding, or a lack of confidence to carry out assessment and treatment. Clearly this warrants exploration with appropriate remedial action. A recent national drive to improve the assessment of people with lower limb ulcers of any aetiology was launched in 2020 in England as a workstream in a National Wound Care Strategy ([The AHSN Network, nd.](#)). The lower limb workstream has compiled flowcharts for care pathways and has produced a data set for assessing the lower limb. It is anticipated that in a community setting this dataset will be a quality requirement (Commissioning for Quality and Innovation [CQUIN] target. The overall aim is to reduce unwarranted variation in patient care, but it does not yet address education and determination of competence in practice settings.

1.1.7 Issues With Competence Assessment

A common method of assessing whether a person can undertake leg ulcer management care is by an assessment of competence and there are many ways of determining this and little consistency or guidance about how it should be conducted. The meaning of competence and how it is determined is not well-defined and there is no consensus on how competence can be identified or measured. It is not known how many clinical practitioners (mainly nurses) have been deemed competent in leg ulcer management. Given that lower limb management makes up over half of clinical workloads in district nursing settings (one part of community nursing services) the number is likely to be substantial given there are over 36,000 qualified nurses in community settings in England alone (NHS Digital, 2020). Many of these nurses are likely to have had at least some training in leg ulcer management although this is not recorded beyond local training records. However, given the education available and the use of competence assessments for over 20 years in the UK (Anderson, 2003) there has not been a measurable increase in ulcer healing rates outside of very specialist settings and there is compelling evidence that patients are not receiving adequate clinical assessment, diagnosis or treatment for lower limb problems (Guest et al, 2015, 2017). A logical assumption could be made that if practitioners are competent in leg ulcer management, then outcomes for patients should be expected to improve but this is not the case (Guest et al., 2015, 2017) and therefore there appears to be a problem with leg ulcer management. One of the aims of this study is to determine if there is indeed a problem in leg ulcer management and if so, what the nature of the problem may be. Knowledge and skills are taught in a variety of ways as mentioned earlier and assessment of competence in leg ulcer management is the most common means of determining if a practitioner is able to manage patients experiencing leg ulceration (and its related conditions). Therefore the first part of understanding the problem is to review relevant literature about competence; what it is and how it is measured, and how it relates to leg ulcer management. Most leg ulcer services require that practitioners are “competent” before carrying out leg ulcer management but this is very challenging if it is not clear what this competence is nor how it can be recognised and measured. Section 2 is a literature review of the concept of competence.

Section 2

Literature Review Introduction

The aim of this literature review is to examine the concept of competence and its use in leg ulcer management education. The definition of the term will be examined and then considered in different nurse education contexts before focusing on leg ulcer management. The literature review will then lead to the rationale for the study and the subsequent research questions.

1.2.1 Literature Search

As the focus of this dissertation is leg ulcer management it was logical to begin the search for literature in the health databases including Medline (health and biosciences) and CINAHL Plus (nursing and allied health). Education databases were then searched, focusing on ERIC (educational resources information center). Other sources searched for information were related to professional body websites including the Nursing and Midwifery Council and organisations such as the National Institute for Health and Care Excellence (NICE), Scottish Intercollegiate Guideline Network (SIGN) and the NHS England site. Books were identified mainly through the university's online library. Reference lists of resources were examined for further resources in a snowballing technique.

Date limits were not set initially as sources already known to me originated from at least the 1980s (Benner, 1984 for instance). However, the first literature search and early literature review was completed in 2012 and was then updated in 2017, so for a revision in 2021 I set a limit of five years (2016-2021) to capture any potentially relevant new resources. I set a filter of publications in English.

Key words were used in combination using Boolean terms and truncation as well as MeSH (medical term subject headings) where appropriate. Key words were used in relation to leg ulcers (including leg ulcer, venous, arterial, mixed, compression, bandage, Doppler, ABPI, assessment) and in separate searches in relation to competence (including competence, knowledge, education, skill), and also with both sets of key words and MeSH terms in combination.

Retrieved papers were filtered for relevance through an initial review of titles then abstracts. Included papers with duplicates removed were then sorted into topics, type of publication (research, systematic review, literature review, opinion/editorial, and guideline/framework) and relevance to the literature review. The retrieved papers enabled exploration of the topics and the review of the issues raised in the literature.

1.2.2 Brief Competence Overview

Competence is not clearly defined. Publications on competence almost invariably review a range of reviews and studies where definitions of competence are given but then conclude that more work is needed to understand and define the term and the concept (for example Scott Tilley, 2008; Church, 2016; Fukada, 2018). In addition, where competency frameworks are available the method of their development is either not stated or lacks detail and/or rigour (O’Connell & Gardner, 2012; Halcomb et al., 2016).

1.2.3 Working Definition Of Competence In My Leg Ulcer Course

In 2003 I developed a competence framework to try and standardise assessment of students (Registered Nurses) studying my leg ulcer course (this is discussed more fully in 1.2.12). This was not a concept that I had previously paid much attention to and the literature indicated that it was a problematic and much debated concept. At that time, I settled on “achievement of safe and effective practice” and found the domains of affective, cognitive and psychomotor skills (Giroto, 1993) helpful to my understanding as they helped me to reflect on the aspects of practice that fitted in each category. “Achievement of safe an effective practice” remained my conceptual understanding until I had the opportunity to engage with it in much more depth in my current study.

1.2.4 Eraut And Competence

A key source on competence in the professions is Eraut in his seminal 1994 text *Developing Professional Knowledge and Competence*. Eraut’s discussion of competence is in relation to the vocational emphasis on “actions” and the way this impacts on assessment of that competence. This helps explain the emphasis in leg ulcer management on “actions” such as the psychomotor elements of Doppler assessment and compression bandaging. A binary measurement of competent/not competent, in Eraut’s view may lead to people collecting competencies rather than seeking to improve those which they have. This may be an increasing risk in contemporary health services where “gateways” are required through the Knowledge and Skills Framework for career progression in the NHS (and therefore the emphasis may be on accumulating competencies rather than consolidating and further developing key skills).

Eraut discusses competence in the professions where the competence defines the profession (as in the unqualified person is not competent to practice) but warns of the dangers of generic statements of competence in professions where there are “inherent specialist areas of practice” (pg. 165); a person may be competent in some aspects of the profession but needs a different label to show expertise in other aspects. He discusses the layperson’s view of the term competence applied to a professional person and what connotations there might be between competence and expertise, and the associated likely costs-“competence might be preferred to excellence if it resulted in quicker and cheaper service” (pg. 166). An example of this given by Eraut is of an architect who may be deemed competent but who would not be given a high profile building to design. Their “competence” would be to carry out lower cost tasks that are cheaper and quicker for the client but not “competence” in relation to high profile tasks. Eraut suggests this is presenting competence as adequacy rather than competence as a level of expertise. Eraut uses the term excellence and expertise interchangeably in explaining his views and suggests that in some cases the term competence used in relation to a professional may be “damning with faint praise” (pg. 166) and whether competence is “binary” (is or is not competent) or graduated (on a continuum to expertise). Eraut’s consideration of competence in the professions encapsulates the problem of a lack of a clear definition and lack of a universal understanding of competence in practice.

1.2.5 Context Of Competence

Other authors have attempted to define competence and this section sets out a range of views that illustrates the complexity of finding consensus. Valloze (2009) discusses competence in diverse settings tracing the word through the arts, psychology, life sciences, law, and business. The term is used variously to mean a stream’s ability to facilitate a flow of sediment, cell differentiation (as in the medical term immunocompetence), a legally defined ability to make a decision and as a more dated term for having sufficient funds to live comfortably within one’s means.

The only consensus in the literature is that there is no consensus on a definition. Competence is variously presented as including qualities of a person, performance or task, and at levels deemed basic, threshold or gold standard; or competence is presented as a composite of knowledge, attitudes and skills (Benner, 1984; Eraut, 1994; Bradshaw, 1998; Watson et al., 2002;). Watson et al (2002) describe competence in the context of manual jobs in North America as a means of testing for skills rather than intellectual ability, linking this to the City and Guilds and NVQ/SVQ

structure in the UK. Eraut (1994) discusses definitions in American literature of competence as a holistic concept and then competency as “specific capabilities” (pg. 179) although complicates this by describing its application variously to a specific workplace skill and then to any piece of relevant knowledge or skill which seems concurrently specific and nebulous.

Competence is commonly presented within domains and the literature contains examples of how these are understood. Girot (1993) set competence within the educational domains of psychomotor (skills), cognitive (knowledge) and affective (attitude). Of these three the psychomotor is the most straightforward to measure in a leg ulcer management context. On the face of it the application of a bandage or placing a Doppler probe on a limb can be overtly observed. The cognitive domain could be tested through question and answers and is often perceived as objective testing but, especially in relation to real life clinical situations and scenarios, may not be. However, the psychomotor and cognitive domains could arguably become superficial in the sense that a “performance moment” is observed/tested and not the adaptation and application of knowledge and skills in changing circumstances, and over time. Both domains are most commonly used to measure outcomes of training or education (Krathwohl, 2002).

The affective domain is even more challenging to define and measure (Krathwohl, Bloom & Masia, 1973) as it includes feelings, attitudes and motivation which are more subjective to measure. Huitt (2011) defines affective behaviour as an emotion or feeling distinguishable from cognition and actions while Krathwohl et al., (1956) had it encompassing a more layered entity in their attempt to form a taxonomy of this domain. Krathwohl (2002) illustrated affective behaviour in this way: receiving something (as in a lecture), responding (as in exhibiting new behaviour), valuing (showing commitment), organisation (integrating new values) and characterisation of the value (acting consistently with a new action). Krathwohl’s headings were presented as a hierarchy over time. The challenge therefore is in the practicality and inherent subjectivity of measuring such changes in a learning context especially in the timeframe of a module or time limited assessment in a clinical setting. Savic and Kashef (2013) focus on motivation, both intrinsic and extrinsic, which they see as leading to “performance” although they do not go on to consider how that would be measured (in their architectural students), only asserting that the affective domain enhances the cognitive one. Bloom’s taxonomy of learning (Bloom et al, 1956) originally focused on the cognitive domain with the affective domain being added

later (Krathwohl, Bloom and Masia, 1964) and the psychomotor taxonomy added later still (Simpson (1966) and Harrow (1972) (all cited in Krathwohl, 2002).

1.2.6 Context Of Competence In Nursing

The term competence is widely used in nursing and is debated in relation to its definition and means of identifying it. Valloze (2009) describes a competent nurse as one able to advance and influence the profession, keep up to date and apply evidence based practice. This aligns more closely with Benner's (1984) principles of proficient or expert practice in her novice to expert continuum, rather than a view of competence as a "threshold" or minimum standard (Boyatz,1982). Benner (1984) suggests that a "threshold competence" can be applied to measurement of a skill but measurement of "performance competence" becomes more complex. Valloze does not accept the threshold concept and presents competence as a "gold standard for nursing excellence" (pp 117) which appears optimistic and perhaps more reflective of Benner's expert nurse. A nursing student (or any other novice in a profession), or a registered professional studying new knowledge and skills will not be excellent, or at a gold standard although aspiring to this should be encouraged. Bradshaw (1997) discusses a broad understanding of competence as "multidimensional" defined as being "open, learning and flexible" as opposed to "skills-based competence" (pp 351). Southgate (1994) defines competence as encompassing: ability, will, consistence, relevance, efficiency, effectiveness, economic and human dimensions. This variation in presenting the term competence and what it means can be seen in the approach of the NMC over time which is explored in the next section.

1.2.7 Competence And The NMC

The NMC is the regulatory body for nursing and midwifery in the UK and in 1999 it defined competence as "... the skills and ability to practise safely and effectively without the need for direct supervision ..." (NMC, 1999, pg. 11). The NMC issues standards for education in programmes that they regulate. In 1923 the regulatory body was the General Nursing Council, in 1983 it became the United Kingdom Central Council (UKCC) and then in 2002 it was renamed the Nursing and Midwifery Council. The largest programme they regulate is pre-registration nursing and the latest standards were issued in 2018 (NMC, 2018). The two previous standards documents were 2004 and 2010. In 2004 (NMC, 2004) the NMC repeated the 1999 definition but added that following consultation the term competence had been changed to proficiency. The consultation and the reason for change was not articulated.

In 2010 the standards document (NMC, 2010, pg. 6) then stated that competencies were to replace proficiencies and that competencies were required to show the student was “competent to practice as a nurse”. The definition above did not change. However, the document went on to refer to legislation requiring that “standards of proficiency” were required and that this was informed by a European project which stated the definition of a nurse is “a professional person achieving a competent standard”. In the latest standards (NMC, 2018) the NMC reverted to the term proficiency and did not change the 2004 definition. In the whole document there are 16 references to competence and 29 to proficiency, mainly in reference to the title of the document.

In light of the ambiguity of the NMC language I will continue to use the term competence for clarity in this section. Competence is important as it is the term used by the professional body to assess a nursing students’ fitness to practice as the pre-registration student prepares for qualification as a Registered Nurse. In post-registration nursing the responsibility for competent practice rests with the qualified nurse whose code of practice requires them to “work within the limits of their competence” (Code, 2018). However, when the definition of competence is unclear, measuring it in a meaningful way becomes problematic. Laudable though the professional onus for responsibility is, people “don’t know what they don’t know” (Bradshaw, 1998, pg. 105) and “don’t know what they know” (Eraut, 1994, pg. 15).

The NMC is heavily criticised by Bradshaw (1997, 1998) and later Merriman and Bradshaw (2008) for its non-prescriptive approach to competence, but this could be perceived as liberating; allowing for innovation and creative approaches in education and evidencing competence. Bradshaw (1998) discusses a concept of “romantic curriculum” (pg. 104) which arises from a post 1960s emphasis on discovery, creativity, and freedom and distinct from the “classical” curriculum premised on instruction, obedience, conformity, and a didactic approach. This would possibly influence and explain the approach by the NMC to give universities more latitude in how they deliver the curriculum but the professional body has not presented any such rationale.

1.2.8 Nurse Education, Vocational Education And Competence

Authors have considered models of nurse education and the challenges in considering competence in a wider context than just discrete vocation related actions. Woolley and Jarvis (2007; pg. 75) discussed “cognitive apprenticeship” in

nurse education as an instructional model based on a traditional master apprentice model, albeit modernised to encompass the “thinking” needing to be as visible as the “doing”. Woolley and Jarvis (2007) also refer to independent competence where the learner gains more independence in their practice following a period of tuition and supervision. This is an interesting view as it resonates with the NMC’s requirement that a Registered Nurse is personally accountable for her or his actions (Code, 2018). This does, however, not sit comfortably with the earlier statement that people “don’t know what they don’t know” (Eraut, 1994; Bradshaw, 1998).

Lum (2003) expresses concern that vocational education in the UK has become “objectivist” (pg. 1), concerned only with specifying and measuring a skill with no account of anything outside a tight specification. He attributes this situation to UK investment in the “NVQ industry” (pg. 2) and looks to philosophers of education to protect education from this in higher education (protection from “vocationalisation”). His view is that the essence of competence is being able to see things in the context of the world we inhabit (e.g. work) and he terms this “vocationally capable” (pg.11). Eraut discusses “capability” (1994: pg.200) derived from attributes and different from performance, and he takes a more positive stance than Lum on the ability to assess it. Lum, however takes the view that focusing on capabilities is at the expense of in-depth learning with the educator “marginalised” to a facilitation role of individual skills or standards. Lum raises some thought-provoking challenges in his strongly held views and acknowledges that his stance is open to criticism as being “anti-pragmatic”. He also runs the risk of a perception of elitism in education and succumbing to the dismissal of competence despite it being a strong feature of the professions (Eraut, 1994). In 2004 Lum considered competence as being “statement based” forming much of educational policy and practice in Australia and the UK. He argued that breaking down components of statements in order to measure them is possible but renders them as “objects” and we are no closer to the qualities, thoughts and decision-making capability of the person.

The issue of measuring discrete actions or tasks has been debated much more recently in an international study by Lahn and Nore (2019). Their study considered the measurement of competence in relation to apprentices in Norway, South Africa, China and Germany. This was not in relation to nursing but included health care workers (unspecified), electricians and mechanics. The researchers found that inter-country understandings and measures of competence differed and that measurement was reductive, focusing on tasks rather than a holistic overview.

1.2.9 Nurse Education And Competence: CPD

The NHS is constantly changing. For example the past 20 years have seen the NHS Plan (2000), The NHS Improvement Plan (2004), NHS High Quality Care For All (2008), NHS Healthy Lives, Healthy People (2010), NHS Liberating the NHS (2020), Health and Social Care Act (2012), NHS Five Year Forward View (2014), NHS Long Term Plan (2019) and more specifically in relation to staff development the NHS People Plan (2020). Despite ambitions for the education of staff, healthcare settings can have an uncertain relationship with educational development of staff especially in relation to CPD which impacts on the development of competencies. Budget cuts and constraints have resulted in a cut in training budgets and unrealistic levels of funding for the development that many nurses need to advance the profession by leading services and being retained in the profession (Foster, 2020).

Lee (2011) explored clinical line managers' experiences with continuing professional development (CPD) among staff and concluded that they (the staff undergoing CPD) did not contribute to change as much as desired or expected following the CPD. Managers saw the application of knowledge in practice as the responsibility of the nurse undergoing the education experience. This was presumed to be either due to volume of work in the manager's role precluding facilitating application of new knowledge by the staff bringing it back from the event, or a lack of engagement with CPD activity. This may well have a significant impact on staff motivation and perceptions of the influence they could ultimately have on practice. Gould et al.'s (2007, pg. 606) small scale study of nurses' access to CPD found a perception among some that managers used access to education as a means of maintaining control over staff and in a "few instances" there was a view that managers would feel threatened by staff having "superior knowledge". Cooley (2008) relates the experience of experienced nurses who are encouraged not to discuss their courses at work in order to maintain good relationships with colleagues which can add to stress and a lack of confidence in the learning experience. The Council of Deans of Health expressed concern at the reduction in CPD funding across the health sector (Greatbatch, 2016). There is a dichotomy therefore between the expectations put upon staff undergoing CPD and a lack of support from managers and colleagues to implement new knowledge in practice settings. McArthur-Rouse (2008) explores this phenomenon in relation to new academic staff in a university nursing department and strongly recommends a robust system of support in a positive "learning culture" which may not be the case in a busy clinical area when a nurse takes part in a CPD

course. Jackson and Manley (2021) assert in their evidence review that a supportive environment is fundamental to successful CPD experiences and retention of the workforce.

1.2.10 Nurse Education And Competence: Simulation

Simulation based education plays an increasing role in nurse education (Cant et al, 2020). The NMC allowed 150 hours of simulation across the pre-registration nursing programme prior to the pandemic and this has since developed to 300 hours as the pandemic continued and clinical placements became harder to source. There is now a maximum of 600 hours of simulation allowed across the programme if the higher education institution can demonstrate the capacity to do so (NMC, 2021) with no sign of this being reduced as the global situation improves. In CPD there is not yet high quality evidence that such CPD improves practice and the recommendation is that such evidence is necessary and should be researched over a long term for sustained effects (Davies et al., 2020). In pre-registration nursing there is good evidence of immediate effects, and well planned initiatives are well reviewed but there is a lack of evidence that competencies are sustained beyond the initial event (Davies et al., 2020). Borneuf and Haigh (2010) cautioned that a drive to laboratory and simulated practice learning in competency-based education may lead to a dissociation between manual dexterity skills and critical thinking skills and that universities must endeavour to keep each inherent in the other. Murray et al., (2008), in a systematic review of simulation in student nurse education, identified there is limited empirical evidence to demonstrate enhancement of practice but concede it is an approach to promoting safe practice. They caution that there is still the challenge of transferring techniques learned as simulation to real practice settings. Watson and Thompson (2009) in a rather provocative editorial raised concern that even with sophisticated and interactive manikins in simulation laboratories student nurses are not learning to “gel” with patients and in their view, students may prefer a simulation environment (to a real clinical setting). There is no evidence presented to support their view but it may be due to confidence levels or a problem with the alignment of theory and practice and risks of disassociation as above. In a more up to date literature review as part of a study into simulation learning for Registered Nurses Bliss and Aitken, (2018) acknowledged positive effects for knowledge and competence, primarily in pre-registration students but that there was little empirical evidence of its benefit in post-qualified courses. They also suggested that there was little empirical evidence of sustained improvement in patient outcomes in the published literature. Intuitively

improvement would seem likely, but it is not confirmed even almost 15 years after the Murray et al study (2008). Despite a focus on different models of education, such as simulation, and the development of competencies, the sustainability of competencies over time are under-explored. Developing competencies, especially in a CPD context is challenging. As mentioned earlier (see section 1.2.9) the experience of a nurse undertaking education and applying competences may not be a positive experience for them. The increasing use of simulation based education could potentially increase anxiety about status when knowledge and skills are overtly demonstrated in front of others.

1.2.11 Novice to Expert

Nurses' views of their professional identity, particularly a positive self-image, is crucial to good practice and Ohlen and Segesten (1998) identify career progression and advanced education as critical factors in this development. However, what does not feature in the literature is the effect on self-image when the experienced nurse becomes a "learner" again as they learn a new skill that may be assessed by peers and possibly in full view of junior colleagues; the expert as novice in a reverse of Benner's (1984) continuum. Benner's presentation of the transition from novice to expert as a continuum suggests it is a linear process. However, a nurse could be at varied and multiple points simultaneously as they gain new skills and knowledge, especially skills such as Doppler assessment and bandaging which takes practise and knowledge in order to meet the needs of the patients (Lindholm & Searle, 2016). In this context the progression from novice to expert is context dependent and often shifts forward and back as new skills are assimilated into practice.

One challenge in post qualifying nurse education (which is often still undergraduate education as a requirement for degree only entry to pre-registration nursing came in to force from 2013) is that seniority and expertise are often viewed synonymously (Eraut, 1998). This can lead to the very people responsible for directing patient care, especially in a leg ulcer management context which is primarily community nurse led, not accessing specific education in this field. This can lead to poor practice standards and risk- taking in the delegation of tasks due to inadequate and unknowledgeable supervision. A lack of willingness to engage with education could be a due to a lack of interest in the subject (van Hecke et al., 2011) or a fear of losing status in some way by becoming a learner and having one's practice observed and assessed by peers, especially when the peer with a leg ulcer management qualification happens to be a more junior person.

Nursing is a wide-ranging profession which is central to most aspects of patient care. Experts in the profession are generally deemed as specialists in specific settings/specialisms. This means they can be both novice and expert and all points between depending on the practice area when aligned with the Dreyfus and Dreyfus (1980) model of novice to expert which was contextualised to nursing by Benner (1984). For instance, during the Covid 19 pandemic specialist nurses in hospital clinical areas such as dermatology, burns and minor injuries may have been redeployed in more general wards where they might never have worked. Additionally, nurses very experienced in operating theatres were redeployed into intensive care units and required close supervision in this unfamiliar setting. As the boundaries of health and technological developments are stretching and patients become older and/or more complex due to such developments it becomes increasingly challenging to be equally competent in every setting. Competence, therefore, could be seen as a fluid entity that is contextualised to the setting and clinical activity required. No healthcare professional, regardless of length of experience and seniority could be competent in all areas of practice. Dreyfus and Dreyfus's (1980) stages of skills acquisition are a continuum and their rate of achievement is individually contextualised with a risk that discrete competences narrow assessment so much that the task and not the stage of acquisition is visible (Carraacio et al., 2008).

Not every nurse is expected to reach an "expert" level of practice and the term expert is also poorly defined in nursing. This raises problems as the desired level of practice is not defined beyond competent but the expectations of the levels of care required are high and many would argue this is rightly so. Practice is trying to reach a target that is nebulous in many ways. In some aspects of health care there are clear targets such as reductions in smoking, teenage pregnancy, heart disease, amputations related to diabetes, infection rates and pressure ulcer prevention which drive practice and investment. However leg ulcer management has not been included in such national drivers and depends on initiatives localised in individual health settings. This means that investment in skills and knowledge development and recognition of expert practice in this area of practice, are lacking.

Benner (1984) used Dreyfus and Dreyfus's model of skill acquisition (1980) to articulate the novice to expert nurse theory. Benner's operational definition of skill relates to clinical judgement and nursing intervention rather than psychomotor skills devoid of a real practice environment. Benner (1984) gives examples of a nurse's

actions as they move from novice, advanced beginner, competent, proficient to expert. The stages are underpinned by examples of practice actions but are not inherently measurable. Johnson (2008) expresses reservations about being able to grade levels of competence as it adds a layer of complexity to establishing the competent practitioner in a multidimensional way rather than through demonstration of a skill – measuring “component sub-tasks”. Such discussion of grading resonates with Dreyfus and Dreyfus’s (1980) skills acquisition and Benner’s (1984) continuum from novice to expert; development in practice is desirable but is very difficult to measure.

1.2.12 Developing A Framework To Measure Competence

Two key factors arise in competence assessment – defining the concept of competence and measuring or assessing competence, especially when there is not a clear or consistent definition of competence. The literature suggests that the validity of competence measurement is fundamentally flawed as the assessment cannot “measure what it is supposed to measure” (LoBiondo-Wood and Haber, 1998 pg. 331) especially if we are not sure what we are measuring. The risk is that measurement becomes an observation of a skill, entirely focused on the psychomotor domain. Focusing on the psychomotor domain is attractive as it simplifies measurement but excludes the cognitive and affective domains, missing the “wholeness” of the practice being assessed.

There is only one published example of a leg ulcer management competency framework (Anderson, 2003). I developed this in 2001 after leading the leg ulcer management module in this university for an academic year and observing inconsistency. Students (qualified nurses) were attempting to gain skills that were signed off by a more experienced nurse in their practice setting. It was clear that there was a variety of practices deemed acceptable and a range of levels of conscientiousness applied to the assessment by the person signing off the skills. For this reason, I aimed to develop a standardised assessment that set out each aspect of knowledge and skills that was to be included in the assessment and required each section to be signed by the assessor. This resulted in the cohort of students having a more consistent experience. The framework ensured that each student and assessor focused on the same areas. Feedback from the students was that they felt supported by having structure and clarity in what was being assessed. The practice assessors evaluated the new document as helpful in its structure and guidance. I was able to

build a database of practice assessors and go through the framework with them annually.

At that time there were some frameworks available that assessed competence in fields such as intensive care and stoma care. Reading these frameworks and reviewing literature led me to the work of Dreyfus and Dreyfus (1980) and Eraut (1994), and to Girot (1993) focusing on the 3 domains (affective, cognitive and psychomotor). In the absence of a clear definition of competence I settled on the “achievement of safe and effective practice” (Anderson, 2003) and saw it very much as a journey towards expertise in leg ulcer management for my students. In the development of the competence framework, I wrote down all the aspects of the procedures in the use of the hand-held Doppler and the application of compression therapy. I then assigned these discrete entities a heading of affective, cognitive and psychomotor. Based on the lack of definition of competence I decided on a pass/fail outcome for each element of the framework rather than making any attempt to grade this practice numerically. Over the following year I then refined the framework by sending it to many practitioners involved in leg ulcer management and teaching. I used it in my course and sought feedback from the assessors in practice who were using it to assess, as well as the students being measured against it. Only minor adjustments were suggested by assessors and students and I took this as a crude validation of the framework but the lack of a clear definition of competence remained a problem in my view.

Once the article that detailed the framework was published in 2003, I received many requests for this to be adopted in many other settings. In 2017 I worked with a nurse specialist in an NHS setting to adapt the framework for use with a range of staff and in 2018 a medical device company adapted it with my collaboration for use across their clinical skills training. In 2014 during an education scholarship tour of New Zealand I found a version of the framework in use in their community services. However, despite the competency framework (and localised variations of it) being widely used the problems in leg ulcer management remain, suggesting the problems are much wider than just the ability to assess practice.

There is a significant body of evidence suggesting that nurses who have received some form of education and have been assessed as competent are not applying bandages with sufficient levels of compression to counteract the effects of venous disease. This is evidenced by publications focused on the need to address nurses’

skills and knowledge of compression therapy (Moffatt, 2008; Heyer, Protz & Augustin, 2017, Guest et al, 2017) and anecdotally via many discussions at tissue viability and leg ulcer management conferences and organisations as well as conversations with qualified nurses on leg ulcer management courses.

1.2.13 Using A Framework To Assess Competence

Dolan (2003) highlights the considerable difficulties in assessing competence effectively because of the lack of consensus on a definition. Dolan conducted focus groups to explore the concept of becoming competent in nursing and the use of a competency tool to assess this in student nurses. Her institution had revised their competency tool in the light of changed professional body requirements. Students in the focus groups expressed concern that they were focusing on discrete tasks rather than clinical practice as a whole. Dolan found that the new tool, although an improvement on a previous “tick box” approach still did not encompass all the attributes of clinical competency that was consistently used. The main debate among tutors and mentors centred on a lack of time in the clinical setting and uncertainty about the type and volume of evidence of competence required in order to be passed as competent. Feedback from student nurses in her study expressed concern at the lack of opportunity to develop in a holistic way because they were constantly striving to get competences “signed off”. The students also highlighted significant variability between their assessors, not least due to different interpretation of what constitutes competence. Dolan’s study therefore may suggest that the tool itself is not the issue but the lack of clarity on what constitutes competence and how it is measured.

In a study on the impact of documentation on assessment of competence, researchers analysed 330 assessments and interviewed 17 assessors (Burden, Topping & O’Halloran, 2018). They established that documentation had little influence on decisions but rather assessments were formed from personal expectations of the ideal, tempered by the stage in training the student was at and the setting in which they were being assessed at that time. For instance, a student in an intensive care setting would be judged less strictly than a student in a less clinically acute area. First impressions formed of the student also influenced decisions. One of the main recommendations to emerge from the study was for an increase in written feedback which would help to highlight rationale and consistency in decisions made. The risk, according to the researchers, is that students who pass on a low match to criteria at an early stage then become more difficult to fail at a

later stage if they fail to progress because the original low match was accepted. Failing to fail is an internationally recognised phenomenon in pre-registration nurse education for a variety of reasons including time, confidence and concern about the consequences for the student (Bachmann et al., 2019). In the case of leg ulcer management competency assessments are made in a short timeframe and assessors may feel pressure to pass a student, or, based on Burden et al.,'s (2018) study, may make a subjective assessment based on first impressions and/or on relationship with the qualified nurse being assessed. Burden et al. concluded a tool or framework can be helpful but does not add objectivity, and that first impressions formed by the assessor are a major element in the assessment outcome (Burden et al., 2018).

The 2 studies cited above (Dolan, 2003 and Burden et al., 2018) are competencies in relation to an overarching view of a whole programme, with "sign off" of discrete elements within the overall programme, and are focused on pre-registration students. There are some examples of competency documents for qualified nurses working in specific settings such as critical care (Critical Care Networks, n.d.) where the discrete elements are assessed within a specific context, and for qualified nurses. Rethans et al. (1993) state that as competence comprises knowledge, skills and attitude (psychomotor, cognitive and affective domains) there needs to be several different measurements taken. Hodges (2006) cautions that testing "pure" knowledge and skills is undesirable as divorcing them from a practice context and from each other can be counter-productive to developing expert holistic skills.

Johnson (2008) raises the issue of consistency in assessment of competence as it may differ due to the context and experience of the assessors. To improve consistency the assessment criteria may have to be spelled out to an 'nth' degree and Johnson is concerned this makes the assessment meaningless as the result is too many fragmented pieces that loses the holistic view of overall competence. Epstein and Hundert (2010) share this concern and quote Polanyi's 1969 (pg. 140) assertion that "when we see the whole, we see its parts differently than when we see them in isolation"; we risk losing the integration of knowledge and practice.

Watson et al (2002, pg. 421) carried out a systematic review of the literature from 1980-2000 to investigate "research evidence for the use of clinical competence assessment in nursing". The researchers identified 107 papers initially and 61 papers when medicine, non-nursing, opinion and editorial papers were excluded.

Literature reviews were included (17 papers). Results indicated that the concept of competence is poorly defined, difficult to measure and measurement tools have not been tested for reliability and validity.

Caruso et al. (2016) reviewed papers published in English between 2005 and 2014 to try and establish a definition of competence in nursing and identify common elements across definitions in nurse education and clinical nursing publications. In 14 papers filtered from over 16,000 publications the most common factor identified in a thematic analysis of determinants of competence was “skill” (in 8 of the 14 papers), albeit this was undefined. The conclusion across the papers reviewed by Caruso et al was that competence was undefined and lacking consensus beyond it being about “ability, skills or knowledge” (pg. 41). Their two main findings across the 14 papers were that tools in use had no criterion validity established and that there was a lack of agreement about what competence is. The authors cautioned that focusing on ability, skills and knowledge is not wholly satisfactory because the assessment can become the ability of a person to fit to the competence through a performance at that time and that even for someone with a high degree of competence (they do not define a grade beyond this) the “performance” may be hindered by the working environment which could “moderate” the performance. Applying this point of moderating performance to leg ulcer management is illustrated by the example of time constraints on giving the skin and wound care, compression therapy and psychological support patients need. The nurse may be able to understand the need and have the skills to carry it out but lack the time to do so. Caruso et al. (2016) concluded that if competence could be defined, the environment would always (and variously) moderate the performance. While (1994; pg. 527) sums up the situation: “*shortcomings at the point of identifying competences cannot be overcome by measurement techniques*”. Issues such as shortage of staff, time and other resource constraints raise challenges in giving effective, evidence based care but this does not mean that standards of care, and the expectation of competence and safe practice should be diluted in any way.

This section has considered literature in relation to using frameworks to measure competence and the aspects being considered across domains. Another term that is sometimes used when competence is being discussed, and is no less difficult to define, is capability.

1.2.14 Capability

Hase (2000) states that capability is where people have a degree of self-efficacy and can apply competencies in unfamiliar situations in a more holistic way than a discrete skill. Hase's paper is a short report on a grounded theory study carried out in Australia on the capability of organisations and he used data from 79 interviews across 10 organisations to identify criteria for such capability and then involved the organisations in ranking the criteria. None of the organisations were healthcare related. Hase then conceptualised capability as in the opening sentence in this section stating that such organisations and individuals had to be creative and work well with others asserting that capability is an "holistic attribute" that is not a feature of competence. This view contrasts with the view of Eraut (1994) in section 1.2.4 where he states competence is holistic. Eraut (1994) discusses definitions in American literature of competence as a holistic concept containing specific capabilities. However, there are some resonances between Hase and Eraut as the latter presents capability as an enhanced performance which reveals cognitive processes around the knowledge base of current principles and future development and an awareness of the profession and how it contributes to society (Eraut, 1994). He points out that capability is problematic to measure because it is necessarily inferred rather than lending itself to measurement of a performance.

One of the arguments put forward by some professional colleagues and/or managers in relation to many skills traditionally carried out by qualified nurses is that anyone can be taught to carry out a procedure (such as applying a compression bandage to a leg). Eraut discusses this in relation to "apprenticeship" in that this may result in a "competent performance" but there is not necessarily a foundation of knowledge and understanding, much less evidence of capability. Therefore, if the teacher/mentor is merely "showing" then there is no transfer of knowledge and in this context patients may be at risk.

Fraser and Greenhalgh (2001) agree that capability can demonstrate critical thinking and self-efficacy but claim that it raises a theory-practice gap when the treatment/intervention relies on a practical skill. Although knowledge, and experience, and intuition are inherent in that skill the efficacy and effectiveness of the intervention stands or falls on the physical "performance" which returns to the idea of measuring the skill as a discrete entity because it is readily visible although Hase would disagree that there is a gap due to his view that capability is all-encompassing. Eraut's rather ambiguous stance on the difference between

capability and competence and the parallel challenges of defining and measuring either concept leave the issue remaining as “if we cannot define it, how can we measure it”?

The use of the term capability by authors, including Hase (2000) does not change the focus of my study on competence and the aim of identifying the nature of the problem as both the concepts are poorly defined or differentiated from each other. The applied knowledge and skills, whether competence or capability in a holistic way needs to have a depth of knowledge that the individual is able to adapt to a constantly changing healthcare environment and the patient’s needs and priorities. For the reasons given here I am using the term competence rather than capability and my submission is building the case for a proposed definition which will be given in the final chapter. The literature generally agrees that although the concept of competence is difficult to define there is more to competence than the performance of a skill.

1.2.15 The Role Of Tacit Knowledge

Identifying the underpinning knowledge and decision making in demonstrating competence and assessing for competence can be extremely difficult and involves tacit knowledge. Michael Polanyi explains that “we know more than we can tell” (Polanyi, 1966 pg.4) because knowledge cannot easily be put into words. He interprets knowing as theory and practice – knowing what and knowing how, explaining that we can do things but cannot articulate what we know and how we came to know it. Berragan (1998) questions from where intuition in expert practice arises; how such a volume of knowledge embedded in the subconscious can be applied to any given situation. This is identified as “tacit knowledge” by Polanyi (1966).

Polanyi describes tacit knowledge as proximal and distal and asserts that we move from using the proximal knowledge (familiar things that are close to us) to make sense of the distal (things that are further away, or more unknown). This move from one to the other forms an “entity” (a from-to structure) and that it is not the individual components but the immersion in the comprehensiveness that gives meaning. He explains that breaking observations down to component parts, and a magnified concentration on these components actually destroys the meaning. Polanyi’s point is that focusing on elements of a skill then leads to a new conceptualisation and understanding of that skill. He likens this to a pianist focusing on their hand

movements leading to a self-consciousness and paralysis of the ability to play but that this state ultimately moves to deeper understanding and improvement in performance. This is just as in Schön's (1991) reflection "in" and "on" action and lends itself to healthcare practice in which reflection is a key component of clinical education and professional development. Reflection "in" action involves the use of tacit knowledge, for instance amending a compression technique, whereas reflection on action comes later where reflecting on the event afterwards enables more time and articulation of the rationale for actions taken (Schön, 1983). In turn this adaptation lends itself to becoming enhanced tacit knowledge that will inform future actions in response to patient need.

Tacit knowledge (Polanyi, 1966) and propositional knowledge, which Eraut (1994, pg. 129) describes as profession-specific knowledge which is made explicit or public, e.g. clinical knowledge, are relevant here for two reasons. One is in relation to teaching; the teacher uses their knowledge, experience, modelling and guidance to sources of text-book type knowledge (propositional knowledge). However, they also have knowledge from their experiences and integration of knowledge and practice that has been honed over time but are unable to fully articulate what this is and therefore by implication, impart explicitly to the student (tacit knowledge). The second reason is that as the learner develops their own experience and skill, they in turn are unable to fully articulate their decision making and theory/practice integration. This then makes them unable to fully articulate this knowledge to their learner and so it continues from each teacher to learner in turn. Propositional knowledge is therefore easier to articulate and pass on. However Girot (1993) points out the difficulties in measuring tacit knowledge and questions how measurement tools for competence can bring out and assess that knowledge too.

1.2.16 Conclusion

This review of key texts in relation to competence identified themes relating to difficulties in defining what is meant by competence, concerns about a continued emphasis on this form of educational strategy and assessment when there are difficulties in establishing validity and consistency in recognising and measuring competence.

Many professions, including nursing have embraced a competence-based education approach. Practice and those who design education, need to engage with it and try to ensure that there is clarity in what competence is and how it can be measured.

This is in order to make such assessment as robust, consistent, and overt as possible, and contextualised- in the case of my study, to leg ulcer management. The challenge of this is to define a concept of competence that can be measured in a meaningful way to ensure continuing development of safe and effective practice.

There is general agreement in the literature that conceptualisation and assessment of competence are difficult and although there is a view that competence could be a “threshold” it is clear that there are many dimensions to competence and it needs to encompass a holistic and adaptive approach to staff development. There appears little to be gained in just measuring discrete tasks but there is merit in a “vocational” approach (Lum, 2004) where an end goal is established (e.g., effective, and safe use of compression therapy) and the learning, teaching and assessment strategies to address the cognitive, affective and psychomotor domains required to achieve this goal. The literature suggests that the two main conceptualisations of competence are psychomotor, as in demonstrating a skill; and the application of knowledge. In relation to compression therapy the apparent emphasis on psychomotor skills warrants further exploration as it is evident that leg ulcer management is problematic and not meeting the needs of patients. This suggests that just being able to apply a bandage or take an ABPI reading is not sufficient to ensure good patient outcomes. There is a need to see competence as a holistic entity that encompasses much more than discrete psychomotor skills. Assessment strategies must endeavour to make explicit the tacit knowledge in the education, developing the learner in a way that moves them beyond a threshold of basic skills.

The literature on competence in nursing focuses primarily on the pre-registration student and there is a need to explore the concept of competence in relation to post qualifying courses and to understand the professional as a learner. There may be a double back loop effect in the experienced nurse (“expert”) becoming a learner (“novice”) but if there is a firm foundation of education with knowledge and mature clinical reasoning honed through experience and effective CPD then Benner’s (1984) trajectory becomes a shorter journey looping back from novice to expert. However, the role of motivation and practice support for CPD becomes important if new knowledge and skills are to be applied for the benefit of patients and ultimately for the overall organisation in terms of lower costs and increased patient satisfaction and outcome. In the context of this dissertation, if management of people with leg ulcers is to improve then staff responsible for their care must be capable of demonstrating effective skills and knowledge in a holistic approach to effective

treatment. In order for this to happen the educational strategy for achieving this needs to be cognisant of the definition of competence and the way in which competence can be taught, assessed, and nurtured/supported in order for it to be applied to practice. The quote: “*shortcomings at the point of identifying competences cannot be overcome by measurement techniques*” (While (1994; pg. 527) reflects the overall premise of my study which is-if we don't know what it is, how can we measure it?

Section 3 Research Aims

In leg ulcer management there are significant concerns about the care that people with leg ulcer and related conditions receive. Despite competence featuring in leg ulcer education for more than two decades there remains considerable deficits in care and it is not clear what the issues are. The literature review in this chapter demonstrates that competence is not clearly defined and is therefore difficult to measure. The reasons for the problems in practice are unclear, as is the role of competence assessment, therefore the key aims of this study are to:

1. Advance understanding of the nature of competent practice in the field of leg ulcer management education by investigating;
 - a. the extent to which there is a problem in leg ulcer care and the reasons for it
 - b. the perceptions of nurses engaged in teaching and assessing leg ulcer management in relation to the nature of competent practice and how it is taught and assessed
 - c. the perceptions and experiences of nurses undertaking leg ulcer management courses with regard to being a student and undergoing assessment of competence in leg ulcer management
 - d. assumptions underpinning current approaches to leg ulcer education
2. Develop an educational strategy and competence framework recommendations that support practitioners to be adequately prepared for the demands of leg ulcer management practice

In order to achieve these aims the specific research questions are:

1. What are the perceptions of competent practice and how it is assessed, from the perspective of senior specialist nurses/lecturers who engage in teaching and assessing competence in leg ulcer management courses?
2. What are the experiences of leg ulcer education, being a student and being assessed for competence, from the perspective of qualified nurses completing leg ulcer courses?
3. What policy/guidance and modes of assessment underpin leg ulcer education and assessment?
4. What factors affect leg ulcer management education from the perspective of learners and teachers/assessors?

Chapter 2 Methodology

2.1 Introduction

This chapter details the context and justification for the methodological design of the study. It then sets out the method of recruitment and data collection for each stage of the study in order to address the aims and research questions set out in Chapter 1,

Research Aims. My context as an educator and researcher is given along with the ethical considerations of the study. The conclusion of chapter 2 will then lead into chapter 3 where the method of data analysis will be detailed.

2.2 Context and Justification of the Methodological Design of the Study

2.2.1 Nursing Research

Eraut (1994) recounts an anecdote about research where the riposte to “if you can’t count it, it doesn’t count” was “if you can count it, it isn’t it”. The first phrase reflects a traditional medical emphasis on a positivist paradigm (Hopayian 2004). This stance is less entrenched in nursing where the limitations of the positivist paradigm meant understanding of the experience of being a patient or being a nurse (or any other professional discipline) became secondary to aspirations to establish certainty and objectivity (Burgess, Sieminski and Arthur, 2006). Even in traditionally positivist settings such as medicine there is more acceptance evident of a move to post-positivism, recognising the difficulties of objectivity when people are involved, and recognising the need for both qualitative and quantitative data (Burgess et al, 2006; Brown & Dueñas, 2020). Post –positivism includes subjectiveness in a more holistic approach to understanding phenomena (Guba and Lincoln, 2004) and less polarisation between positivists and constructivists (Hopayian, 2004; Holloway and Wheeler, 2002; Brown & Dueñas, 2020; Park, Konge & Artino, 2020). The shift towards interpretivism (Burgess et al., 2006) or a more naturalistic paradigm (Polit and Hungler, 2002) has led to greater understanding about patients’, carers’ and healthcare professionals’ perspectives and experiences.

Qualitative research focuses on the emic, insiders, point of view (Holloway and Wheeler, 2002); how people see themselves in the world. The purpose of qualitative research is to uncover and explore meaning in relation to phenomena. Holloway (2005, pg. 1) asserts that qualitative research is “person centred” where participants are considered in their entirety not just as a collection of discrete parts. She also states that people can be better understood if they are asked for reasons for the way they behave and feel and if those phenomena are understood as much as possible by those not experiencing the phenomenon. Quantitative research is deductive and concerned with structured measurement and statistical analysis (Polit and Hungler, 2002). It is sometimes stated that positivists are concerned with quantitative approaches and naturalists concerned with qualitative. However, in practice each can complement the other (Polit and Hungler, 2002; Park, Konge & Artino, 2021),

providing richness and a more complete picture of experiences, a more holistic approach to phenomena.

2.2.2 Constructivist Paradigm

2.2.3 Constructivism As Learning Theory

Constructivism is a learning theory (Pritchard, 2009), philosophy and research paradigm (Guba and Lincoln, 1998). As a learning theory it describes the construction of knowledge, active and collaborative participation of learners and multiple dimensions of reality, authenticity and reflection on prior experience (Pritchard, 2009). In constructivism as a learning theory, learning depends on the learner having to “do” something, an activity, to create learning (Biggs, 2003). The learner bases the construction of new knowledge on previous experience (Burgess, Sieminski and Arthur, 2006), and that knowledge will therefore be context dependent (Knowles et al, 2005). Key theorists include Piaget (1952), Vygotsky (1978), Bruner (2006) and von Glaserfeld (1984). In general, there are 3 main theories underpinning constructivism: cognitive (Piaget), social (Vygotsky) and radical (von Glaserfeld). In teaching I align mostly with social constructivism encouraging students to learn from experience and through reflection, with social interaction as a learning method and one in which the teacher is not necessarily the leader in the class which stems from the work of Vygotsky and Dewey (Dewey, 1910; Merriam, Caffarella & Baumgartner, 2012; Ardichvili, 2001). My students are experienced Registered Nurses who have a range of clinical experience in leg ulcer management ranging from a fairly newly qualified staff nurse to being a specialist nurse in this area of practice. This lends itself to a rich environment for exploration of problems and sharing solutions and understanding (Merriam, Caffarella, Baumgartner &, 2012). Problems are based around clinical scenarios, recognising clinical cues and making evidence-based decisions about treatment and expected outcomes. My role as educator is to ensure that research underpinning this knowledge construction is accessed, understood and applied to this decision-making.

2.2.4 Constructivism As Research Paradigm

In research a naturalistic or constructivist paradigm recognises the complexity and individual nature of reality and interpretation of that reality (Polit and Hungler, 2002). In this paradigm reality is context dependent and may be multiple in nature and there is minimal distance between the researcher and the participant. Findings are the product or construction of understanding (Polit and Beck, 2012). The constructivist paradigm is comfortable with subjectivity and may not be quantifiable in a numerical

sense. Analysis of data is concerned with in-depth understanding of a phenomenon. This understanding is context dependent and is not a fixed entity (Woods, 2012). It could also be quantifiable with the proviso that attitudes and knowledge develop and change in light of multiple evidence sources.

The constructivist paradigm stems from phenomenology and hermeneutics advocated by Husserl, Heidegger and others. The purpose of the constructivist approach is to understand lived or human experience as experienced by the individual sharing that experience; their own construction (Mackenzie and Knipe, 2006). The researcher needs to recognise each individual's construction and also how the impact of their own context and experience impacts on how they interpret and develop a "pattern of meanings" (Creswell, 2003). The constructivist researcher aims to inductively develop a theory or themes rather than begin with a theory as a postpositivist researcher would (Mackenzie and Knipe, 2006). Quantitative data may be used in a constructivist approach (Mackenzie and Knipe, 2006) and this is certainly the case in my own research where quantitative data is collected and used to shape the study and questions asked of participants.

In relation to research methodology, constructivism is the process of enquiry which aims to understand and reconstruct meanings (constructions) that participants hold while remaining open to new interpretations as understanding develops. According to Guba and Lincoln (1998) the researcher is cast in the role of "orchestrator or facilitator". The "voice" of the researcher is described as a "passionate participant" because their construction of the phenomenon is active in the enquiry. Schwandt (1998) views constructivism as a steer for "directions of enquiry" rather than a set of instructions. He believes that in order to construct an understanding one has to interpret it, and in order to do this the researcher has to take into account the "lived reality" of the participants. He sees constructivism as opposite to objective truth and empirical realism and that in fact even "objective knowledge and truth is a result of perspective" (pg. 236). He argues that we are all constructivists if we accept that the mind is involved in constructing knowledge; we do not 'discover' knowledge but construct it and alter and develop such constructions in the light of experience. On this basis Schwandt's assertion that constructivism is "opposite" to objective truth is questionable as empirical evidence and personal experiences change thinking and actions continually. In leg ulcer management there are empirical data that have indicated a stable truth such as the physiological effects of compression therapy and

less stable truths such as understanding of pain levels (widely underestimated; (Leren et al., 2020). On this premise some truths are more “true” than others.

The approach to my dissertation is social constructivism which focuses on interaction between people and is influenced by the relationships between people in the context of processes. This is influenced by communication and negotiation and an understanding that there is collective generation of meaning within social, cultural and language conventions (Gergen, 1985). In this context my data gathering and data analysis are constructs of lived reality and relationships. However, as Bridges (2019) states this is not at the expense of “rigour” or a systematic approach to constructing an evidence based understanding of clinical practice (a professional body requirement (NMC, 2018) for safe and effective practice), or a rigorous and systematic approach to research.

The challenge of competence in relation to leg ulcer care and the experience of nurses undertaking such courses and assessment are aligned more logically to the constructivist paradigm as it seeks to develop new understandings of what is like to be both a qualified nurse and a student learning new skills, with a focus on participants and the meaning they attach to their setting (Bowling, 2002).

2.2.5 Ontology And Epistemology

The ontological view of the naturalistic, constructivist paradigm is that reality is subjective and complex, and epistemologically that researcher and participant proximity and interaction are key to the creation of new understandings of individual reality (Polit and Hungler, 2002). The opposite could then be claimed for a positivist paradigm where reality exists, and validity of the findings are independent, and not influenced by the researcher (Polit and Hungler, 2002). The implication of this paradigm is that generating findings based on measurement independent of the researcher is the only way to produce knowledge (Rahi, 2017). However, Bridges’ (2019, pg. 499) stance is a much more nuanced position couched in more pragmatic philosophy and language, in which the aim of research is to produce “beliefs [findings] that are more deserving of belief and our confidence than others”. His concern is that the systematic approach to research is vital if results are to be predicated on a rigorous method, albeit one that may change, rather than an “arrogant confidence” (pg. 500).

I am philosophically drawn to a constructivist paradigm and believe a constructivist approach to the research questions in this study enables exploration of the

perspectives and experiences of the people involved in leg ulcer education as educators, assessors, and students. There are “truths” in the empirical evidence of physiological changes and therapeutic interventions for leg ulcer management but the understanding of the problems in leg ulcer management, and the reasons for the problems is a constructed reality that needs to be understood from the perspective of the practitioners involved.

It is clear that constructivism is both a learning theory and a philosophical stance that influences how the researcher views the notion of reality and is therefore an important concept in research where a constructivist paradigm enables the “voice” of the participant to present their view of reality as it is perceived and affects them within their own context. My submission aims to uncover this “voice” to better understand the nature of the problem.

2.2.6 Phenomenology

In order to better understand how to frame questions and develop understanding about “lived experience” I drew on phenomenology which is concerned with how people make sense of the world and how people act based on the meanings they take from this “being”. Bryman (2012, pg. 30) asserts that the researcher needs to access “people’s common sense thinking” and interpret their actions in the context of their perceptions. This aligns with my desire to understand how nurses see the world of leg ulcer management practice and education, and how they perceive the challenges these present. Understanding my own views of the challenges and how these may influence my interpretation are important considerations in phenomenology. The philosopher Husserl believed that suspension of judgement or shedding preconceptions through “bracketing” enables interpretation of a lived experience. Heidegger modified Husserl’s approach and focused more on description of phenomena believing that experience and values of the researcher are an integral part of the process (Walters, 1995, Holloway and Wheeler, 2002). The philosopher Gadamer was a student of Heidegger and believed that experience was not fixed but has changing perspectives because it is not possible to step outside of one’s own tradition. Gadamer states that in the science of hermeneutics, or interpretation, the interpreter has been overlooked or “neglected” to the detriment of understanding (Gadamer, 1976). Hermeneutics in its interpretative role seeks reconciliation of the “author” (the person having the experience) and the interpreter (the researcher) making a hermeneutic circle.

2.3 Reflexivity

Gadamer's (1976) key assertion is that the interpreter's being is inextricably bound in the process of understanding and is not a negative thing as perceived by Husserl. Therefore, my own reflexivity has to be considered too. I have been immersed in leg ulcer practice since 1992 as a practitioner (and student on a CPD course in leg ulcer management in 1999). This study is informed by my perspective as Principal Lecturer in Tissue Viability predominantly involved with the CPD of qualified nurses in the field of tissue viability. I am a Registered Nurse who has led a module in leg ulcer management since 2000. I hold a university accreditation in leg ulcer management as part of my first degree (BSc (Hons), Tissue Viability). These experiences have formed and shaped my ideas and opinions which I have shared through interactions with patients and practitioners in practice, education, conferences, publications, and professional networks. All of this activity has reinforced my view, backed by increasing evidence (Guest et al., 2015, 2017) that there is a problem in leg ulcer management. Recognising my perspective as an academic I was clear that I wanted to understand the problem from the perspective of clinicians in clinical practice. In order to test my suppositions about the nature of the problem I set out to establish if my views held validity and how the experiences and views of others could shape my approach to determine the nature of the problem. This fits with Gadamer's idea of a collective approach (hermeneutic circle) that has greater potential to speak to the clinical community if they could resonate with the research approach and findings because they felt part of it. I was clear that I wanted questions to arise from practice and practitioners, hence my decision to carry out an initial focus group as a precursor to my study.

2.4.1 Precursor to the Main Study

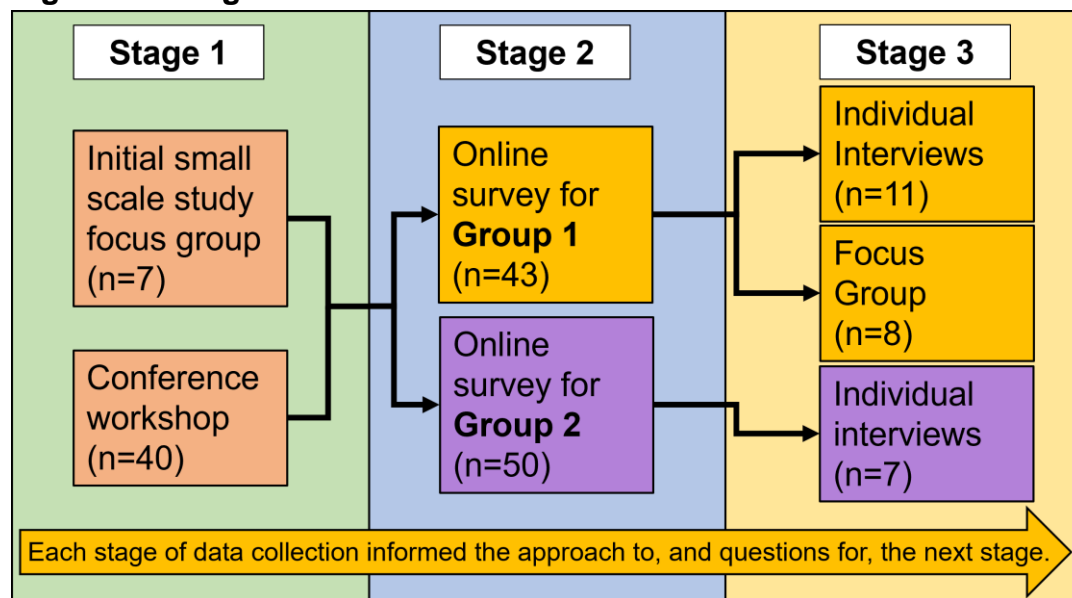
This section comprises three sub-sections. The first is a brief outline of the precursor to the main study, the second a report of the focus group and the third is a report of a conference workshop. Table 2.1 details the groups, stage of data collection (see also figure 2.1), number of participants, recruitment method and data collection method.

Table 2.1 Participants And Recruitment Method

Participant Group Data Collection Period	Participant Description	Number of Participants	Recruitment Method (Purposive Sampling)	Data Collection Method
Initial Focus Group 2011	Initial small scale study focus group of 7 specialist nurses	N=7	Invitation issued via the Chairs of 2 tissue viability nurse forums	Stage 1 Initial focus group using semi-structured questions
Conference workshop group 2012	Registered nurses attending a conference on lower limb management who attended a workshop to discuss competence in leg ulcer management.	N=40	Conference delegates signed up for a range of workshop breakout rooms	Stage 1 Groupwork discussion output
Group 1 Assessors Online Survey 2013 Interviews 2013-2014	Assessors: nurses who teach on leg ulcer courses and/or assess others as competent in leg ulcer management skills.	N=43 (survey) N=11 (interview)	Survey link issued via relevant professional forums and module leaders of university leg ulcer courses across the UK. Recipients were invited to volunteer directly to be interviewed or to volunteer via the survey questionnaire if they wished (this was optional).	Stage 2 Online survey questionnaire Stage 3 Individual interview using semi-structured questions
Focus Group 1 Assessors 2014	Group 1 participants (Assessors) who opted to be interviewed as a group rather than individually	N=8	Survey link issued via relevant professional forums and module leaders of university leg ulcer courses across the UK. Recipients were invited to volunteer directly to be interviewed or to volunteer via the survey questionnaire if they wished (this was optional). This group was attending a conference and requested to be interviewed together after the event ended.	Stage 3 Focus group using semi-structured questions

Group 2 Students Online Survey 2013 Interviews 2013-2014	Students: registered nurses who have completed a leg ulcer course in a university setting.	N=50 (survey) N=7 (interview)	Survey link issued via relevant professional forums and module leaders of university leg ulcer courses across the UK. Recipients were invited to volunteer directly to be interviewed or to volunteer via the survey questionnaire if they wished (this was optional).	Stage 2 Stage 3
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Figure 2.1 Stages Of Data Collection



Note: the initial small scale study focus group informed the questions asked in the survey and in turn the survey responses informed the questions for the interviews to enable deeper exploration of issues

2.4.1.1 Outline Of The Precursory Work

In order to test my own view that there is a problem in leg ulcer management I aimed to discuss my perceptions with nurses experienced in leg ulcer management. I planned to do this through a focus group comprising specialist nurses. I then had the opportunity to discuss the focus group findings at a conference workshop. The conference was specifically focused on leg ulcer management and delegates were from a range of clinical settings from across the United Kingdom.

2.4.1.2 Report Of The Focus Group

The precursor to the main study was a focus group held in 2011 with the aim of establishing if my view that there is a problem in leg ulcer management and how the concept of competence is recognised, was shared by senior practitioners. This was followed by a conference workshop to discuss the focus group findings.

Focus groups are a technique premised on the view that interaction contributes to perspectives and attitudes (Morse and Field, 1996). Focus groups typically comprise small groups of people with characteristics in common (Holloway and Wheeler, 2002; Polit & Beck, 2017). Holloway and Wheeler (2002) assert that the purpose of a focus group is to understand reality from the participants' perspective but could also be useful in developing ideas about problems.

Participants' views could have been collected via a questionnaire or individual interview but Kitzinger (2000) highlights the opportunity for richness of data and for participants to become part of the "research development" as they interact and share ideas and experience; in this case helping to clarify the problem to inform the future direction of the research. Kitzinger also points out that focus groups can give insight into culture and this can lead to service improvements, which made it an appealing approach to explore and understand the nature and problem of competence assessment in leg ulcer practice. Bradbury-Jones, Sambrook and Irvine (2009) highlight the value of focus groups to guide a study which is a key aim in this competence study.

The research questions for the focus group were:

What do specialist nurses and (clinical) managers understand by competence?

Do they perceive a gap/problem in assessment of competence from their perspective as commissioners of leg ulcer courses?

The focus group comprised seven specialist nurses in tissue viability. Six were community based and one was from a hospital setting. A group of seven is within the recommended focus group size of 6-12 participants (Polit & Beck, 2017). Twelve specific invitations were issued as a convenience sample, taking a pragmatic view on distance to travel to the university. The aim was to discuss the questions for a reality check for my proposed study rather than a representative sample. One participant heard about my work through word of mouth and travelled a considerable distance to attend.

The questions put to the focus group for discussion were:

1. What do you understand by competence?
2. Do you perceive a gap/problem in competence assessment?
3. Do nurses apply what they have learned on courses when they go back into practice?

The first question explored understanding and dimensions of competence using the concepts of psychomotor and people orientated skills; Girot (1993) sets competence within the educational domains of cognitive (knowledge), affective (attitude) and psychomotor skills). Secondly participants were asked about the nature of the problem as they saw it (their lived reality) and their perspectives on what can be done about it. Finally, they were asked their views and experiences of nurses' practice after completing a leg ulcer management course that had competencies assessed.

The focus group lasted 1.5 hours which was longer than the hour planned. The group then went on to meet for coffee immediately after to continue discussing their experiences which I took as reinforcement that I had legitimate concerns that warranted further study. The key findings were that the concept of competence was not understood, and agreement that many people assessed as competent were not applying their skills in practice. One major theme that transpired from the focus group was that notwithstanding the reality that a clear concept of competence did not exist, such understanding that there was, changed over time. This was a realisation among the group that they had lower expectations of staff in relation to competence in order to "pass" enough people to manage the workload. This new understanding rendered the participants in the focus group momentarily silent and reinforced my view that this topic warranted research.

2.4.1.3 Report Of The Conference Workshop

I used the findings from the focus group to pose questions at a national conference in 2012 focusing on lower limb management. The workshop was a 35 minute session and was attended by approximately 40 delegates comprising district nurses, specialist tissue viability and leg ulcer nurses, a small number of practice nurses and hospital nurses, two podiatrists and a nurse lecturer from another institution who teaches on a leg ulcer course. No participants from the focus group were present at this workshop. The findings I presented generated discussion broadly similar to the focus group discussion. In relation to the revelation of lowered expectations there was general agreement in this group of 40 nurses that this was indeed the case and although it was pragmatic it did not contribute to effective patient care.

My doctoral research data collection began with the focus group and the ensuing conference workshop (following ethical approval). The data generated from both activities reflected concerns about practice in leg ulcer management and helped me to reflect on means of ascertaining the nature of the problem and how to shape the next stages of data collection for the main study, and so my research journey began in earnest.

2.5 Participant Groups

This study is concerned with the nature of competence and how it is assessed and supported. Sandelowski (2004) suggests that what a participant says is “socially constructed” within a particular context and consequently a full picture and understanding may not emerge if only one perspective is explored. Therefore, in this study views were sought from two groups which from this point are named: Group 1 Assessors and Group 2 Students (see tables 2.1, 2.2 & 2.3). Group 1 Assessors are nurses who are practitioners involved in teaching and assessing nurses for competence in leg ulcer management. The teaching and assessing roles are often combined and the nurses carrying out these roles are generally senior nurses in specialist roles related to tissue viability/wound care in general or leg ulcer care specifically. However, some non- specialist nurses take on these roles due to their qualifications, clinical settings and teaching skills. For example, a registered nurse may work in a leg ulcer clinic under the supervision of a specialist nurse.

Group 2 students are nurses who have completed a leg ulcer management course known as Group 2 Student. This group comprises registered nurses who have completed a leg ulcer course in a university setting. In general, such courses carry

academic credits and almost invariably have a competence element to the course assessment (Bianchi, 2007).

2.5.1 Sampling Strategy

Purposive sampling was employed to enable participants for both groups to be recruited and meet the eligibility criteria in order to explore the phenomena of interest. The eligibility criterion for Assessors was involvement in teaching about leg ulcer management and/or the assessment of competence of nurses. The eligibility criteria for Students (Registered Nurse) were to have attended a leg ulcer course and being involved in the management of people with leg ulceration. The aim of the eligibility criteria was to add rigour to the study by ensuring the characteristics of the population represented the respective populations of assessors and students to ensure depth of data from an informed source (Campbell et al., 2020) rather than for the sample to represent a whole population of nurses. There was also de facto snowball sampling as nurses heard about the research from others and volunteered help in dissemination of the invitations to potential participants.

There are no national details kept of leg ulcer courses, the number of people involved in teaching or the number of nurses and other professionals attending such courses. This makes decisions about sampling quite problematic. I took a systematic approach to generate a sample by identifying UK universities offering leg ulcer courses. I did this through internet searching for individual universities and a literature review of leg ulcer studies and articles originating in the UK (where the author was identified as teaching in a university). I then made personal contact with module leaders who agreed to assist with recruitment of participants. There were also five key professional groups comprising health care professionals with a special interest in tissue viability (of which leg ulceration is a part). These were national groups including the Leg Ulcer Forum, Wounds UK, Tissue Viability Society and regional groups, Southern Tissue Viability Nurses Group and Northern Ireland Tissue Viability Group. The Chairs of these groups agreed to disseminate my request for participants to their membership. In the national groups membership is not made public but is likely to be around three to four hundred. The regional groups have around 30-50 members each. There is likely to be some overlap of membership. In 10 universities which run leg ulcer courses the module leaders generally have 10-30 students annually although this varies year on year subject to CPD funding.

The sampling strategy resulted in a sufficient number of participants who met the eligibility criteria in relation to experience. Table 2.1 and section 2.6 detail the data collection methods and figure 2.1 summarises the stages of the data collection for this study. At the time of the survey social media such as Twitter and Facebook were not as ubiquitous as now, so email and networks were the best options and enabled reminders to be sent. Sinclair, O'Toole, Malawaraarachchi and Leder (2012) recognised the increasing use of the internet for surveys and more recent research suggested the internet is an effective and cost-efficient means of reaching participants and a meaningful response rate (Saleh & Bista, 2017). In the NHS and private health sectors internet technology is everyday practice and each member of staff has an email address. In universities the use of email and virtual learning environments are ubiquitous across the sector. This use of technology means more nurses are likely to access email but also poses the risk of email being deleted due to the volume of mail received. However, it was anticipated that this risk was reduced because it arrived via professional groups that people have signed up to voluntarily as members and came from people known to them, e.g., tissue viability leaders and tutors.

2.6 Data Collection

As detailed in section 2.4 and figure 2.1, the initial focus group and conference workshop helped to establish the need for the study and together with the literature review started the process of developing the overall research questions (see Chapter 1, Research Aims) and the shape of the study. Having established that there is a problem in leg ulcer management and the assessment of competence I needed data to develop focused and relevant questions. To get the data needed I was influenced by Gadamer's view that "understanding does not occur when we try to intercept what someone wants to say to us by claiming we already know it" (1976, pg. 102), and I gave as much space as possible through a range of methods for collecting data to allow views and experiences to be articulated as fully as possible. Table 2.1 details the participants, method of data collection and the year(s) in which the data were collected.

2.6.1 Mixed methods

Foss and Ellefsen (2002) discuss the value of a mixed method approach arguing that although some researchers perceive quantitative and qualitative paradigms as

diametrically and epistemologically opposed, they can in fact be complementary providing the researcher's position is clear. Mixed methods is the combination of qualitative and quantitative methods and, according to Hunter and Brewer (2015, pg.187) is a "subset" of multimethods that they present as a mixing of methods regardless of paradigm. The mix of qualitative and quantitative data can result in "completeness" of understanding and could uncover questions that may not have been considered using a single method. This could be seen as triangulation, but this is not the purpose here as the dominant approach to my research is qualitative with survey data being used to enhance and inform the underlying premise that there is a problem. Survey data also helped guide the focus and direction of the interview questions by providing a range of views about the nature and experience of competence in leg ulcer management which could be explored in the interviews (see figure 2.1 for Stages of data collection).

Fetters et al. (2013) highlight the advantage of integrating quantitative and qualitative data in a mixed methods approach with one approach helping to generate and refine the other. Fetters et al. (2013, pg. 2136) refer to the collection and analysis of quantitative data being used to inform data collection and analysis of qualitative data as an "explanatory sequential design". This describes the strategy of my research method. My approach was to use the initial focus group, conference workshop and surveys as a launch for exploration of issues and experiences through the online surveys and interviews. Arnon and Reichel (2009) recognised a mix of qualitative and quantitative approaches as a pragmatic trend that could complement and enrich data. Foss and Ellefsen call this a "continuum of knowledge" rather than discrete and irreconcilable quantitative and qualitative approaches. Therefore, this study is a qualitative study in a constructivist paradigm.

2.6.2 Higher Education And Quality Assurance Considerations

The HEI locus was a pragmatic choice to have some measure of quality assurance of teaching and assessing methods. HEIs are regulated by the Quality Assurance Agency in the UK (<https://www.qaa.ac.uk/en>), although course design varies widely from non-credit bearing short courses to accredited courses carrying academic credits mostly at undergraduate level. Locally designed "in-house" work-based courses or study days do not currently have any content or quality assurance at a national level.

2.6.3 Survey

Surveys can be used to complement qualitative procedures and would be congruent with Polit and Hungler's (2002) views on quantitative approaches supplementing and enriching a qualitative methodology. Mendlinger and Cwikel (2008) refer to "nesting" where one paradigm is dominant, and so it is in this submission. The online survey was designed to follow on from the initial focus group and conference workshop. The purpose of the survey was to ascertain as much information as possible in a manageable timeframe in order to help develop more in-depth questions for individual interviews. Polit and Beck (2017) explain this method of data collection as a means of obtaining broad information that can be delved into more deeply in subsequent interviews. This point also applied in relation to the mix of open and closed questions in the surveys.

The advantages of using self-completion questionnaires include expediency and economy especially if administered online. Self-completion also enables anonymity which was especially an advantage of using the online system Bristol Online Surveys rather than an email return. This method of completion also allowed respondents time to consider questions and encouraged them to be open in their answers and not influenced by me as the researcher (or any other person administering the questionnaire) key considerations raised by Polit and Beck (2017).

Two surveys were designed and administered online via Bristol Online Surveys (figure 2.2 Group 1 Assessor Survey questions and figure 2.3 Group 2 Student Survey Questions). The questions for each survey arose from the literature review of the nature of competence, anecdotal reports of ineffective clinical practice as well as the initial focus group and conference workshop.

Figure 2.2 Group 1 Assessor Survey Questions (Stage 2 Of Data Collection)

1. Years since qualified as a nurse
2. Your current post (job title)
3. Specify if "other"
4. Gender
5. Time in present post
6. Do you teach on a university leg ulcer management course?
7. What is your teaching role?
8. Do you teach on a leg ulcer management course outside a university setting (e.g. an in-house course)?
9. What is your teaching role?
10. Do the nurses attending the university leg ulcer course(s) that you teach on have a competence assessment?
11. If competence is assessed, is a competence framework used?

12. If competence is assessed, but a framework is not used, how is competence assessed?
13. If competence is assessed, is it assessed in practice with patients or in a classroom/workshop setting?
14. If an assessment framework/portfolio document was used to assess competence, what elements were assessed (tick all that apply).
15. What is your personal definition of competence in leg ulcer management?
16. How would you recognise that someone is competent in leg ulcer management?
17. Do you think that practitioners assessed as competent in leg ulcer management always apply their skills in practice?
18. Could you explain your view?
19. Do you think your views or expectations of competence in leg ulcer management have changed since you first became involved in teaching and/or assessing competence?
20. Please explain the answer you have above about any changes in your views or expectations of competent practice in leg ulcer management.

If you are willing to talk to me in more detail about your views and experiences of competence in leg ulcer management, please leave your contact details in the box below (or contact me separately by phone or email).

Figure 2.3 Group 2 Student Survey Questions (Stage 2 Of Data Collection)

1. Have you complete a university leg ulcer course in the last 7 years?
2. What year did you complete the course?
3. Years since qualified as a nurse.
4. Present post (job title)- specify other if not on list
5. Gender
6. Highest university qualification (specific other)
7. Did your leg ulcer course have a competence assessment?
8. Where did the assessment of competence take place?
9. Was a competence framework/portfolio used to assess competence?
10. If a competence framework was not used, how was competence assessed?
11. Was there an assessment other than competence used in the course?
12. Specify the nature of all the assessments
13. If a competence assessment/framework was used, what elements were assessed (from list)?
14. Please specify if "other" was selected.
15. Please explain briefly what your understanding of competence is in relation to leg ulcer management.
16. When you started your course how confident dd you feel about your leg ulcer management skills?
17. When you were half way through your curses how confident did you feel about your leg ulcer management skills?
18. When you were assessed as competent at the end of the course, how confident did you feel about your leg ulcer management skills?(Even if your course did not have a competence assessment, please still indicate your level of confidence in leg ulcer management at the end of the course)?
19. Once you had finished your course and were applying your leg ulcer management skills in practice did your confidence level change?
20. Please can you explain why your confidence level did, or did not change? If the level changed, in what way did it change?
21. How confident do you feel now about your leg ulcer management skills?

22. When you had finished your course and went back into practice do you feel you had sufficient support to put your leg ulcer skills to effective use?
23. Please explain your answer.
24. If you are willing to talk to me in more detail about your views and experiences of becoming competent in leg ulcer management, please put your name and contact details below. I will contact you and supply information about the interview. This will not put you under any obligation to take part in the interview.

Note: respondents were also invited to contact me separately from the questionnaire. As the responses were collected via the Bristol Online Survey it was not possible to identify individual responses from respondents and this was made clear to potential respondents and interviews.

Pope, Ziebland and Mays (2000 ch.8) recognise the value of “simple counts” to augment qualitative data. Examples of such “counts” in my study are levels of self-reported confidence at various time points in the course and views on course structure and content.

Both surveys were sent as embedded links in an email via the professional forums outlined in section 2.5.1 with a screening question to enable potential participants to identify which survey to complete (as an Assessor or as a Student). Follow-up emails were sent as prompts on two further occasions. The email that was sent out via module leaders in universities identified as running leg ulcer management courses contained only the link to the Student survey. The survey tool for both groups allowed for expansion of answers to some questions and in particular personal perspectives on competence.

[2.6.3.1 Group 1 Assessors’ Questionnaire](#)

Key questions for Group 1 Assessors included experience of using a competence framework or other method of assessing competence and personal definitions of competence relative to leg ulcer management (see appendix 1 for survey questions). A key question that arose from the initial focus group related to any changes in how participants perceived competence in the time they have been involved in teaching and assessing on leg ulcer courses therefore this was included in the survey as a specific question (and repeated in individual interviews). Group 1 Assessors had 43 online survey respondents. One survey question in both groups invited respondents to volunteer to be a participant in an individual interview, or a focus group interview if preferred for logistical reasons. If the respondent wanted to volunteer but wanted to keep their survey responses anonymous, they were invited to contact me separately.

2.6.3.2 Group 2 Students' Questionnaire

The survey of Group 2 Students focused on how competence was assessed (if it was) on their course and as in Group 1 the participants were asked for a personal definition of competence (see figure 2.3 for survey questions). In addition, Group 2 was asked about their self-rated confidence levels as they progressed through their university course; scored on a Likert type scale. There is a paucity of evidence that post qualifying courses enhance individuals' practice although nurses do self-report this is the case and they experience increased self- confidence (Davey and Robinson, 2002, Evans et al., 2007). Research exploring post qualified nurses experience of continuing education tends to focus on work, study and family commitments and not on levels of confidence, during the course, immediately afterwards or in the longer term. Cooley (2008) relates instances of experienced nurses who are encouraged not to discuss their courses at work in order to maintain good relationships with colleagues. Therefore, the survey aimed to establish the experience of Group 2 Student participants as they were learners on a leg ulcer management course. Group 2 had 50 online survey respondents. As in the Group 1 survey one survey question invited respondents to volunteer to be a participant in an individual interview and were invited to contact me separately if they preferred to keep their survey responses anonymous.

As stated in section 2.5.1 it was very difficult to ascertain the overall population size and therefore difficult to confirm how representative the returns of 43 and 50 completed questionnaires from groups 1 and 2 respectively were. However, the synergy of information across the completed forms was notable. However, the purpose of the survey was to guide the interviews, and recruit participants for interviews therefore was only part of a "whole" and together with the focus group and workshop data served to create a picture of the issues to be researched.

2.7 Individual Interviews

2.7.1 Sample Recruitment For Individual Interviews

Sample sizes in qualitative research are more concerned with depth and saturation of data rather than numbers of participants (Morse and Field, 1996; Guest, Namey & Chen, 2020). Often the numbers are based on the number of researchers and the anticipated volume of data, but the key aim is data saturation (Morse, 2015). A maximum for each group was set at twenty but it is common to have as few as six-eight participants (Polit and Beck, 2017). The reason for a maximum number of

twenty was based on consideration of the time involved in setting up and conducting the interviews and the transcribing, balanced with my ambition to explore the phenomena as rigorously and in as much depth as possible. The use of professional networks helps ensure participants have experience of the phenomenon, a criterion sampling method (Polit and Beck, 2012). This purposive sampling (see section 2.5.1) ensures the best chance of gaining rich data.

The overall desired characteristics of participants could be defined for each group in terms of Group 1 Assessors and Group 2 Students and were the same as for the survey participation (section 2.5.1), but the names and locations of potential individuals was largely unknown. A snowballing effect was utilised from the dissemination through the professional networks and university courses. Discussion within these forums resulted in others hearing about my research and contact was made with me from potential participants outside of the survey method of recruitment. As contacts were made, I was able to screen eligibility to ensure my purposive approach was maintained and that the potential participant had the characteristics necessary for either Group 1 or Group 2. These were involvement in teaching about leg ulcer management and/or the assessment of competence of nurses (Assessor) and to have attended a leg ulcer course and being involved in the management of people with leg ulceration (Student).

The recruitment strategy resulted in 11 participants in Group 1 Assessors with a further 8 nurses meeting the criteria for Group 1 Assessors in a single focus group. This was held at their request as they were attending a conference and wanted to meet as a group for logistical reasons because they were normally dispersed over a wider geographical area. The option of a focus group instead of individual interview was offered to potential participants in both groups (see section 2.6.3).

The recruitment for Group 2 participants resulted in seven participants. This number was smaller than Group 1. However, because the seven matched the eligibility criteria I concluded that seven would be adequate for the purposes of data collection. In the submission overall there was data collected from 160 participants across each of the data collection stages.

2.7.2 Data Collection: Interviews

Semi structured interviews are the most common interview structure in qualitative research (Arksey and Knight, 1999; Polit & Beck, 2017). Questions can be used in a flexible way and sometimes out of sequence to facilitate probing and clarification of issues, which arise in the course of the interview (Bowling, 2002). The advantage of this technique for data collection is that points can be clarified, and more in-depth exploration of issues is possible where appropriate (Farley and McLafferty, 2003), however the disadvantage is that it can be time consuming (Liamputtong and Ezzy, 2005). Transcribing can take a long time and the quality of the data depends on the skill of the interviewer. An open unstructured interviewing approach could have been used but requires skill to keep the participant focused on the subject matter and considerable volumes of data can be generated (Arksey and Knight, 1999). However this can be useful when there is little known about a subject (Bowling, 2002). During the course of an interview the interviewer seeks to clarify and interpret descriptions with the participant and to ascertain what is said “between the lines” (Kvale, 1996, pg. 32). In this doctoral study it has been established that there is a problem with the application of competent practice and therefore a focused enquiry using a semi-structured method was justified.

An observational, ethnographic approach could also have been considered and is concerned with groups and cultures. In a nursing context this generally involves spending a significant amount of time with participants in their working day (Holloway and Wheeler, 2002); the researcher enters the world of the participant (Marcus and Liehr, 1998). The interweaving of observation, questioning and field notes (Liamputtong and Ezzy, 2005) helps ensure a richness of data. This would be an interesting experience to observe and understand how practice skills are applied but is not feasible as I am not in the practice setting, the nurse may spend only part of her/his time engaged in leg ulcer related practice and there would be issues of patient confidentiality. Action research was discounted as an approach as it is concerned with organisational change (Holloway and Wheeler, 2002) and in this study the emphasis is on diagnosis and understanding of the nature of the problem rather than immediate change and is therefore practice -based research.

Following the online surveys, individual interviews (Groups 1 and 2) and 1 focus group (Group 1) took place. Each interview lasted between 45 minutes to one hour either face to face in a place of their choosing which was mostly in a private room at their workplace or in a very few cases via Skype. One interview was conducted on

the telephone as NHS firewalls did not allow Skype to be used in the workplace. One interview was concluded on the telephone when online connections failed. All participants consented to audio recording of the interviews and recordings were then transcribed verbatim by a non-health related qualified typist and subsequently checked word for word against the audio recording by the researcher with field notes inserted at appropriate places to emphasise actions or expressions within the interview. All participants were offered a copy of their recording and transcript, but the offer was predominantly declined. All participants were happy with their transcription and did not request any amendments.

2.7.3 Group 1 Assessor Individual Interviews And Focus Group

Twelve questions were put to the individual participants (n=11) and the same 12 questions to the focus group (n=8) (table 2.2). Some questions had a preface statement before the question was asked. This was done to help participants feel at ease with questions, reassure them that there was not a “test” element and to help demonstrate that this was a journey of exploration that we were both invested in. I am inevitably both an insider and outsider in this research (Hellowell, 2006) through my activities and profile in leg ulcer management and my role as researcher, teacher, and assessor of practice. It was important to me that participants felt comfortable and that there was a collegiate approach to the topic.

Table 2.2 Group 1 Assessors (Individual Interview And Group 1 Focus Group)

Question/Preface	Prompts/sub-headings
1. Do you think there is a problem with leg ulcer management or not?	<ul style="list-style-type: none"> - please give reasons for your answer - is this about people's understanding of the term competence, the skills of staff, or something else?
2. Lots of us run leg ulcer courses and assess skills and competence in a variety of ways.	<ul style="list-style-type: none"> - how easy or difficult is it really (emphasis- real life) to determine if someone is competent? - is there anything that you assess that is not written on the framework but that you are looking for? - is competence measured by a framework or wholly, or partly, by gut feeling/intuition? If gut/intuition what are these feelings, and can you give any examples? - how much time do you need with a "student" to ascertain if they are competent? - when do you make this decision? - how long is enough to get a feeling that someone is competent?
3. A focus group I ran with specialist nurses indicated that their expectations of competence had changed because staff were sometimes less able/skilled than they would like but they had to manage patients, so they had to make a balanced judgement about who was delivering leg ulcer care.	<ul style="list-style-type: none"> - have you any thoughts on the theory and reality of this view? - there were many comments made about nurses being too quick to refer patients to TV (Tissue Viability specialist nurse/team) rather than manage them, any views on this?
4. In courses there is usually theory and practice in assessment, Doppler, bandaging, skin care.	<ul style="list-style-type: none"> - is there anything else you think is important for the course to address that is not currently included? - have you any thoughts on what else we could be doing to prepare the nurses to manage people with leg ulcers and related conditions?
5. When you work with a nurse as a student and/or assess them:	<ul style="list-style-type: none"> - do you notice anything about the nurse when they are being a "student"? - (prompt)- many students say they feel very nervous in this situation even if they are normally good and confident nurses.
6. Do you think there are different levels of competence?	<ul style="list-style-type: none"> - what would be a base level? - would you pass a specialist nurse as competent in the same way as you would pass a community nurse who was new to leg ulcer management? - can you explain why you would take this approach?
7. In the survey the word "safe" was used a lot by respondents.	<ul style="list-style-type: none"> - what does this mean to you? - does this mean that the bottom line for competence is "safe".

	- there is a feeling sometimes that reduced compression is used in order for the nurse to feel the patient is "safe"; is this competence?
8. The word "holistic" was used many times in the survey, what does this actually mean to you?	
9. Being able to challenge or question decisions was also mentioned a lot.	- do students do this in your experience? (an example?) - what qualities do you think students who challenge or question decisions have?
10. Given that you responded to the survey and the questions in this interview so have had to think about competence: have your views or ideas changed about competence?	
11. Do you have any further thoughts on competence, what it is and how it is determined?	
With a concluding question 12. Is there anything else you would like to tell me?	

2.7.4 Group 2 Student Individual Interviews

The student interviewees had ten questions posed to them with supplementary questions used if it was necessary to keep focused (table 2.3)

Table 2.3 Group 2 Students (Individual Interview)

Question/Preface	Prompts/sub-headings
1. Tell me about your experience of leg ulcers:	<ul style="list-style-type: none"> - when you first encountered someone with this condition did you know what it was and how it was managed? - how did you learn this? - how did it come about that you were bandaging and using the Doppler? - what did it feel like learning those skills?
2. Talk to me about your leg ulcer course:	<ul style="list-style-type: none"> - how did you come to be on the course? - when you were doing your course how did it feel being a student again? - in the whole of your journey to where you are now, in relation to Doppler and bandaging where does your level of confidence sit on a scale of 1-10 (1 being not at all confident and 10 being completely confident). - Thinking about the course can you give me an example of a low confidence point and can you give me an example of a particular high confidence point? - courses generally teach patient assessment, Doppler, bandaging and skin care but is there anything else the course taught you or prepared you for? - is there anything else you wish the course had covered that you would have found useful then and now? - can you say why you think that?
3. I got lots of ideas and opinions from an online survey on what competence means and what it looks like.	<ul style="list-style-type: none"> - If you completed the survey did you find this a difficult question to answer [what competence in leg ulcer management means]? - can you say why this is? - do you think there is a problem with competence in practice? - can you say more about why you think this?
4. One of the most common words used in the survey in relation to competence was "safe".	<ul style="list-style-type: none"> - if you had to explain this in relation to leg ulcer management what would you say?
5. Lots of people in the survey told me their ideas about what competence is and how it is recognised.	<ul style="list-style-type: none"> - if you were assessing someone for competence how would you go about it? - do you think everyone being assessed as competent has the same level of skill? - can you tell me a bit more about that?
6. In relation to your course:	<ul style="list-style-type: none"> - was there anything in particular that struck you and made you really re-evaluate your practice? - once you had finished the course, what happened next in relation to your experience with leg ulcer management?

	<ul style="list-style-type: none"> - did you feel you could just get on with it and manage patients? - if you had support, where did that come from and was it helpful? - did doing the course make a difference to how you feel about managing people with leg ulcers? If so, in what way did this make a difference?
7. If a competence assessment was used in your assessment) when you were assessed as being competent, did you feel you actually were competent at that point?	<ul style="list-style-type: none"> - do you feel differently competent now? - can you explain that? - do you think patients have a view about competence? - what would they be looking for in your view?
8. "Holistic" was mentioned in the survey by many people what do you think they meant?	
9. Another thing that was mentioned was being able to "challenge things".	<ul style="list-style-type: none"> - can you give me an example of where you have done this? - If you did challenge or question something how did it feel doing this? - what qualities does a nurse need to be able to do this?
10. Is there anything else about competence that you would like to say?	

2.7.5 Ethical Considerations

Ethics committees are concerned primarily with the protection of research participants and are charged with ensuring that the ethical principles of doing no harm are adhered to (Bowling, 2002). Ethical considerations must always be paramount (LoBiondo-Wood and Haber 1998) and researchers must adhere to the principles of the Declaration of Helsinki (World Medical Association 2000), which are concerned with human rights in research. Confidentiality of participants was protected throughout the process and in the reporting of results (Liamputtong and Ezzy, 2005). Once the study is complete data will be destroyed in accordance with the Data Protection Act (2018) "*Personal data processed for any purpose or purposes shall not be kept for longer than is necessary for that purpose or those purposes*".

I was mindful that participants may have feelings of professional vulnerability as they shared practice experiences. The participants, and the researcher are nurses and as such are expected to be familiar and compliant with their professional code (The Code, 2018) and specifically the need to avoid any identifying names in discussion and responsibilities inherent in the Code related to patient well-being and protection. This requirement could risk reducing disclosure by participants, but the Nursing and Midwifery Council requires the over-riding priority to be patient safety.

In the event all the participants were careful to preserve anonymity and confidentiality. As reported in the results section 4.6.1, 4.9 and figure 4.7 there were instances of Group 1 and Group 2 participants expressing emotion at practice situations but there were no concerns raised about their own personal wellbeing. All participants had access to their employer organisation's staff support resources.

This research received ethical approval in two stages. The first stage which was the initial focus group and conference workshop was covered by a form of delegated authority by the Ethics Committee with Delegated Authority (ECDA, Social Sciences, Arts and Humanities). University approval was then granted for the online surveys and interviews (individual or focus group) by the Ethics Committee for Studies Involving Human Participants with Protocol number 11-12.10.

2.8 Conclusion

The first step in addressing a problem is to understand the nature of it from the perspective of all involved. A naturalistic philosophy underpins this desire to see things from their perspective and a predominantly qualitative approach was used to collect the data. Quantitative data served to develop the focus of enquiry and the interview questions. Competence is multifaceted therefore many issues were expected to emerge from the data such as methods of assessment, the role of communities of practice, course design, teaching methods and dimensions within assessment frameworks. The precursor to the study and reinforcement of the findings from the subsequent conference workshop led to refinement of the questions in the individual interviews. These also led to justification of having Group 1 and Group 2 participants in order to fully explore the phenomena.

2.9 Contribution to Knowledge

Ambitions for the contribution to knowledge of this doctorate study centre on the development of a greater understanding of the nature of competent practice in this field and the development of an educational strategy and competence framework that supports practitioners to be adequately prepared for the demands of clinical practice. Currently there is no national or standardised framework for the education and assessment of qualified nurses engaged in leg ulcer care. The Department of Health (DoH) is pushing a strong quality agenda (Shorney, 2010; NHS, 2019) with a view to making better use of resources including CPD spending and to bring patients and carers much more into focus (DH, 2010; NHS, 2019). This made it timely to examine the issue of leg ulcer education and the emphasis on competence assessment.

Chapter 3 Methods of Data Analysis

3.1 Introduction

Chapter 2 explained the aims and rationale for the methods of the data collected and gave an account of how data collection was undertaken. This chapter presents the method of analysis of data collected in online surveys (Groups 1 and 2), individual interviews (Groups 1 and 2) and a focus group (included as part of Group 1) using examples of a specific question in each group. The participants provided their views of competence in leg ulcer management and specifically the nature of the current situation (problems) in leg ulcer management practice. The sampling strategy values the experience and range of perspectives of the participants who universally agreed there is a problem in leg ulcer management. New understandings were within the context of the lived reality of the participants as they shared their experience of practice in a particular field within an organisational structure and culture. Bridges (2019) asserts that this context gives richness to data, and interpretation of that data. New insights are produced into the barriers to, and development and recognition of, competence in leg ulcer management through analysis of the data. Braun and Clarke's (2006) framework was used to analyse the data and examples of data management and analysis are presented to show the process of coding and identification of themes for interview data.

3.2 Online Survey Data Analysis

Survey data were analysed in 2 ways for each group of respondents: Group 1 Assessors and Group 2 Students. Firstly, questions with yes or no answers, those with tick all that apply responses or questions posed on a Likert scale were analysed using simple and descriptive statistics (see figures 2.2 and 2.3 for the survey questions). For both groups the questions included years since qualification as a nurse, job title, whether competence was assessed on the leg ulcer course and whether this assessment was carried out in a clinical setting with patients, or in a classroom setting as a workshop. Questions on a Likert scale related to levels of confidence throughout, and after their course (Group 2). Secondly narrative answers were analysed thematically, and the outcome of this analysis was used to form the questions posed to the participants in qualitative interviews. Narrative questions for both groups included personal definitions of competence and the content of the

competence assessment. Group 1 respondents were also asked about any changes in their views of competent practice in leg ulcer management over time.

3.3 Data Analysis Framework for Qualitative Interview Data

Data analysis of qualitative data was conducted through thematic analysis using Braun and Clarke's framework (2006). Braun and Clarke (2013) describe a process of complete and selective coding. Braun and Clarke's more recent (2022) publication continues to support their 2006 framework especially for a single researcher. The following text, sections 3.4 and 3.5 set out how the framework was applied to the interview data.

3.4 Group 1 Assessors' Interviews (And Group 1 Assessors' Focus Group)

The interviews opened with a direct and single question (see table 2.2 Question 1), "Do you think there is a problem or not with leg ulcer management"? The response was unanimously an unequivocal yes. The analysis of question 1 with its prompts (see table 2.2) is presented here as an example of the approach to analysis of the interview data. When asked to explain the reason for their answers the Assessors gave detail of many concerns in practice. From the transcripts across the dataset for this question a list of key words/phrases were identified as factors associated by the participants as problems (table 3.1) and sorted into codes (table 3.2) which were colour coded using yellow, blue, green and purple to make identification of linked words/phrases easier to see in the transcripts (see 3.4.1 below).

Table 3.1 Key Words/Phrases For Question 1 (is there a problem in leg ulcer management?) (alphabetical order- indicated by bold letters)

Challenging poor practice	Changes in nursing	Competing priorities
Complexity of patients	Compression	Confidence
Conflict in practice	Continuity of care	
Distance to travel	Do a full patient assessment	
Education and training	Elements of care	Emphasis
Equipment and environment	Equipment and resources	Equity in care
Fight for patients	Frustration	
General practice	General practitioners	
Handing over patients	Hierarchy	Hierarchy of leg ulcers
Inadequate care	Interest and motivation	
Judgement (clinical)		
Knowledge of Doppler	Knowledge of compression	Know when to refer
Knowledge of what assessment skills to assess		
Lack of standardisation	Language of caring	Leg ulcer care activities
Location differences		
Models of care	Motivation and interest	
No model of care		
Patient centeredness	Patients can see	Patient complaints and frustration
Patient involvement	Patient role in assessing care/skills/competence	Patient view
Personal conflict	Personal fight	Personal investment
Personal investment emotion	Planning care	Political activism
Political agenda	Poor care	Poor practice
Positions of power and influence	Practice stories	
Reflective practice	Regret and concern	Relationships
Risk aversion	Risk aware	
Safety	Self-awareness	Setting
Setting and speciality	Settings judgement preferences	Skills to diagnose
Speciality and setting	Specific setting or specialities	Staff confidence
Staff engagement	Staff motivation	Staff skills
Staff support	Standardisation	Standardisation of care
Struggle	Surviving	
Task focus	Task orientated	Teaching people
Teaching staff	Team working	The personnel available
Time to care	Time and resources	Training and education
Variable care	Variable practice	Variable skills
Yes to leg ulcer management problem		

The key words/phrases from across the transcripts were then developed into codes. This was done by working systematically through each phrase and word to identify those that appeared to have meaning relevant to the research questions. Those identified were then clustered together as words and phrases that appeared connected to each other. A code was given for each of the clusters. In order to do this I went through the phrases and words many times on paper and as a recording that I played over and over to immerse myself in the words.

These are two examples of the codes, showing the cluster of key words/phrases which they each represent and why I viewed them as connected.

- Changes in nursing (A in table 3.2 below): changes in nursing, competing priorities, complexity of patients, continuity of care, distance to travel, motivation and interest of staff, models of care, patient involvement, political agenda, positions of power and influence, risk aversion, personnel available.

I colour coded these blue and viewed these as connected because they spoke of the environment in which nursing is situated and the pressures that clinical staff are under as they carry out their clinical work. There are significant staff shortages and budgetary constraints as well as an increasingly frail population with complex needs. The transcripts focused on these aspects and the words/phrases identified the changes and their impact.

- Concerns about practice (B in table 3.2): challenging poor practice, conflict in practice, Inadequate care, patient complaints and frustration, poor care, poor practice, regret and concern.

I colour coded these yellow as they were words/phrases of meaning in relation to the effect on patients and on them as nurses when they talked of the care people received (or did not receive).

Table 3.2 Codes Derived From Key Words/Phrases (from table 3.1)

Code letter	Code name
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A.	Changes in nursing
B.	Concerns about practice
C.	Equity for patients
D.	Education, training or teaching
E.	Delayed referrals or any referral
F.	Assessor emotion
G.	Complexity of patients
H.	General Practice nurses
I.	General practice settings
J.	Judgement
K.	Lack of reflective practice/task orientation
L.	Lack of standardisation or continuity
M.	Models of care
N.	Patient centeredness
O.	Patient experience
P.	Patient experience of care
Q.	Patients as assessors
R.	Politics or political
S.	Power GP or GP Practice
T.	Power nurse
U.	Resources equipment
V.	Resources staff
W.	Safety and risk
X.	Setting for care
Y.	Staff confidence or competence
Z.	Staff knowledge
AA	Staff motivation and interest
AB	Staff skills
AC	Status of leg ulcer care
AD	Time to give care and competing priorities
AE	Yes and emphasis
AF	Recognising good practice

AG	Task focused
AH	Practice stories

3.4.1 Themes From Key Words/Phrases

Codes were then clustered into themes and codes that sat within the thematic headings were then allocated a colour (see table 3.2) and an identifying letter to enable the application of the codes to the transcripts. Where more than 1 code applied, the text had a colour at each end of the selected section of text with one or more colours between to illustrate all the codes that apply, this process enabled a check of the transcripts to ensure the validity of the codes and reduce any risk of missing out any key data.

Codes identified from analysis of question one were collated into four themes:

1. Emotional Display (Yellow text)
2. Impact of Changes in Nursing (Blue text)
3. Financial Pressures and Motivation of Non-specialist Staff (Green text)
4. Patient Experience (Purple text)

3.4.1.1 Emotional Display

Emotional display is defined in this context as the exhibition by participants of distress and upset about the service provision for people with leg ulceration.

Emotional display appeared a dominant theme through words, examples from their experience and the strength of feeling exhibited by participants as they spoke.

Words such as fight, frustration, power (as in a lack of power) were used and echoed in illustrative stories told by participants about interactions with patients and colleagues. Emotion was also evident in body language- emotional display- as the participants spoke of practice, which was emphasised by their voice rising, sometimes breaking, shrugging shoulders, hands held up which all served to illustrate anger and frustration.

3.4.1.2 Impact of Changes In Nursing

The impact of changes in nursing and added work pressures resulting in task orientation, and a perception of deterioration in services were apparent in the data. A shift in service provision that gave General Practitioners more control over community services that is not perceived to benefit people with leg ulcers and other

lower limb problems was common in the emotional display theme in relation to powerlessness and frustration. Views about General Practice settings were also expressed in relation to the change in care arrangements such as a move of patient care from district nursing to general practice settings.

3.4.1.3 Financial Pressures And Motivation Of Non-Specialist Staff

Participants spoke of financial pressures in practice and the problems of recruiting and retaining staff in the NHS. Their perception was expressed as issues of more temporary staff in service provision and an overall lack of motivation of staff in the current working environment. This was felt to be due to financial pressures and staff in non-specialist roles becoming tired and demotivated. These pressures impacted on non-specialist staff according to the participants as they spoke of “lack” in relation to resources, education, staff confidence and motivation.

3.4.1.4 Patient Experience

The experience of patients was a recurring theme and was expressed as a negative experience in relation to care received and sometimes in relation to the manner in which individual people were treated. The focus on patients and their needs was perceived as being lost as participants told of patients’ views being disregarded by health care professionals and the prevalence of complaints and upset told to them by patients as well as their own observations of practice.

3.5 Group 2 Students Interviews

I used the analysis framework in the same way as for Group 1 data- identifying words/phrases with meaning relevant to the research questions clustering those that appeared connected to each other with a code given to each cluster. In the same way as for Group 1, I recorded these so that I could listen repeatedly to immerse myself in the words and phrases. This is how the process was carried out using the example of Question 3 that was posed to the participants (see table 2.3):

3. I got lots of ideas and opinions on what competence means and what it looks like.
 - did you find this a difficult question to answer?
 - can you say why this is?
 - do you think there is a problem with competence in practice?
 - can you say more about why you think this?

Each cluster of connected words/phrases was assigned a code and the codes were then clustered into four themes. I did not use colour codes for Group 2 as the transcripts were shorter and fewer in number than Group 1. Illustrative examples are in the results chapter (chapter 4).

Words and phrases were collated and clustered under the bold headings (table 3.3). Codes identified were collated into four final themes:

1. Defining competence
2. Problems in practice
3. The use of reduced compression
4. The effect of education

Table 3.3 Clustered key words and phrases (Student Group)

Theme 1: Defining Competence	Expectations affect competence assessment
	Knowledge, skill, understanding
	Competence takes time
	Competence as personal responsibility
	12 weeks should be enough time to become competent
	Different path and length of time to competence
	Competence is setting specific
	Competence is an ideal we should strive for
	Competence is difficult to define
	Competence is a personal thing
	Competence is being safe
	Competence is understanding what I am doing
	You just know
	Consistency, not a one-off
	“Answer only with a lot of words” (i.e. not a simple answer)
	Safe is the acceptable level
	Level of skill is not dependent on grade
	Different levels of competence
	Need thorough assessment of competence
	Ask questions in different ways to check knowledge

	List of requirements
	Gut feeling, but not scientific
Theme 2: Problem with Practice	Problem with practice
	Lot of good practice
	Problem with competence
	Workloads
	Lose confidence
	Patients get minimum competencies
	Rush, rush, rush
	Competencies not updated
	Things taken the wrong way
	Some will never be competent
	Accused of bullying and harassment
	Need for a refresher (based on run of poor practice)
	slip into bad practice
	Bandaging skills
	Tick, tick sign people off
	Not simple
	Difficult to challenge staff in the NHS
	Trauma to patients
	Lot of bad practice
	Practice Nurses do not have the skills
	Just want the job done
	Some nurses don't like leg ulcers
	Not enough staff
	Lack of interest in the person
	Not just a skill
	Like driving
Theme 3: Reduced Compression	Nurses get scared (reduced compression)
	Reduced compression because it is easier
Theme 4: Education/Becoming Competent	Importance of supervision
	Differently competent

	Need experience to supervise
	Need to be open to new things
	Knowledge not training
	Use a framework
	It is assessment not just a skill
	More proactive with patients
	Assessing others is a responsible job
	Didn't know what I was looking for until I learned
	Knowledge bring responsibility
	Have to do what is right for the patient
	Not just putting a bandage on
	Crossover of student and assessor

Each of the four final themes theme will now be explained in sections 3.5.1 to 3.5.4.

3.5.1 Defining Competence

In relation to defining competence there were ideas of skill, knowledge, and safety which participants saw as important in defining competence, but there was also evidence of concepts of intuition, “gut instinct” and personal constructs of competence. There was some concern raised about the impact of variations in settings, people and time, on becoming competent.

3.5.2 Problems In Practice

Problems in practice were reported as interpersonal challenges and work pressures impacting on time and staff skills. Students related experiences of observing, and trying to challenge problems in practice and there were incidences of being accused of bullying, work life becoming difficult and colleagues being offended when sub-optimal practice was raised as an issue.

3.5.3 The Unjustified Use Of Reduced Compression

The use of reduced compression when it is not clinically justified is a problem in practice but was sufficiently prominent to warrant its own theme. Reduced compression received little attention from the participants in relation to question 3. In this part of the analysis, it was identified as a minor theme. However, when data were analysed across the whole Group 2 interview transcripts concerns and frustration about the use of reduced compression (and therefore sub-therapeutic practice) was a more prominent feature in the data. Reduced compression means

that the level of external pressure applied to the leg is reduced and this is useful for some patients, for instance when they have compromised arterial blood flow in their legs alongside venous disease and swelling. However, there is evidence to suggest that many patients receive reduced compression because they have not had an adequate assessment of their lower limb or nurses apply reduced pressure because they are afraid of causing harm. This is sub-therapeutic treatment (Oates and Adderley, 2019).

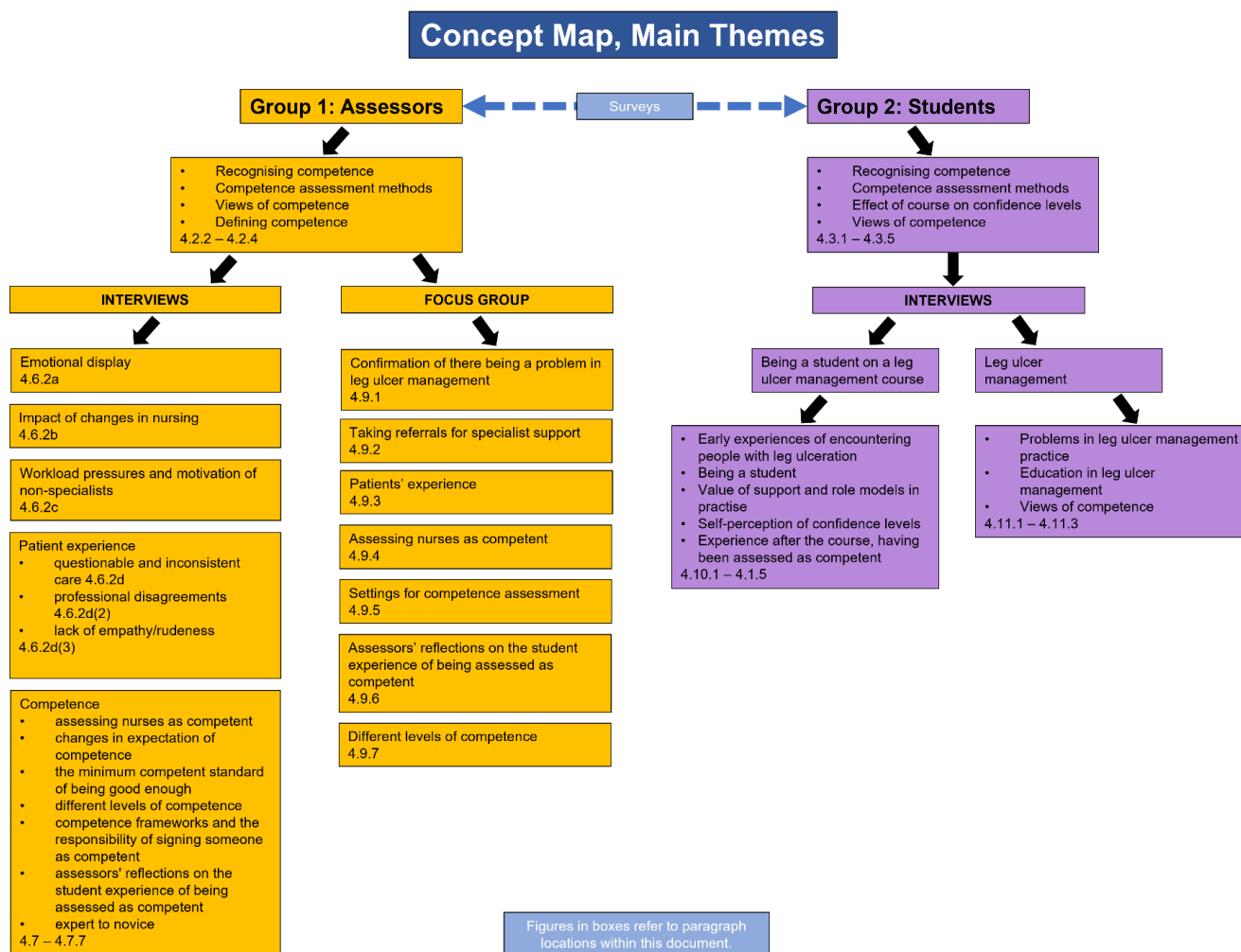
3.5.4 The Effect Of Education

This heading encompassed themes of Group 2 Students in their personal journey in leg ulcer management and the value they placed on their education which they saw as important and ongoing. This evidently positively impacted on their confidence and they used stories of “near misses” before they became knowledgeable in leg ulcer management to illustrate the risks of a lack of education and therefore specific knowledge deficits which could harm patients. The education they valued most was formal education; a university accredited course. The participants placed value on any leg ulcer management related education but placed most value and professional development on the formal course they attended.

3.6 A Summary Of The Main Themes From All Stages of Data Collection

Figure 3.1 is a thematic map of the main themes identified. Please see figure 3.1 for a thematic map of all the themes identified. The Group 1 Assessor survey themes (Stage 2) were used to explore the themes in Stage 3 of the data collection through individual interviews and a focus group. The resulting themes are presented in figure 3.1 and section numbers for each are given in the boxes. In the same way the Group 2 Student themes from the survey informed the interview questions and the main themes and their section numbers are presented in the figure.

Figure 3.1 Concept Map of Main Themes



3.7 Conclusion

Analysis of the survey data enabled formation of questions for the Assessor and Student groups. Individual interviews with participants in each group and the additional focus group with some of the Assessors resulted in transcripts of in-depth and detailed information. Braun and Clarke's (2006, 2013) framework and guidance allowed this large volume of data to be analysed into themes so that a greater understanding of the issues and concerns in leg ulcer management clinical practice and education could be identified. The following chapter presents the findings of the survey and interviews of Group 1 and Group 2.

Chapter 4 Findings

4.1 Introduction

This chapter presents the findings from the main study data and initial commentary on the findings. This is followed by a discussion section consisting of the overall findings in relation to the context of the perceived problem in practice and the educational issues arising from them. The data are presented in three parts. The first part is an analysis of responses in the surveys that were used to gather information about leg ulcer management education and assessment of competence, as well as to formulate questions to be asked of the Group 1 Assessors and Group 2 Students. The second part is an analysis of data relating to individual interviews and a focus group carried out with the Assessors, and part three is an analysis of data from individual interviews with the Students. The data across the groups were collected in all 4 countries of the UK and the context of this is given before the final section leads into chapter 5 where the findings are discussed.

4.2 Surveys of Group 1 And Group 2

The purpose of the survey tool was to ascertain indicative views of those involved in leg ulcer management, either as an assessor, Group 1 (a teacher and/or an assessor of skills in leg ulcer management) or as a student, Group 2 (a nurse completing leg ulcer related education) in order to inform the subsequent interview questions (see section 3.2). The survey tool also served as a means of helping to communicate the aim of the qualitative part of the study and recruiting participants to the relevant group.

The survey findings for each group will be presented beginning with a summary of the profile of the respondents their views and experience of competence and finishing with a summary for each group followed by an overall summary of the survey findings.

4.2.1 Group 1 Assessor Survey: Profile

There were 43 respondents in the Assessor (Group 1) survey. Respondents identified themselves as involved in teaching leg ulcer management and assessing others for competence in this area of clinical practice. Table 4.1 shows the overall profile of the respondents in relation to their length of service, gender, job role as well as their teaching and assessing for competence contexts. None of the nurses was newly qualified and most have been registered nurses for over 20 years with 75% of them in their current specialist post for 5-15 years. As is common in nursing

where 90% of registered nurses are female (RCN [Royal College of Nursing], 2018), 95% of the respondents were female. The majority of respondents worked in community settings and it is known that this is where the vast majority of patients affected by leg ulceration are treated (Guest et al., 2015). A nursing workforce report from the RCN (2018) suggests that the majority of the nursing workforce are aged from 35-55 years and that almost half of new entrants to nursing are over 25 years old. Therefore, being qualified for a least 10 years and for more than 20 years aligns the Assessor Group reasonably well with the nursing population. Twenty percent of the sample are qualified for more than 20 years and the remaining eight participants are qualified for at least five years based on their length of service in their current post. There is no prescribed route to a specialism in nursing but in general there would need to be at least 5 years' experience once a preceptorship year is completed post-qualification and further study is undertaken in a specialism. Community nurses are the most prevalent students attending leg ulcer management courses (most patients are treated in community settings).

A small number of respondents (3) stated they were Lecturers in Higher Education, and it was not clear if these people were also in clinical settings. Some chose the Lecturer option from a list of roles but then went on to describe their clinical work and responsibilities. The responses to the location of education was greater than 100% indicating some respondents taught in more than 1 setting.

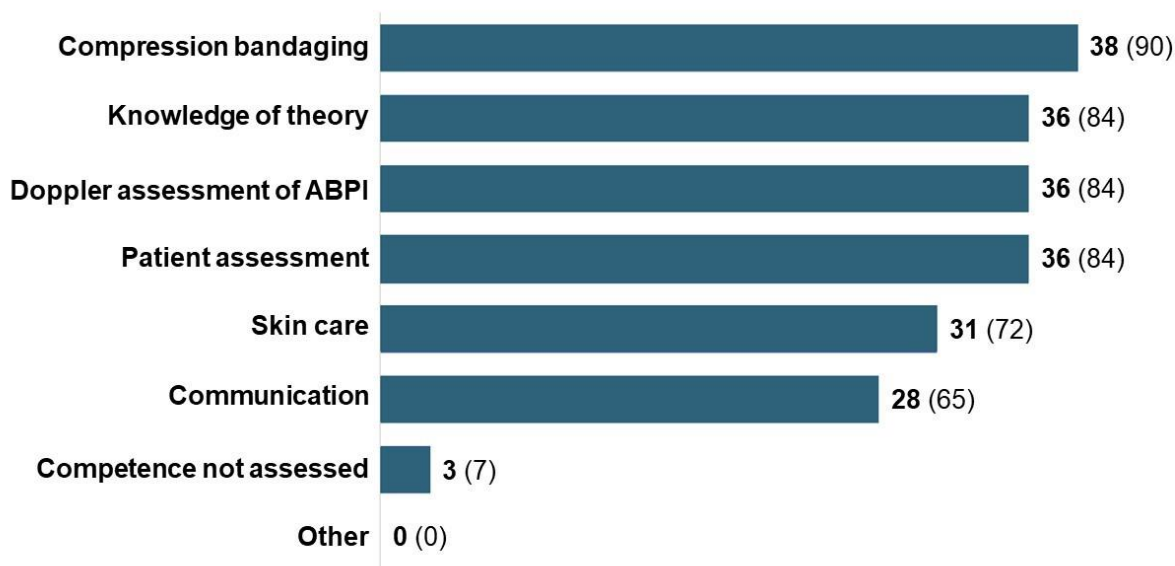
Table 4.1 Group 1 Assessors Characteristics n=43 (all percentages are out of 43)

Years Qualified	80% > 20 years	
Gender	95% Female	
Specialist post	90%	
Years in current post	5-15 years (75%)	
Specialist areas	Tissue Viability Dermatology Vascular	4- hospital 39- community
Teaching	86% in-house courses (70% leading the education) 45% leading university courses (38% contributing to the teaching)	All respondents were involved in at least 1 mode of education
Course includes competence assessment	90%	
Competence framework used	90%	
Assessment in clinical setting	52%	
Assessment in classroom setting	40%	

4.2.2 Competence Assessment

In relation to university courses on leg ulcer management over 90% (39) were stated as having a competence assessment and of those, 90% (35) were carried out using a competence framework. Respondents were asked to indicate the content of competence frameworks based on a pre-set list of topics (Figure 4.1).

Figure 4.1: Competence Framework Elements (Assessor) $n=43$ (100%)



Assessors were asked if they felt that nurses who had been assessed as competent always applied their skills in their practice. The majority view (over 80%) on a scale of 1-10 (1= always to 10= never) was evenly split across the range scores of 3-6 indicating that, in the view of the respondents, skills learned were not being applied consistently. Three respondents selected 1 or 2 (always applied) and only one person felt that skills were never applied. The question was not specific enough to ascertain if this was because the nurse(s) they were thinking of were no longer working in this area or if there was a significant concern about the skills demonstrated by one or more nurses to the extent that they did not apply an appropriate level of care.

When respondents were asked if their views of competence had changed over time 66% (28) of respondents stated that their views had changed, and 3% were unsure. The remaining 31% (14) said their views had not changed. There were 23 written responses to the follow up question to ascertain the reason for their changed views. There were various reasons given which were analysed and coded, and then the

codes were clustered into 5 main themes: assessment of competence, personal changes as an assessor (becoming more aware of responsibility), levels of interest (of the learner), time constraints and workforce changes (Table 4.2). The main headings are in bold type with illustrative examples in the rows underneath from the respondents to explain their view. Where more than 1 person made the same comment, the number is indicated beside the text in column 1. The second column, labelled Reason for Changes is taken from the data where respondents elaborated on reasons for their view changing - these statements are examples from the 23 respondents which I interpreted in light of the headings in column 1 and are not necessarily from the same respondent as in column 1.

Table 4.2 Group 1 Assessors Views of Competence and Reasons For Changes In Views Over Time (main headings in bold text)

Views of Competence	Reason for Changes
Assessment of Competence	
Great scope for improvement of practice	Managers do not realise the need for education in this field
No consistent and widespread assessment of competence	We need to be less afraid of failing nurses who are not competent
Not enough assessors	Nurses need support in practice if they only do a 2-day theory course so it makes sense [to them]
	People have differing start and end points
Personal Changes as an Assessor	
Personal responsibility for assessing individuals as competent so looking for much more depth of understanding	I expect less as there is no support in hospitals for leg ulcer management
Becoming aware that competence is much more than diagnosis and safe bandaging (2)	More aware of need for diagnosis and patient safety issues
I apply more detail to the assessment	Increased expectation of those on in-depth courses with time for practice.
Levels of Interest	
Realisation that not everyone has the passion for leg ulcers	Even after doing a course some nurses leave it up to the tissue viability nurse to manage patients (hospital).
Some nurses only attend training because they are expected to- they have no passion for leg ulcers.	Community staff will do nothing without tissue viability team input
Competence into Practice	
People attend courses then [still] make poor referrals and give poor quality care.	Many have practical skills but lack confidence to start treatment with full compression without a specialist nurse.
Practitioners left on their own after competency assessment with no follow up over time (3).	
Time Constraints	
Patients not properly assessed due to lack of time.	Lack of time to attend training
Workforce Changes	
Level of knowledge and skill reduced significantly in district nursing.	Transient workforce so fewer leg ulcer skills and confidence
Skills now expected of more nurses	Need to read more to understand
	Colleagues do not challenge poor practice

Where a competence framework was not in use respondents were asked how competence was assessed (4). There were 2 written responses to this question. One stated that following a two-day in-house course, participants spent time under supervision in a leg ulcer clinic until they were deemed competent. Another described a similar model but added that they now felt the need to introduce a framework as there was a reduction in knowledge and skills among the nurses and the framework was felt necessary to manage the increased input to teaching and assessment required by the assessors. The respondent stated that the framework was felt to make “covering everything” quicker.

All the respondents (43) were asked for their definition of what constitutes competence and all 43 submitted a response. The text in the written responses was analysed and distilled into a list that represented all the responses (Table 4.3, column 2 Responses). The words and phrases used in the definitions were then placed under headings of Cognitive (understanding), Affective (behaviour) and Psychomotor (skills) (Table 4.3, column 1) which are the domains of competence widely identified in the literature (Giro, 1993). The row labelled “Other” in table 4.3 indicates where respondents’ text did not align clearly with any of the 3 domains. Respondents submitted a comment in relation to their response. Column 3 in Table 4.3 is my summary and commentary of the characteristics of the additional information given by respondents. Please note that except where indicated as (1) all responses were given by at least two respondents.

Table 4.3 Defining Competence (n=43)

Domain	Responses	Comments
Cognitive	Knowledge of theory Underlying cause of ulceration Aetiology of ulceration Differential diagnoses Explanations Knowledge of evidence Adherence to guidelines	Respondents did not define what was meant by knowledge, for instance in relation to the depth and extent expected. The depth and extent of knowledge is undefined. 'Explanations' is presented as ability to explain concepts to the assessor of competence and explanations of findings and treatment to patients which is a fit with the cognitive domain as knowledge of theory, and also fits the affective domain as communication skills.
Affective	Safety Accuracy Holistic Communication with patient Knowing own limitations (n=1) and when to refer Confidence (n=1) Compassion (n=1)	Safety, accuracy and holistic were oft repeated terms. Accuracy was used mostly in relation to Doppler assessment of ABPI. Holism was used in relation to patient assessment and terms such as other conditions and obesity in relation to co-morbidities and lifestyle factors were mentioned. Safe was a common term and was not defined explicitly in the responses. There was only 1 mention each of confidence and compassion.
Psychomotor	Doppler ABPI Compression Bandaging Compression hosiery Skin cleansing and care Accuracy Interpretation	Accuracy and interpretation were mostly mentioned in the context of determining the ABPI.
Other	Period of education- accredited course Assessed by another Patient assessment- no elements explained other than holistic taking in co-morbidities and lifestyle factors. Time working in clinic with others to develop skills- some mentions but no consensus on the time- individualised.	There was no detail given for the points written and they tended to be discrete statements by individuals rather than repeated views across the respondents.

There were some omissions of topics that might have been expected, such as knowledge of products given the large choice available which can cause confusion and debate in clinical practice. There was no mention of the need to detect signs and risks of deterioration in a patient's condition including recurrence of the ulcer but these may have been implied across the other headings such as knowledge and holistic care.

4.2.3 Recognising Competence

Respondents were then asked how they would recognise someone as competent (Table 4.4) and all 43 respondents wrote a response. In the analysis responses were listed so that each view was represented and then grouped under the headings of

cognitive, affective, psychomotor and other in a similar way to table 4.3. In the main, the written answers were relatively succinct and tended to list the elements as presented in the Responses column (table 4.4). This may have been due to respondents having a clear view of their perception, but conversely it may have been due to work time pressure limiting responses. This latter possibility influenced my decision to use this question in the individual interviews to explore this further.

Table 4.4 Recognising Competence (Assessors)

Domain	Response	Comment
Cognitive	<p>Knowledge: anatomy, physiology, aetiology</p> <p>Discuss results</p> <p>Cite evidence</p>	<p>Respondents referred to written and oral testing of knowledge for theory and rationale for actions. They also referred to using documentation audit to assess knowledge and application of knowledge to management plans, and the ability to cite evidence.</p> <p>OSCE (Objective, Structured, Clinical, Examination) was mentioned once as a means of determining competence alongside a theory test.</p>
Affective	<p>Individualised care</p> <p>Interaction with patients</p> <p>Professional Development</p> <p>Open to develop skills and knowledge</p> <p>Evidences change in practice based on feedback</p> <p>Peer to peer reviews</p>	<p>Interaction was explained in relation to being able to give explanations to patents.</p>
Psychomotor	<p>Confident with bandages</p> <p>Apply different types of bandaging</p> <p>Confident with Doppler</p> <p>Observe Doppler and bandaging</p>	<p>Confidence has not been a key concept in survey responses but appeared only specifically in relation to Doppler and bandaging.</p> <p>The focus was mainly in relation to Doppler and bandaging in this section.</p>
Other	<p>Expertise</p> <p>Think outside the box</p> <p>Does things properly</p>	<p>Terms written such as expertise, creative thinking, properly, judgement, thorough, were not defined in the responses and understanding of these may vary between assessors.</p>

	<p>Uses clinical judgement</p> <p>Assess patient, pain, lower limb, quality of life.</p> <p>Referral and advice as appropriate.</p> <p>Supervised and assessed by a skilled clinician using a framework</p> <p>Healing outcomes or symptom management outcomes</p> <p>Completion of framework</p> <p>Working alongside to observe multiple times</p> <p>Completed theory and practice training, not just bandaging</p> <p>Does not just rely on ABPI readings</p>	<p>Patient outcomes such as healing rates and symptom control were stated by some respondents. However this would be difficult to measure and potentially damaging for individuals' professional reputation and morale because patients may be straightforward to heal or may be very complex. The less detailed "friends and family" test is an NHS feedback outcome measure for services more generally (https://www.england.nhs.uk/fft/).</p> <p>Completion of framework is presented as competence which implies the framework elements are sufficient.</p> <p>Assessed as competent by a suitably qualified and experienced assessor. This was not quantified by any of the respondents.</p> <p>Education beyond skills workshops</p> <p>Holism required in the patient assessment rather than reliance on quantitative data.</p>
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4.2.4 Conclusion From Group 1 Assessors Survey

The Assessors' responses to definitions of competence were quite focused on discrete actions. There are similarities between tables 4.3 and 4.4 although in the latter there was greater emphasis on professional development of confidence and a wider range of compression skills. There was clear confirmation that a problem in leg ulcer management exists which contributes to the overall findings that there is a problem and laying the foundations for the individual interviews to explore the nature of the problem in more depth. Concern was expressed about workloads, motivation and lack of education opportunity and engagement for non-specialist staff responsible for caring for people with leg ulceration.

In relation to competence, views were predominantly presented in relation to tasks. Expectations of staff by the Assessors were viewed as negative in relation to overall practice, balanced against appreciation of their workloads. Terms such as holistic and safe were used without them being more than abstract concepts without concrete examples. The respondents did view competence frameworks positively, but they then used intangible constructs such as 'properly', 'outside the box' and 'skilled' without stating how these would be measured in such a framework. The responses and analysis of the survey data informed the interview questions which were designed to explore the identified views in more depth.

4.3 Group 2 Student Survey

Fifty nurses contributed to this survey and identified themselves as students in the context of a qualified nurse who had completed a leg ulcer management course at a university in the previous seven years (Table 4.5).

Table 4.5 Group 2 Student Characteristics n=50 (all percentages are out of 50)

Years qualified	52% > 20 years 48% 5-15 years	
Specialist posts	80%	
Non-specialist post (community)	18%	
Hospital setting	10% (inc. 2 of the specialists)	
Academic qualification	1 st degree 60% Higher degree 18%	Remaining 22% (11) of respondents had completed individual credit bearing modules or had a Diploma in Nursing (Nursing only became an all-graduate profession in 2013).
Competence assessment in Leg ulcer course (setting)	In clinical practice 56% Class only 22% No assessment 22%	2 (4%) students referred to an OSCE assessment in class (Objective Structured Clinical Examination)
Competence framework used	97% (n=48) (of those assessed in any setting)	

Most of the students were in specialist posts (80%, 40) and 18% (9) stated they were in community non-specialist posts (District or Practice Nursing). Only 2 of the respondents were in a hospital setting either as specialists or non-specialist nurses (having more than 1 role accounted for the total exceeding 100%). Most leg ulcer management practice takes place in a community setting (Harrison, 2011, Guest et al., 2015). The number of respondents in specialist roles is an important factor to note when there is discussion of nursing practice in this study. The survey was distributed through professional forums and inevitably this means that it was accessible and promoted to nurses in tissue viability roles who are encouraged to join forums for networking. In addition, attending a leg ulcer course is often a job requirement for a tissue viability nurse, albeit there is no national agreement on qualifications for the role. It is also important to note that most nurses attending university leg ulcer courses are not specialists, the majority are community nurses. The respondents may not have been in a specialist role at the time they completed their leg ulcer course but went on to achieve these roles once they had a qualification in leg ulcer management.

4.3.1 Competence Assessment Methods

Respondents were asked for information on other types of assessment that were used in their course whether or not a competence framework was in use. The list was:

- Doppler and case study
- Literature review
- Essay (topic not specified)
- Time in clinic (not assessed formally)
- Report on a leg ulcer service
- Case study, literature review and presentation
- Literature review and exam
- Case studies

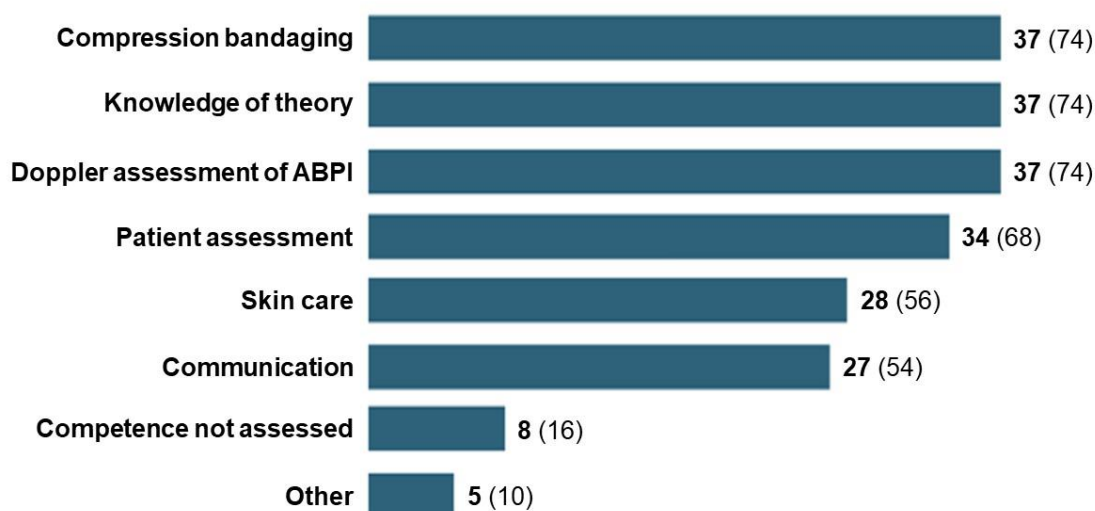
Two comments were added

- “Assessor did not stick to framework”
- “Watched a couple of times by colleague”

The added comments suggest that there was not a formal approach to assessing competence. Although these were comments from two students it does resonate with the perceptions of a lack of consistency expressed by respondents and in the literature review.

Where a framework was used, the respondents were asked to indicate content from a pre-set list. The outcome is very similar to the assessor’s information (Figure 4.1) although theory does not feature as high on the list in the Student version. There was some uncertainty about the responses in two particular questions on competence as 16% (13) said competence was not assessed on their course and then when asked where any competence assessment took place (if competence was assessed), 22% (11) stated that competence was not assessed. The difference is two students however, and as well as reflecting on my questionnaire design skills it indicated a further area to follow up in the individual interviews.

Figure 4.2 Competence Framework Elements (Student) (n=50) (100%)



4.3.2 Confidence Levels

Students were asked about their self-assessed confidence levels at the start, mid-point and end of their course (regardless of any competence assessment). The scale is set out as 1-low confidence to 10-high confidence. Finally, they were asked about their confidence level, currently, in relation to leg ulcer management (Figures 4.3, 4.4 & 4.5).

Figure 4.3. Confidence Level at Beginning of Course

When you started your leg ulcer course how confident did you feel about your leg ulcer management skills?

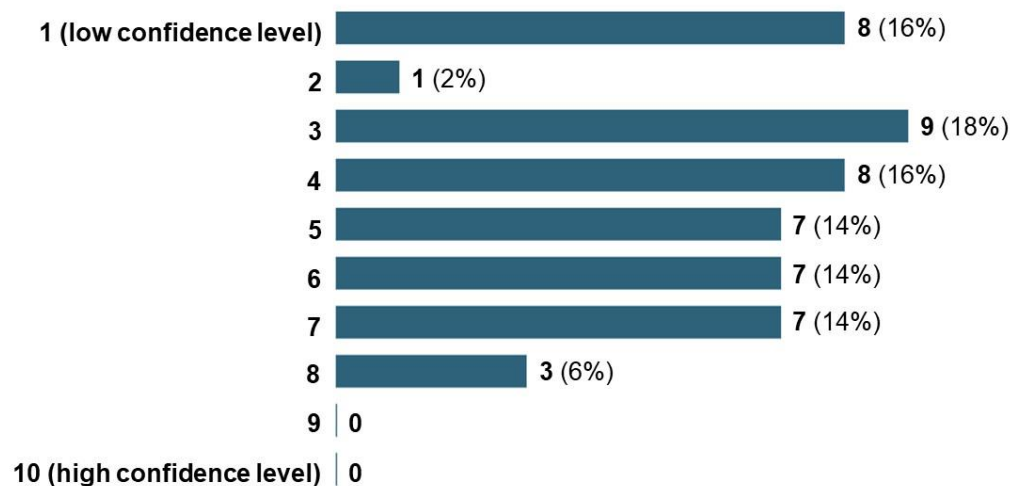


Figure 4.4 Confidence Level at Mid-point of Course

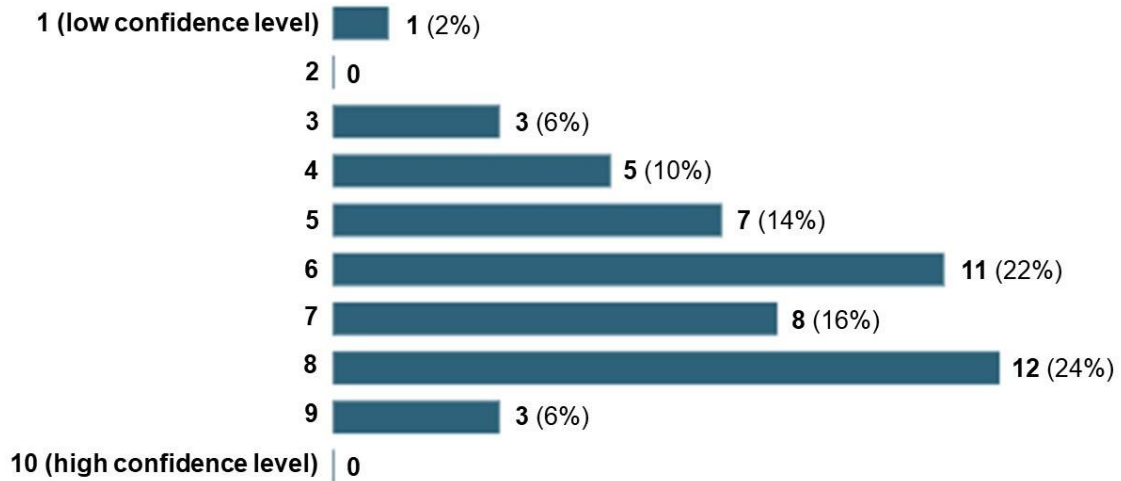
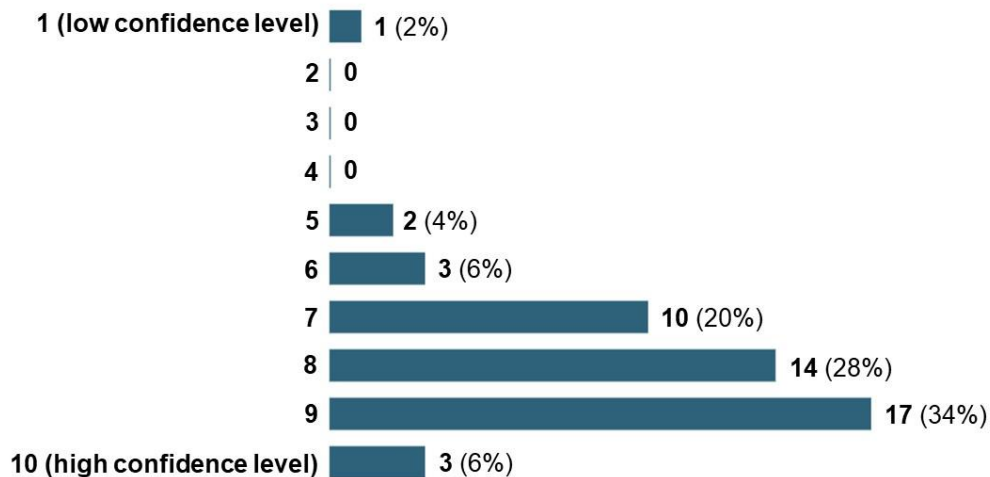


Figure 4.5 Confidence Level At The End Of The Course

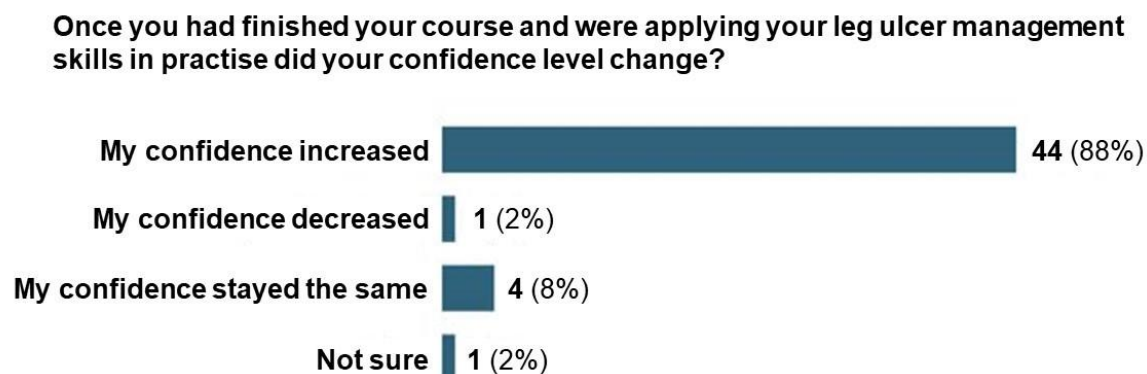
When you were assessed as competent at the end of the course, how confident did you feel about your leg ulcer management skills? (Even if your course did not have a competent assessment please still indicate your level of confidence in leg ulcer management at the end of the course.)



At the time of the beginning of their course eight respondents rated their confidence at the lowest point and a further 48 respondents rated themselves at 5 or below. At the mid- point of their course the majority indicated scores of above 5, with 30 respondents at 5 or below. By the end of the course only three respondents rated themselves at or below 5; the majority (82%, 41) scoring 7-9. When asked if they felt their confidence level had changed once the course was complete and they were

back in practice 88% (44) agreed this was so; that it had increased (Figure 4.6), with one person stating their confidence had decreased but this view was not explained in the free text option in the survey.

Figure 4.6 Confidence Level After Completion of the Course When Back in Practice



Overwhelmingly , increased confidence in the period after the course was attributed to increased knowledge of theoretical principles that they had learned during the course that they could apply to practice. Aspects detailed were the benefits of understanding the science and principles underpinning patient assessment, Doppler and compression therapy as well as pathophysiology, all of which they felt were important to patient assessment and establishing a diagnosis of the ulcer and a treatment plan. The period following the course was characterised by consolidation of skills which was particularly influential in increasing their confidence and practice skills.

4.3.3 Effect of Course on Confidence

Direct quotes from two of the students illustrate the effect of the leg ulcer management course on their confidence, helping to explain why no-one chose a confidence level of 10 after commencing the course; that it was never possible to know everything:

- 1) *Greater awareness of how to assess leg ulcers and documentation.*
- 2) *Understanding my limitations as a practising Nurse and knowing that I will never understand everything in Tissue Viability.*

The third comment below illustrates the focus on practice and positive outcomes for patients:

3) *Patients have received a more positive and informative experience.*

The positive impact of education was evident across all the responses and this quote typifies the quite striking view of awareness being raised :

“I felt I'd been in a little bubble managing leg ulcers on a small scale but after attending the course it helped me to see the bigger picture and how much more information is out there if you look for it.”

And in relation to professional development following the course completion:

“I got a job as a specialist in Tissue Viability and was able to adopt the practices and theories learnt into everyday practice at work.”

Once students had completed their course and were in their normal practice area the students reported a variance in the support they received from their workplace. Just under half of respondents (48%) felt they had a high level of support and 20% (10) felt they had little or no support. The higher figure is not borne out in the interviews where students talked of “getting on with it” and “sink or swim” (see section 4.10.3). However, there was distinction made in the interview data between the service support overall and local support from immediate colleagues with the latter being particularly valued. Predominantly the students were in established teams where more experienced colleagues gave support. In a few instances the student was the first specialist nurse in an area and there was no established support. When this was the case wider networks were valued;

“I had a good networking base such as Tissue Viability and Research to discuss the evidence. Multidisciplinary discussions around treatment options were varied, working with Podiatrists and Vascular colleagues”.

The most common reasons given for feeling less well supported were in relation to a lack of knowledge and appreciation of the demands and requirements for leg ulcer management by managers and team leaders as well as not having anyone with this specific clinical knowledge to work with. Mostly this was ameliorated to some extent by having access to tissue viability or leg ulcer forums and networks but almost 10% of respondents reported feelings of isolation in their role.

4.3.4 Views Of Competence

Student respondents were asked about their understanding of competence. In contrast to the Assessors who tended to give short succinct answers to this question, the Students gave much longer narrative answers. Table 4.6 is a summary of the ideas that respondents (n=50) included in their definition of competence. As with the Assessor Group 1 the responses are grouped under the competence domains.

Table 4.6 Defining Competence (Student Survey) n=50

Domain	Responses	Comment
Cognitive	Appropriate use of investigations Knowledge, skill and qualification. Interpretation of results Knowledge of current practice, aetiologies, when to refer.	Appropriate is a subjective term and open to interpretation and variable expectation. Qualification is not specified. Expectation of different levels of competence depending on role and setting.
Affective	Consistency Confidence Able to answer patient's questions Communication with patients. Be professional Autonomous Know own limitations	Only mention of autonomous practice in survey. Concepts discussed in interviews. Professionalism and interaction with patients raised as a concern in interviews.
Psychomotor	Doppler Compression therapies	Relatively few mentions of Doppler and bandaging across all the responses from Students for this question. These were much more dominant in the student interviews.
Other	How well an employee carries out defined tasks Holistic, safe Networking and updating with different specialisms Recurrence prevention Gold standard Problem solving Reassessment Skin assessment, wound management Pain management Complete a task but understand the risks behind it Different levels of competence Observed in practice Criteria alone does not make someone competent	Important aspects but open to interpretation. Wider skills Identified in survey as important source of support. Specific tasks, not defined General comments about competence. Discussed in interviews.

In the free-text box a respondent attempted to encompass all the elements in the statement quoted below which identifies how challenging the elements beyond the psychomotor skills are to define and measure.

“Competence is a difficult concept to explain/measure. At a technical level one might state it is the ability to take a clinical history, observe signs and symptoms of arterial/venous disease, correctly measure and record an ABPI, apply a bandage, or measure and fit hosiery. But for me, it goes a lot deeper, it is about person centred care. It is about being able to apply technical skills and knowhow to the person's circumstances, the ability to gain their confidence, trust and concordance, and the ability to know when the patient needs to be referred to others.”

This quote encompasses the elements in the Responses column, and it is interesting that the respondent has stratified elements into a technical level and a “deeper” level where there is the ability to flex and adapt care and knowing when to seek help and advice. The technical elements, psychomotor skills, dominate in the quote but there is also emphasis, albeit more briefly on the affective and cognitive domains.

Two quotes illustrate the range of views held about competent practice in leg ulcer management.

“being able to assess a patient in view of possible venous/arterial disease, interpret this assessment and results of any scans.... know if treatments are appropriate or not... be able to challenge others.”

and:

“to be assessed in clinical practice as able and safe to carry out an holistic leg ulcer assessment including Doppler assessment of ABPI and to be assessed in the safe application of compression treatment”.

The first focuses on two specific ulcer aetiologies and wider aspects of patient management while the second is more concerned with direct patient care and specific skills of Doppler and bandaging. Neither has more merit than the other but serve to illustrate contrasting views of competence in leg ulcer management.

4.3.5 Conclusion From Group 2 Students’ Survey

The Student respondents were asked about their experience of being a student on a course. They had all been qualified nurses for a minimum of 5 years, over half of them for more than 20 years. Their confidence levels increased as the course progressed and almost without exception continued to increase as they consolidated their skills and experience. Their views on education highlighted the value they put on this and how their understanding of theory and principles informed their practice.

The survey and subsequent interviews with the Students should be read in the context of a “student” almost immediately becoming a supervisor and assessor of others, and already being in a role where non-specialist nurses refer the more complex patients on to them. This is evident in the responses where the Student group can appear aligned to the Assessor group. The nature of the recruitment method for the survey means that the respondents in the Student group were much more likely to be working in a specialist setting. Therefore, they are likely to have different experiences of managing patients and interacting with other clinical colleagues than a nurse in a non-specialist role who will be more likely to refer patients to staff similar to the survey respondents. The Student group in the survey,

in common with the Assessors will have more autonomy in their role and would be more familiar with the breadth of clinical colleagues involved in patient care. This context was important to bear in mind throughout the analysis.

4.4 Overall Summary of Group 1 Assessors and Group 2 Students Surveys

The key question in both surveys related to the perception of competence. As indicated in Tables 4.3 & 4.6 defining competence, the Student and Assessor groups are different in some respects. Students had fewer entries in the psychomotor domains and they had more overarching concepts that were important but more abstract than the Assessors. For instance, Assessors highlighted Doppler, bandaging, skin care, clinical judgement, creative thinking with an emphasis on holism and safety. Students did not focus on bandaging and other psychomotor skills but highlighted consistency, confidence, and communication. Both groups valued theory very highly, and in particular the application of theory to clinical practice. There was no aspect of competence according to either group that warrants criticism nor could a case be made to exclude any elements they presented in relation to guidelines related to leg ulcer management (for instance: SIGN, 2010, Lower Limb Strategy, 2021). The surveys confirmed the view that there is not a fully consistent approach to leg ulcer management education and the assessment of competence but there are many factors in common. The narrative answers in the surveys gave rise to key areas to explore in more depth about the perceptions of education in leg ulcer management, the nature of competence and the means of assessing competence. The main purpose of the questionnaires was to gather data from the perspectives of assessors and students that would inform the development of interview questions. The second purpose of the surveys was to recruit participants to the main part of the study- qualitative interviews. Several respondents added their details to the end of the questionnaire and others made separate contact by email. Section 4.5 will present the analysis of interviews from Group 1 Assessors, and the Group 1 Assessor focus group and then section 4.10 presents the analysis of Group 2 Student interviews.

4.5 Interviews: Group 1 Assessor

This section presents the themes identified from the coding process and interpretation of themes identified with illustrative examples from the coded

transcripts from Group 1 Assessor participants. The section is in two parts (sections 4.6 and then 4.7).

There were eleven individual interviews and a focus group with eight participants. Where illustrative quotes are presented the pseudonym of the interviewee is given in brackets at the end of the quote. The first part is four themes developed from the analysis of the answers to the question about the nature of problems in leg ulcer management (see table 2.2 for interview questions). The fourth theme in part one is divided into three sub-themes. The second part presents the results from analysis of the responses to questions posed about competence and this is presented as seven themes.

4.6.1 Interviews with Group 1 Assessors

The interviews opened with a direct and single question “do you think there is a problem or not with leg ulcer management”? The response was unanimously an unequivocal yes as detailed in section 3.4. The elaborated responses to this first question were coded and grouped under four themes;

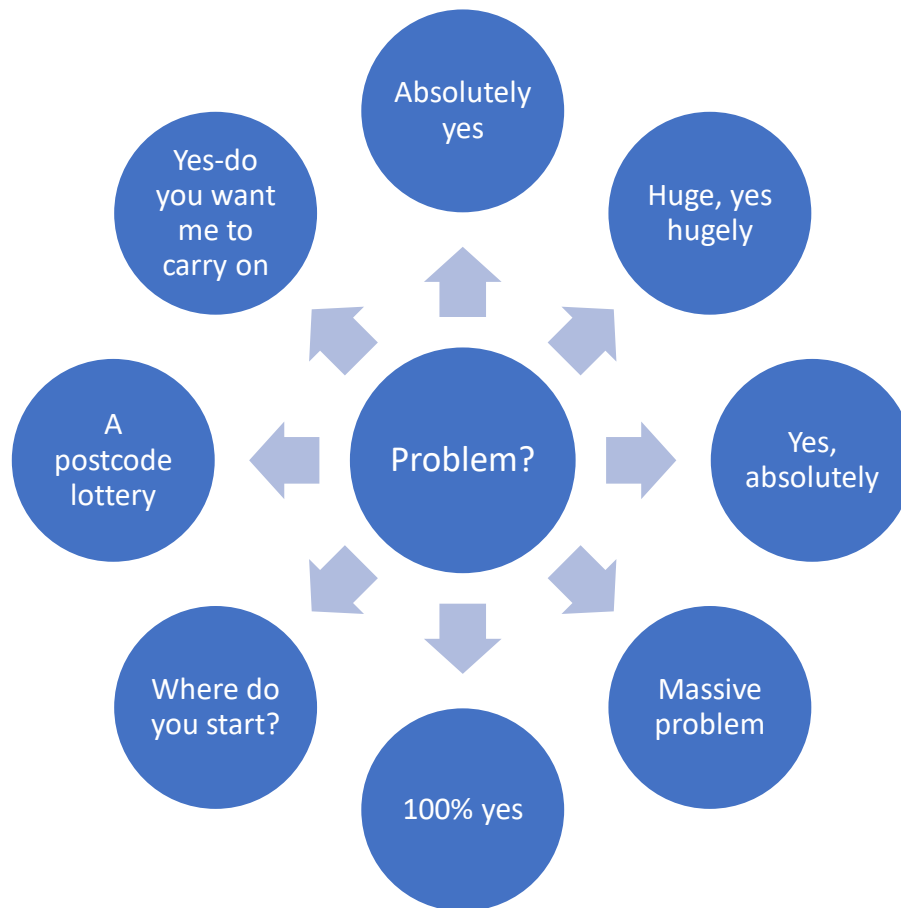
- emotional display
- impact of changes in nursing
- competing priorities and motivation of non-specialist staff
- patient experience

Each theme is considered with illustrative examples from participants. Overall, there was little variation in the views expressed by all the interviewees.

4.6.2a Emotional Display

In response to the question “do you think there is a problem in leg ulcer management?” the emotion in the responses was very striking from each participant. Figure 4.7 represents the first thing that each person said.

Figure 4.7: Responses To Question 1; Is There A Problem With Leg Ulcer Management?



The answers were given without hesitation and emphasis was expressed in words, tone of voice which was emphatic, and body language where hands and or eyebrows were raised, or there were ironic smiles and facial expressions. The display of emotion was also evident in the ways in which the participants went on to explain their views. There was understanding shown by the participants about competing priorities and increasing workloads of nursing staff. However, the emotion of assessors was expressed as they talked of frustration that the potential for improvements in healing of patients was not being realised. They spoke of leg ulcers not being perceived as important in healthcare; two participants summed up the feeling of disregard:

“I’ve always felt that leg ulcers have always been a wee bit down at the bottom of the pile!”(MT)

I personally have fought for, for years” (AR).

Others illustrated their struggle or fight for practice improvements

“fight for the time to care for people properly..... it is just so sad, because you think to yourself every practice is only going to have a certain number of patients and they should know their patients” (KE).

Frustration was expressed as *“they just carry on doing what they are doing” (VW)* [instead of thinking] *“is there anything more proactive that we could do to reduce and heal up this wound in the long term’ ” (TL).*

“there is nothing more frustrating than seeing a patient back who has been an in-patient and you are back to square one because the right [compression]... hasn’t been put on, so I think that’s an issue” (LM).

Two issues arise in the analysis of the data. The Assessors express on the one hand frustration that patients are not getting effective care and on the other hand that the workloads of the general nurses impact on care. There is a tension then between frustration and understanding. There is also a tension evident in the analysis of the participants’ views about their role in patient care in relation to leg ulcer management. This is in relation to participants discussing themselves as a specialist service and themselves as part of the general nursing population. Participants use an implicit language of collective responsibility in the use of “we” by the Assessors. Sometimes this language is “we” as in the specialist service and at other times “we” as in a collaborative encompassing of practice more generally. The tension here appears to be related to concern that staff are not caring for patients effectively and that the staff are not sufficiently skilled in this area of practice. This quote illustrates the use of “we” when the Assessor is actually referring to the general nurses deemed to be delivering sub-optimal care:

“what we are doing is probably as good as we can with the nurses we have...” (BS)

Support for nurses was given by the specialist nurses where possible and these two quotes show “we” being used to mean the specialist care but the undercurrent of concern about the general nurses remains:

“When they come to our clinic, we usually do a shared care, so we are supporting the community nurse....but some areas don’t have that support” (FA).

“we wanted to work and get the oedema down in her toes as well as her leg, I had organised to go out to the practice to teach the nurse and to support her, it wasn’t a sort of a one-off visit and then you are on your own” (KE).

The tensions between understanding and frustration were also summed up in the quote below which recognised the variations in practice and summarised the views expressed by most that there may be individual circumstances that need to be taken into account:

“I feel that too, so there is a kind of dichotomy in my feelings that I can’t quite work out which camp I’m in, and it nearly depends on the patient and their individual practice [setting]” (KE).

The understanding is shown in relation to the challenges of practice but with frustration about not having control or influence over the individual practice settings.

The overall theme was of a “personal struggle” and dismay that *“care was as good as it could be with the nurses we have”* meaning that care was not good. Whilst there was recognition that there was some good practice, and that many staff were working under very difficult circumstances, the overwhelming view was that there is a problem in leg ulcer management and the quality of care was often poor.

4.6.2b The Impact Of Changes In Nursing

This theme refers to the change of care setting depending on whether a patient is mobile or not (see section 1.14) and also the impact of severe nurse shortages. The participants’ perception of the former is that the change means patients are under the care of a GPN rather than a DN and that this negatively impacts on the care they receive for their leg ulcer a view supported by Gray et al. (2019) and Green et al. (2020). This quote illustrates the view on the difference between district and general practice nursing held by the participants:

“if they are housebound they get a very good service, if they are able to go to the practice, they are not getting as good a service.....I think we are making progress, but we still have a long way to go”. (BS).

The latter view of significant shortages in nursing which particularly impacts on community DN services where there are fewer experienced nurses (Band 6 and above) and fewer nurses overall (Fanning, 2019) which is a significant change in nursing impacts on the quality and availability of services:

“we’ve got far less Band 6 DN support, which ultimately means that leg ulcer clinics within district nursing don’t exist anymore....so you’ve got Band 5.... they come to us

for education, but then the level of support that they then receive is virtually zero, they just hit the ground running.” (HG).

The consequence of this is, according to the participants:

“people are still waiting far too long before they actually get their assessment, before they get their lower leg assessment completed.... management can be a little bit ad hoc and I think if the patient is lucky enough to heal, then keeping patients healed is another challenge” (PF).

Here the participant uses the word “lucky” (as in down to sheer luck that the patient heals) in relation to whether the patient will heal or not, highlighting the uncertainty in ongoing treatment and outcome. The inequity of care in a varied and changing nursing context is not lost on the participants:

“you get different care for your leg ulceration in different parts of the area and that to me is fundamentally wrong.” (VW).

The view stated above is in the context of changes in the funding of nursing services which affects many areas in the UK. For instance one part of a borough may have a leg ulcer clinic that patients in another part of the borough may not be able to access. One GP practice may fund leg ulcer care and another opts not to.

One participant contrasted the care setting of a specialist centre with care from a GPN explaining that when non-healing patients were referred to the centre as part of an ongoing clinical trial almost a quarter of them healed quickly in the specialist setting. This illustrates that when a patient is mobile, they are in the care of GPNs and do not benefit from specialist input unless the practice setting makes a referral or, as in this case, the opportunity to be included in a clinical trial comes up.

“when we bring them into clinic, standardise the management, have the same nurses doing their care, they improve....” (NG).

Participants expressed underlying frustration that they felt powerless in relation to influencing or directing care in general practice settings especially when there was a lack of recognition of the skills, and the time needed for leg ulcer management care, this is summed up by two quotes:

“the problem in our area is practice nurses and I think it is mainly a political problem....it is whether the GPs are willing to take on these patients, so in effect for me sometimes it is almost like a two tier thing.....if they are housebound they get a very good service, if they are able to go to the practice, they are not getting as good a service” (BS).

“they [GPNs] maybe have fifteen minutes for an appointment, which obviously if you’ve got bilateral lower limb ulceration is not really going to cut the mustard”. (MT).

The theme is about the impact of the change in nursing from DN to GPN services and how the change in setting means that patients are not seen by the most experienced staff. There was also recognition that time and workload pressures in nursing have also impacted negatively on the experience of patients and their outcomes.

4.6.2c Workload Pressures And Motivation Of Non-Specialist Staff

This theme is the view of participants that high workloads and lack of motivation to develop knowledge and skills in leg ulcer management among non-specialist nurses impacts negatively on patient care. The high workloads means there are competing priorities for nurses caring for a large number of patients with a range of conditions. As in the previous section there is recognition of heavy workloads but frustration that patients are not receiving the care they need. Unlike the previous theme this was not based solely in general practice but more generally in community nursing. Key issues raised were the focus of the nurses on tasks rather than being motivated to increase their knowledge, ask questions about ineffective or seek more specialist advice. This participant summed up the perception of a lack of knowledge:

“knowledge of the community nurses....is very low...they know that they’ve got an ulcer, but they don’t know how to diagnose what is wrong with it and they don’t always then refer on to specialist services to do that assessment and guide care.....” (VW).

This is balanced with understanding of workloads but also a perceived lack of motivation in the nurses to be more proactive:

“their workload is so heavy that they have become really task orientated” “they will go in and dress the wound daily, two/three times a week ad infinitum, rather than thinking is there anything more proactive that we could do to reduce and heal up this wound in the long term?”. (TL).

The participants made a link between time and motivation. On one hand the interviewees empathise with nursing staff and on the other express judgement that there is a lack of will to reflect on what is happening in practice and to move beyond a task orientation:

“we still have patients who are on district nurses’ books for two years and if their ulcer hasn’t healed for two years, why have they not been sent for a second assessment? They just carry on doing what they are doing” (VW)

This reactive, rather than proactive, situation epitomises the perception of there being low motivation of busy and overstretched nurses who carry on as before rather than take stock and assess the situation and the patient. Inevitably this impacts adversely on costs and workloads and is summed up by an example of a patient having a collection of therapy products (hosiery, bandages, dressings) in their home because there has not been a thorough review of care. A collection of such unused products probably totals hundreds of pounds.

“turns out compression therapy in his wardrobe, so he has got three different types of compression hosiery, so [when asked why] he said well I can’t get them on and off. So, the nurses don’t either listen to that, or don’t hear it, or haven’t got the time.....so they have to go into him three to four times a week to mop up the exudate of the leg ulcer.” (TL)

“we don’t assess correctly; we’ve still got patients out there where diagnosis of the aetiology of leg ulceration hasn’t been made” (VW).

The view of all the participants was that although time is a factor in giving care, deficient care just becomes easier and the norm for a service:

“And it is very easy, isn’t it, if they say they haven’t got the time, to then fall into that easy path of just managing conservatively.” (LM).

There is also frustration that nurses get into a situation where it is easier not to engage at all, illustrated by this view;

“[knowledge] is readily available, there are lots of books you don’t even have to go to a university library anymore, just Google it and the treatment, if you’ve got the right diagnosis, the treatment is there, available but, because they are all so busy....” (TL).

Concerns expressed by the participants about workloads and lack of motivation due to having too many things to cover in their workload impacted on patients and their care.

4.6.2d Patients’ Experience

Concerns were raised about patients being negatively impacted by the care given (or not given). The experience of patients, and concern for patients was a constant presence in all the interviews. Overall patients were not felt to be getting optimum,

evidence- based care and the participants demonstrated concern and an element of powerlessness to do anything to rectify it other than take on the care of patients themselves which their service arrangements did not allow for. Three sub-themes are apparent within this theme:

- questionable and inconsistent care
- professional disagreements
- lack of empathy/rudeness

It is clearly stated by the participants that the lack of standardisation of services and staff education impacts on patient care and there is acknowledgement that current educational approaches are not meeting the needs of nurses in a meaningful and sustained way.

4.6.2d(1) Questionable And Inconsistent Care

Most participants related examples of inconsistency in treatment. Even in specialist settings, time pressures and service design can mean that time passes without a patient outcome review especially when care is shared among multiple settings and no-one seems to be co-ordinating the care to ensure a coherent approach to clinical management. One participant explained this about their specialist service:

“ we think we are pretty switched on [specialist clinic] and we suddenly think ‘oh this patient has been coming for eight months and we haven’t said hang on, stop’,there are no flags in the system and the way things are recorded and documented are so piecemeal you lose track of things....., seen by different nurses, practice nurse, coming into hospital, going to an out-patient clinic, what happens to them in all those different places?” (NG).

The same participant related a very questionable aspect of care reported by patients;

“we have asked them, ‘why do you chose to do this?’ [self-care] there is always a convenience element, [but] an amazingly large proportion say well we do it properly, we do things like wash our hands, which is quite worrying [laughs]!”. (NG)

Handwashing is a fundamental principle of infection prevention and control (Palmer, 2019). In recent years there have been international campaigns to encourage patients to challenge healthcare personnel who do not wash their hands before and after contact (Lastinger et al., 2017). In 2020 the impact of the pandemic brought handwashing front and centre of infection prevention globally and is a key positive result in healthcare provision that is anticipated to have a benefit for patients.

Questionable and inconsistent care did not appear to go unnoticed by patients according to another participant:

“our patients know the difference between good care and poor care, he will say every time I go I’m being managed by a bank [locum/supply] nurse or somebody agency or whatever and they don’t know what to do and they ask me how are my legs to be managed, and nobody descales my legs’....., so you stand here just trying to give him the confidence to go back [to the GPN] and it just doesn’t work out” (KE).

4.6.2d(2) Professional Disagreements

In the surveys and interviews the importance of making referrals to specialist services was highlighted repeatedly. Group 1 Assessors are specialist nurses and take such referrals. However, in three of the individual interviews, and in the Group 1 Assessor focus group there was concern expressed that when specialist advice was given it was not always acted on by the nurses who instigated the referral which was a cause of frustration. One participant in a specialist service summed up the views of the others with a comment by a patient and their spouse:

“...waiting [a long time] to see X [international renowned specialist] and we go back and our district nurse says ‘oh I don’t agree with that” (NG).

Problems are not confined to community nursing. A hospital specialist nurse referred to the experience of patients with leg ulcers who are admitted to hospital, often with a condition not specifically related to their leg ulcer. The professional disagreement raised by this participant is in the context of an inter-organisational disagreement about care:

“So if patients come in [admitted to hospital], it is quite often that I won’t have time to get to everybody to get the compression back on so then it will come off and then it will be restarted in the community, and in my mind you wouldn’t stop any other treatments when patients come into hospital, so why would you stop the compression” (LM).

Professional disagreements such as the ones illustrated above appeared to manifest as a disregard (of advice or evidence based care) without a specific interaction face to face between professionals.

4.6.2d(3) Lack of Empathy/Rudeness

There were stories of a lack of empathy with patients and rude, unprofessional behaviour, expressed as “attitude” by several participants and summed up by one participant when relating an incident when they went to a general practice as a specialist nurse expecting to see a patient jointly with a GPN:

“the nurse said, ‘oh I’m really sorry there is a ‘flu clinic on, I’m going to have to leave you to do it yourself’, so put me into a room that was carpeted, that was totally inappropriate to care for someone with skin scales and everything falling off their leg and literally I felt this person [GPN] had no interest.....,[the GPN] came at the end and the comment was ‘oh this room smells, open the window, I’ll get you the Hoover!’ the patient was sitting there...” (KE).

The participant went on to say that the situation ended with the patient’s lower limb care being taken over by the specialist service (of the participant) and pointing out that most patients do not have such options and do not have a specialist advocating for them and therefore there is a significant power imbalance for patients. One participant reflected on the possible reasons for such behaviours and felt that compassion was lost and as a consequence empathy was not demonstrated:

“I hate using the word vocation, but years ago people wanted to help make people better.....now it is a job, and because of the pressures a lot of them are under, some of the compassion either isn’t there to start with or has been worked out of them.”

Section 4.6 focused on the responses to results from questions related to the nature of the problems in leg ulcer management and the 4 themes identified through interpretation of the data related to the question. Section 4.7 turns to competence and the results from data analysis of this concept in relation to leg ulcer management.

4.7 Competence

Interviewees were asked about competence and coded data were clustered into the following seven themes:

- assessing nurses as competent
- changes in expectation of competence
- a minimum competence standard of being good enough
- different levels of competence
- competence frameworks and the responsibility of signing someone as competent
- Assessors’ reflections on the student experience of being assessed as competent
- expert to novice

The list above is not in any hierarchical order. The participants shared their perspectives on how they recognised nurses as competent and how views of competent practice had changed for all but one participant. This led participants to consider what their expectation of competence had become and some reflected on

whether there should be a single level of competence and the tools they had for assessing competence. The Assessors thought about their experience of assessing nurses as competent and what they noticed about nurses being assessed. With prompting this reflection on the nurses as a learner led to a discussion of Benner's novice to expert continuum (Benner, 1984) and the significance of this for learning new skills.

4.7.1 Assessing Nurses As Competent

Participants outlined different strategies they employed for working with nurses to assess their competences including:

- allowing them to run a clinic under supervision
- working alongside them in a clinic
- overseeing more than one nurse in a clinic
- accompanying the nurse to a patient's home where the care is to be given

At what point the Assessors came to a judgement about competence when working with nurses was considered:

It is not a quick thing, you can't do it in one go, it really depends on whether they are completely new or whether they have some wound experience, and they are bringing some knowledge with them.....So with those nurses who have a bit of knowledge anyway, that would only take a couple of clinics probably [short pause] and then I could sign them off, but they are all different. (BS)

"I think you can tell, after the first couple of hours, their interest in it and that they are going to grasp it, yes.....They ask lots of relevant questions and they don't just listen to you and not ask.... Everybody is quite variable in how quickly they learn, but I think after four to six supervised practices, if someone isn't picking it up, then you know there's something wrong here." (FA)

"yes you get a feel instantly.....you should be able to pick up on whether they are doing something right or wrong...maybe not instantly, but within that visit you might be thinking 'oh my God, what have we got here?'" (HG)

"I think I do judge people fairly quickly....whether they have a positive demeanour, whether they come in enthusiastic to learn and they are wanting to get their hands dirty straight away.there is one type who are almost elbowing you out of the way to get at the patient and there is the other type who are still standing by the door half an hour into their consultation." (WD)

Yees.. [pause] I think it is, but there are some people who just instinctively seem to know [what to do with patient care] ... some of our nurses have done further study [university course named], and so they have a level of interest anyway, which is great and they are enthusiastic and really switched on, you just get a feel for right away.... and other ones you can tell fairly quickly whether there is a passion or not [laughs]. (BS)

The latter quote included the word passion and 3 other participants used this term in relation to assessing a nurse as competent.

“I don’t know how to measure it [passion], but I think it is just something that will come across quite stronglythey have tried, it has not been “oh here is a patient with a leg ulcer, must refer that” you sort of see that they have got that spark” (KE).

“...despite being in district nursing, some people don’t like it [leg ulcer management] and you get the ones with the passion, and the keen interest for wound care, just putting the effort in and being at a higher level, so it could be about effort.” (HG)

The quotes above include views on behaviours of the nurse being assessed for competence in leg ulcer management such as interest, asking questions, enthusiasm and “wanting to get their hands dirty”. These fit in the affective domain of competence. There also appears to be some assumptions made, for instance if the student has completed a known course they are assumed to have “interest” and if they are known to the assessor there is an indication that assessment of competence can be made at an earlier stage. This appears logical as a relationship already exists but arguably there could be potential for bias in assessment processes with an “unknown” student having more to prove or exhibit in the competence domains.

4.7.2 Changes In Expectation Of Competence

Stage 1 of data collection (figure 2.1) led to participants being asked the question “have your views on competence changed?” All of the participants, with one exception suggested that they had come to a reduced expectation of competence over time.

“Mmm... possibly yes. I would expect all the district nurses to very quickly become competent, whereas with the practice nurses, I sympathise with them, and they don’t have the knowledge then that the district nurses have, so I might possibly be lowering my expectations with them” (BS).

“That’s what’s out there now, realistically that’s what we are faced with, but it is not just for leg ulcer management, it is for every task in district nursing, it is really, really dire out there, so that’s life, rightly or wrongly that’s the way it is.... vacancy rates and the use of bank and agency.. then you’ve got all these Band fives with no supervision but some of the junior Band fives that we have got here are fantastic, considering they hit the ground running” (HG).

The exception to the examples above was one participant that agreed their expectation had changed, but it had increased rather than lowered:

“I think they [expectations] have got higher. I’ve got a lot of respect for the nurses I work with in the community; there are some very dedicated, hardworking, good bandagers out there, you know good people out there, so I think my levels are increasing.” (PF)

Pragmatism and understanding was illustrated by acknowledgement of, and empathy with, increasing workloads but there was also resignation inherent in observations such as:

“what we are doing is probably as good as we can with the nurses we have” (BS)

One exchange summarises the link between my initial focus group and the individual interviews (stages 1 and 3 in figure 2.1):

“it saddens me greatly [to have a reduced expectation],

I asked this participant if they were struggling with that idea?

“I am, because I don’t see why that should be, I don’t understand why that is, why is that?”

I told the participant: My focus group were quite shocked when they thought about it, I didn’t suggest it, they did, and it reduced them to silence.

“Yes, it is not a comfortable space to be in, definitely” (LM)

This exchange mirrored the experience in the initial focus group (stage 1 data collection, figure 2.1) where the participants had visibly come to a realisation of their change in how they viewed competence in leg ulcer management which shocked them. Changes in nursing in community settings, an increasing vacancy rate and reduced funding for CPD (Greatbatch, 2016) are evident in the views of the participants. Although one person was clear in their defence of nurses, the overwhelming view was that nurses were overstretched, and care of patients was not good enough.

4.7.3 A Minimum Competence Standard Of Being Good Enough

Assessors considered how their changed views on competence manifested in practice and “good enough” was the interpretation of their views on having to have sufficient staff available for patient management despite reservations, and this was clearly an aspect that worried participants. Being “good enough” was their minimum

standard for competence but they all had reservations about whether this was adequate for patient care. Even the participant (PF) who stated their expectation of competence had increased (section 4.7.2) used the word “some” in relation to staff. The theme of good enough is evident in these quotes which echo the views of the whole Group 1 cohort:

“With the ones that are really bad, you spot it straightaway, you spot it in their preparation, you spot it in the first things that they do; the ones that are really good are more [pause] straightaway; the ones that are in the middle I think you have to go through the whole procedure and you’ve got that fine line of is this good enough? And that is what worries me, is the good enough thing.....But the barrier between ‘no’ and ‘good enough’ is, depends on the day you are having.” (NG)

“It is difficult isn’t it. I think what tends to happen is we want people, we need people to be competent, so if they are not competent within a certain time frame, then we just keep them for longer to gain that competence, until we are happy to sign them off. So rather than failing people, as it were, because we need a workforce of people who can do these things so, some people go through the process quicker than others”.(WD)

“The safe bit is the important bit and they might not be really Pasteur and picking up absolutely every single clue, but as long as they are picking up enough clues to make it safe and that they know when and where their competence ends and starts and who to refer on to, that’s enough...hopefully.” (WD)

The first quote above (NG) “ ‘no’ and ‘good enough’ depends on the day you are having” is indicative of the pressure assessors feel to assess staff as competent in order to deliver some kind of service to patients, a view that features in the middle of the three quotes (WD). It indicates pragmatism and risk when their view is that nurses being assessed as competent may not be. This is evident in the view that the assessors keep going on with assessments until they feel they can sign someone off as competent but the narrative around that suggests compromise in their measurement of competence.

4.7.4 Different Levels Of Competence

Discussion of levels of competence was prompted by a question asking; “Do you think there are different levels of competence?” There were mixed responses to this question. Participant KE thought about this for a few moments and then listed their views:

“I think I would be looking for more from the person who is going to move into the specialist post:

- *expecting the specialist nurse to be gaining an awareness that would help her to think outside the box*
- *I wouldn't be teaching a brand-new Band 5 who is starting off, because they are just going to be so clouded and so muddy*
- *got to tailor the level of their competence, within their remit*
- *in an older persons' ward, I would be expecting that sort of a nurse to be able to do things like compression bandaging*
- *maybe in ENT [ear nose and throat], where they rarely see [leg ulceration], I would see their level of competence as knowing this patient needs referred*
- *if newly qualified, I'm not going to be expecting her, or him, to know everything straightaway, but within six months I would be wanting them to come back and discuss anything that they are unsure of.*
- *when they start to give you a good rationale behind their thought process at the time, that helps you to work out what they know and what they don't know. Context dependent.” (KE)*

However, one participant recognised it was not always clear cut or logical especially when assessing competence for students on the same course:

“but if you have got somebody who is a nurse specialist, you would hope they had a bit more.... A bandage properly applied is a bandage properly applied.... I would expect them [specialist] to be much more attuned..... which is unfair because they are coming to a basic levels course.” (NG)

There was also recognition that competence in specific tasks (e.g., bandaging, Doppler) does not lead to competence overall:

“competency is competency, but over-confidence or misplaced confidence can be more scary to me than lack of confidence. You know if somebody presents with an SCC [squamous cell carcinoma] in their lower leg and your link nurse on the ward is nineteen years old and thinks “oh venous ulcer, I'll Doppler them, I'll put them into compression” and six months later they have a below knee amputation, that's scary. I would rather the nurse on the ward looked at the leg and went “I don't know what that is, get the tissue viability nurse to see it.” (MT)

“Well I suppose in a way we've put that in place [different levels of competence], because we [DN service] said that there are two levels of competence, we said that there are those nurses who are competent at applying compression bandaging, which is where your task is and those who are then competent at making their [clinical] assessment... “ (WD).

Competence is mainly presented as an overarching entity but the discussion above moves to a more nuanced approach which centres around the clinical setting, job

grading/seniority and interestingly adds in levels of confidence , with the caution that this confidence may be misplaced. The differentiation between competence in bandaging, and competence in patient assessment gives rise to a task orientation which could result in increased risk to the patient through fragmented care.

4.7.5 Competence Framework And The Responsibility of Signing Someone as Competent

Eight of the assessors used a framework when assessing competence and three of these used the University of Hertfordshire framework (Anderson, 2003). All 11 Assessors stated a preference to have a framework; those three that did not have one were actively considering introducing it in practice. The framework in relation to having a checklist was deemed useful by participants to aid consistency and act as an "aide memoire". However, several went on to discuss the responsibility of signing the framework document to say someone was competent caused them concern as a professional nurse. This was in relation to accountability for the individual's practice after being signed off in the document as competent. This participant sums up the concern:

"...that whole business about signing, there is always that anxiety about signing, I always make sure I date it, as far as I'm concerned you are competent today, but I'm not taking responsibility for what you do next week! ...you know, what happens if they mess up? In eighteen months' time is someone going to come and bang on my door and say you said they were competent. But I can't worry about it too much or I wouldn't get any sleep!"(WD)

Frameworks were therefore used when elements had to be signed off at a point in time. The feelings of professional responsibility of being an assessor was evident in the interviews. The NMC (Code, 2018) requires Registered Nurses to be responsible for recognising their own limitations but in relation to leg ulcer management a nurse may not know the subtleties and risks of practice until an adverse incident occurs. (They don't know what they don't know). The assessor signs that the competencies have been passed but even although the nurse deemed competent has personal responsibility (and vicarious liability through their employer), the assessors feel they may be held responsible for any leg ulcer management related untoward incident in practice at a later date. The use of the framework was felt to be useful and gave structure and formality to the responsibility. However the Assessors feel concern about that responsibility in relation to future practice of the nurse.

4.7.6 Assessors' Reflections On the Student Experience Of Being Assessed For Competence (Group 1 Individual Interviews)

This theme is the Assessors' perceptions of the students they are assessing. Participants were asked what they noticed about the students at the point of assessment. Assessors recognised how nervous students became when being assessed for competence, and demonstrated considerable empathy with the nurses being assessed:

"They'll be nervous!....They make mistakes and they say 'oh I know that, it is just because you are watching me' [laughs]. Nobody likes being in that environment, do they? I mean they all tend to know us anyway, which I think is easier, but, yes some people go to pieces....I was nervous [in their own course], I even forgot to measure me limb before I started! So yes it happens." (HG)

" [they say] 'I wouldn't normally do it like this, oh and I've dropped the bucket and oh!' I'm sure if I had someone just observing me when I'm teaching, I've been teaching for years, I'm quite happy with my ability, but I'm sure it would still make me feel a bit nervous!" (VW).

The two quotes above are examples of empathy for the students and a recognition of the impact of nerves on performance and indeed the assessors recalled their own thoughts on being observed. However, the participant below raised a point about the assessment being a point at which the student can realise limitations in their knowledge and skills. The quote below recognises the possibility that a practitioner may be carrying out a task for assessment of competence but not realising until that moment that their cognition is not sound.

"Some of them are just really terrified of being observed, they just lose their ability to speak, they can't think of the right word and, we had a couple of examples where people were stuttering and red and they couldn't remember the right name, but I think quite a lot of them realise that they are being challenged about something they have taken for granted and actually they realise what they are doing is very limited." (NG)

Empathy and understanding of students was evident through the participants' perceptions of the effects of nerves and how they themselves might feel in such a scenario. There was laughter and stories from their own experience. This was in contrast to the earlier theme of expectations of competence and staff being "good enough" (section 4.7.3), and the anxiety expressed about staff perhaps being deemed competent despite misgivings that they may not be. It was therefore not clear what the boundary then was between "forgiveness" of nerves in the assessment which impacted negatively on knowledge and skills, and the point at

which the person is deemed not competent due to issues in knowledge and skills. The students being assessed for competence in leg ulcer management are qualified nurses. In a typical university leg ulcer course, the nurses will come from a range of practice settings and will be a mixture of levels of seniority and practice experience.

4.7.7 Expert to Novice

Being a student on a CPD course can be a daunting experience. This is especially so when a relatively senior nurse, used to being a leader and directing care becomes a student on a course where their subject knowledge and skill level may be relatively low. As presented above, assessors demonstrated empathy with students being assessed and this raised further discussion about being a novice. Participants were asked about this in relation to there being a possibility of experiencing a reversal of Benner's (1984) novice to expert continuum. No-one talked about this without prompting, nor discussed competence in leg ulcer management as a continuum. However, when the subject was raised, they recognised nurses in this situation when it was put to them that there may be a reverse with an "expert" (explained as an experienced and possibly quite senior nurse) becoming a novice in the context of learning how to manage patients with lower limb problems. The recognition of this by all the participants is summarised in this quote:

"They become less confident I think, but it is about not embarrassing them ... just providing them with a safe environment to discuss things really.... yes, they might be a skilled practitioner in other areas and they are now a novice, aren't they.....they might be competent at challenging [practice of colleagues] in many situations, but not always in a particular situation because they feel quite novice in their knowledge and skills" (LM).

One participant recognised this as being contextualised as they were personally working in a new role:

"I can answer that question because you have just described exactly my personal life at the moment, from the point of view of being very confident in one situation and then lifting yourself out and being put in another situation...the confidence goes, and an awful lot of the personality goes with that lack of confidence." (MT).

Assessors therefore recognised the potential vulnerability of being a learner.

4.8 Final Words

At the end of the individual interviews, participants were invited to say anything else in relation to competence in leg ulcer management. This was a light-hearted question posed as anything they 'wanted to get off their chest'. Everyone had something to say. In many cases the participants recapped their views and some added final thoughts. The comments demonstrate a great strength of feeling especially around what they perceived to be the inadequacy of the education provision as influenced by managerial decisions in organisations and the lack of support for nurses to engage in professional development in relation to leg ulcer management.

"[laughs] It is just hugely challenging now....the most upsetting thing about it is there is a significant number of people that have this problem [leg ulceration] and it is just the absolute bread and butter. Yes, it is just so poorly resourced and not very attractive, and people are just not looked after in the way they should be." (HG)

"You've got to argue against the people who say we haven't got time to release them [for course]..... I've had to put in a contract, that the nurse is willing to learn, they've got a clinical practice supervisor who is competent, and the manager agrees." (TL)

"[long pause]... I find it really hard to get people released for training and I find that, within our area, possibly because they know that I teach in the university and I teach a university course, I think they sometimes think that the teaching I give back at the ranch [in practice] is the course....and that bothers me. They maybe want to be taught leg ulcer management in an afternoon, whereas I'm teaching a module which is examined and tested. is almost seen as an add-on, it is not an add-on." (KE)

"I feel strongly,you want competent nurses looking after these patients.... but [pause] I've probably said enough!" (BS).

The quote from BS here and the one below from FA demonstrates the ubiquitous view that patients should expect better care:

"[laughs] No, just the whole leg ulcer service.....I don't really feel that, at the end of the day when you see patients coming into hospital, coming to clinics, that the care's good enough, it is not good enough." (FA)

This summary below from WD embodies the pressure experienced to get staff signed off as competent in as little time as possible with heavily abridged educational underpinning- in effect- the model of "see one -do one". Their personal experience of education in lower limb management, observation of practice, and concerns about patient outcomes is distilled to a signature on an assessment:

"I suppose one of the things that comes up time and time again is, is that there is a lot of pressure from management to get people to make competence..... there is that pressure, you know, oh why does it take six weeks? Why do they need to do a two-

day theory course? Why can't you just go out and work with them once and they work with you once and then you sign them off...." (WD).

The invitation to participants to add anything else they wanted "to get off their chest" resulted in a series of impassioned statements about practice, education and resources.

One participant offered encouraging words about my study and a recognition of the complexity of the problem and frustration with the situation in practice from their perspective:

"I think you are mad! No, I think it is a fascinating area.... the more I kind of hear what you are doing, see bits that have been published about it, I just worry where are we going with a lot of what we are doing and I don't know how we make it safe for patients....history of three or four years of mismanagement, I mean really serious mismanagement, often absolutely basic stuff, I want to ring the nurse up and rip their heads off, you can't because it is never just one nurse." (NG)

Overall, the key points in the interviews relate to sub-optimal services for patients with workloads impacting on motivation and availability of staff for the care of people with leg ulcers. The lack of education in this area of practice; more specifically lack of investment by health managers and budget holders were key features highlighted in the interviews, and a view of the precariousness of practice that puts patients at risk of harm. There is recognition of the demands of clinical practice but a clear frustration and concern about investment in service provision. Education, support from specialist practice, and greater awareness of the needs of the patients are presented as key factors that need to be addressed.

4.9 Group 1 Assessor Focus Group

The Group 1 Assessors data collection also included a focus group (figure 2.1) comprising eight participants. All the nurses were in specialist clinical roles and have responsibility for teaching and assessing practice in leg ulcer management. The nurses all came from one country in the UK but were spread across a diverse geographical area encompassing urban and rural communities and were in different clinical organisations.

The timing of the focus group was towards the end of the data collection period and it was a timely opportunity to discuss some of the points arising from individual interviews. The participants all knew each other and at least five of them knew me from various professional forums. Participants were allocated numbers with a prefix

of A (Assessor) to aid clarity (A1-A8). The findings are presented in relation to the questions asked of the group which were similar to the individual interviews (see table 2.2) with the addition of two follow-up questions about referrals to specialist services and the settings in which competence assessment takes place as these topics arose in the discussion during the focus group.

Themes were similar to those in the individual interviews in relation to problems and the impact on patients. There are some differences. The focus group had more emphasis on referrals to specialist support than the individual interviews had. In the focus group there was much more discussion on competence; how this was done, the setting for assessment and the impact on nurses as students. The different emphases results in a different list of themes which are not in a hierarchical order but deal first with practice issues and then with themes related to competence. The focus group participants echoed the views in the individual interviews that there is a problem in leg ulcer management but the difference was that they were more muted in terms of their emotional display hence instead of that theme, a theme of 'confirmation of their being a problem in leg ulcer management' was identified.

The themes identified in the focus group are:

- confirmation of their being a problem in leg ulcer management
- taking referrals for specialist support
- patients' experience
- assessing nurses as competent
- settings for competence assessment
- Assessors' reflections on the student experience of being assessed as competent
- different levels of competence

[4.9.1 Confirmation Of Their Being A Problem In Leg Ulcer Management](#)

Beginning with the question of whether there is a problem in leg ulcer management there was a unanimous view that there is, with many nods and exclamations of "yes" around the table. This agreement resonated strongly with the views of the participants in the individual interviews. Two quotes encompassed the unanimous view:

A 1: "I think there are lots of people in hospital settings and community settings who aren't so competent. It is very difficult then for myself, as a specialist nurse, to hand patients over to somebody that I'm not sure is entirely competent with leg ulcers and I do feel that everybody dealing with leg ulcers should be competent in their management."

A 6: "It's resources, I say well please ask your GP to phone me, let me explain why I recommend this, because otherwise this patient will never get on top of this skin condition or whatever it happens to be....they don't understand the importance of that treatment."

The narrative focused mainly in relation to GP settings, and on time as a scarce resource particularly. Appointments are generally short (10 minutes is typical in general practice) which participants felt is not adequate for assessment, dressing and bandage changes. Criticism was not confined to nurses but to the GP as a gatekeeper who may not prioritise the needs of people with leg ulceration in relation to the management of their ulcer. There was therefore anxiety for patients expressed in relation to staff knowledge, and resources. This emphasis on problems in general practice resonated with the individual interview findings.

4.9.2 Taking Referrals For Specialist Support

The nurses talked of their experiences of patients being referred to them from non-specialist settings. There was a mix of frustration that nurses could have given more care initially, with an understanding of newly qualified nurses' anxieties.

A 6: "Sometimes we do get referrals and you think maybe they could have done a bit more before, but then they've maybe reached the peak of their knowledge, so that's why they have referred, so probably a bit of both, a bit of a mixture."

There was also some cynicism about the motivation (or lack of) with some more experienced staff. The quotes from A1 and A8 below illustrate the experience of the participants who felt that staff who they felt should know better would make a referral before carrying out preliminary assessment and care of the patient and wound. They were quite forgiving of less experienced staff but cynical of the actions of staff they considered more experienced. This was balanced by the latter part of the second quote below where they considered the potential disadvantages of receiving a delayed referral.

A 1: "Perhaps it is a junior nurse who maybe isn't that particularly confident, or quite new and just happens to be on the ward round and is told refer to tissue viability, she is maybe not aware, maybe should have looked at the wound first... I think they just do."

A 8: " ..thinking 'well if I could get someone else to do it' [everyone laughs]... but on the other hand I do think in some cases yes they are referred a little bit too late, because the quicker we can get to them and the less concoctions they put on the better ...[nods from participants]."

This (knowing when to refer the patient for specialist help), was not a significant issue in the individual interviews but was expressed in response to the online survey in terms of knowing when to refer for specialist help as being one indicator of competence. This was in relation to recognising problems whereas the focus group balanced this with the view that sometimes nurses were instructed to refer patients to tissue viability services rather than a more experienced member of the team carrying out an initial assessment. There was recognition that this is appropriate for less experienced staff and that reducing delays for patients was a positive thing but the main discussion of referral to them as a specialist nurse was perceived to be about patients being passed on to reduce their (the general nurse's) workload or because they did "not like" leg ulcers.

4.9.3 Patients' Experience

The assessors discussed the relationships patients have with nurses and how concerned patients may become at upsetting "their" nurse. This may either be for concerns about adverse effects on care, or a desire to not criticise a nurse they see as doing their best.

A 5: "Patients pick up on things, they say I'm not going back to XX", they're the scariest times."

A 3: "They say Just a minute 'would you write that down nurse, because I wouldn't like to say it to my practice nurse' you know, because they are dependent on that practice nurse, they have to go and see him or her two or three times a week and it is important that they have a good relationship or they are going to be cast away."

Key points in the focus group related to resources especially in relation to time allowances for care episodes and a perception that the key areas of limitation were in GP practices. There appeared to be more sympathy for nurses in hospital settings. Hospital settings see far fewer patients with leg ulcers than in community settings (Anderson, 2017). Hospital nurses are much less likely to need leg ulcer related skills and will have fewer opportunities to practice them and remain up to date in skills and maintain confidence (Lian et al., 2022). The precariousness of practice arose as in the individual interviews; the potential of harm to patients and as an

addition the concern that patients have not to “upset” the healthcare practitioner they mostly rely on for their ongoing care.

4.9.4 Assessing Nurses As Competent

Participants were asked about the process they use for assessing competence in nurses. Participants showed two types of responses; one is working at a moment in time with a nurse in direct patient care and the other is taking a longer more formalised view. The quote from A2 below explains the former type of response in relation to observing a nurse applying a bandage in the clinical setting and the subtleties of pointing out inadequate practice. There was evidence here of role-modelling care (taking a leg each) and hoping to influence care and create learning opportunities in this way rather than tell the person outright that they were not competent which aligns with the direct patient care approach.

A 2: “I think as a registered nurse you have an obligation to the patient to say to a colleague if it is incorrectly done, to say as subtly as you can ‘take that back off and maybe do it a different way’. If a patient is bilateral [ulcers on both legs] sometimes what I would do, ‘if I do one side then would you like to do the other’, at least you can teach as you go along and then hopefully they would understand where you are coming from.”

The second type of response was a more over-arching perspective taking time and looking a range of knowledge and skills in a more formal way (A8).

A 8:” I do think probably formal testing is better and I know as [name] said watching someone putting on a bandage may look fine at the time, but it will require continuous observation and watching the technique, but I think it all comes back to knowledge, knowing what they are doing and why they are doing it, it is not just a matter of putting a bandage on”.

Participant A1, backed up by A7 expressed concern in relation to competence assessment when they perceived staff did not understand the issues in leg ulcer management and believed that knowledge did not need to be updated or could be picked up very quickly. The participants described this as “scary” and unsafe practice:

A 1: “Yes, either they think they can do it ...half an hour introduction will not make them competent. But I’ve got people who have said “I don’t need to come to a study day, because I have been to a course ten years ago”, it’s scary.”

A 7:”Scared, yes.”

4.9.5 Settings For Competence Assessment

The group was asked about methods of assessing competence to follow on from the process in the previous section. Their discussion focused on the settings in which such assessments took place. Some participants did this in a clinic and others carried out the assessments in OSCE (Objective, Structured, Clinical Observation) conditions in a university. The value and authenticity of “real” environments for assessing competence were highlighted.

A 7: “there is nothing like a real leg with all that swelling and everything that goes with a leg ulcer, because it is one thing being in class putting bandages on....it wasn't until I went to leg ulcer clinic, in my own time,sat and watched and watched and put on bandages and got a real feel for it , that you felt you were competent but it wasn't until you actually did it you thought ... yeah I can do this fine. I think you have to get real practice if you know what I mean.”

A 1 “As long as the patients are protected...they can start on each other first. Then....”

(finishing the sentence of A1)

A 2: “..do it for real, it's really important.”

There was no disagreement expressed that assessment with real patients was the preferred method of assessing competence. However, some participants, especially those specialists covering very rural areas raised the challenge of finding sufficient assessors in practice and that this was the reason they opted for OSCEs.

4.9.6 Assessors' Reflections On The Student Experience Of being Assessed As Competent (Group 1 Focus Group)

The group was asked about their perceptions of the students undergoing assessment of competence. There is a contrast here with the individual interviews. Where the individual interview participants found their students becoming very nervous about being observed and assessed, the focus group's perception was of diminishing nervousness. The difference in the perspective appears to be related to the timeframe. The individual interview participants appeared to be relating their observations to a single point in time when the nurse is being assessed for competence whereas the focus group participants are discussing a more longitudinal experience of becoming competent because they refer to improvements to patient's' condition as effective care is implemented. The focus group participants also

commented on growing confidence. Again, this was based on the impact of visible improvements in the condition of the patient over time as the nurses' skills developed rather than a specific moment in time. Growing confidence was not a feature of individual interviews in Group 1.

A 5: "I think if they can see that they are doing a good job for the patient you can see confidence growing."

I asked- what does that look like? How do you know that?

A 2: "I think answering in-depth questions ...and they see wounds getting smaller or the patient is pleased. And I'm not saying; 'take that back off!' [bandage] "

A 7:" I agree with [A2], you do notice when somebody is more confident, more competent, they are very quick to get everything set up and to show you their technique, whereas before they were very nervous, and they could drop bandages on the floor, but you could see that growing".

Participant A7 does refer here to the dropping of bandages and this resonates with the views in the individual interviews of nervousness of students when being observed in a new skill.

4.9.7 Different Levels Of Competence

The focus group agreed with the individual participants' views about levels of competence (section 4.9.7) based on the band and role of the nurse with the distinction between a base level of a practical skill, namely bandaging, and a depth of knowledge and application of that knowledge expected of a more senior nurse. There was a general discussion around an expectation that a nurse at a more senior "expert" level would be expected to do a more specialist course and likened this to their own experience of education in leg ulcer management.

A 7: "Well I suppose that's what we've done, we've attended leg ulcer courses, two day courses, one day courses, individual things and then we have gone on at a different level to look at whether it is 1st, secondary degrees ... whatever, because that is the knowledge we need at expert level, specialist level, whatever you want to call it. Not every single person dealing with leg ulcers ... has that expert level."

A 2:"I think the important thing is that, once they've hit that level of knowledge and as [A1] said earlier, they are competent on the day, I think everyone needs to be aware of their dips, so when they see something that's 'outside my remit of knowledge',there is also that of knowing your capabilities and when you need to get help."

4.9.8 Patients' Experience (Group 1 Focus Group)

The assessors discussed the relationships patients have with nurses and how concerned patients may become at upsetting "their" nurse. This may either be for concerns about adverse effects on care, or a desire to not criticise a nurse they see as doing their best.

A 5: "Patients pick up on things, they say I'm not going back to XX", they're the scariest times."

A 3: "They say Just a minute 'would you write that down nurse, because I wouldn't like to say it to my practice nurse' you know, because they are dependent on that practice nurse, they have to go and see him or her two or three times a week and it is important that they have a good relationship or they are going to be cast away."

Key points in the focus group related to resources especially in relation to time allowances for care episodes and a perception that the key areas of limitation were in GP practices. There appeared to be more sympathy for nurses in hospital settings. Hospital settings see far fewer patients with leg ulcers than in community settings (Anderson, 2017). Hospital nurses are much less likely to need leg ulcer related skills and will have fewer opportunities to practise them and remain up to date in skills and confidence (Lian et al, 2022). The precariousness of practice arose as in the individual interviews; the potential of harm to patients and as an addition the concern that patients have not to "upset" the healthcare practitioner they mostly rely on for their ongoing care.

4.9.9 Conclusion

The Assessors in the individual interviews and in the focus group were unanimous in the view that there is a problem in leg ulcer management. The nature of the problem from the perspective of Group 1 Assessors is multifactorial but centres on the interest and motivation of staff, and the organisation of services- mainly in relation to resources of time and investment in education. While exhibiting empathy with constraints and pressures on general nurses all the Assessors recognised the level of knowledge and skills of non-specialist nurses is insufficient. Participants, individually and collectively in the focus group, have many aspirations for competent practice but generally feel these are unfulfilled. The lack of education in leg ulcer management and a view that practice is precarious and risks harm to patients causes anxiety and frustration evident in the interviews and focus group. Given the option, the assessors would prefer to keep patients under their own service, but

resources do not allow for this. There is recognition of the demands of clinical practice but a clear frustration and concern about investment in service provision and education. The value the participants put on leg ulcer management education is evident and any input to learning was perceived as valuable and potentially a stepping-stone to more formalised and higher-level education. The education they were referring to was specific courses or modules for leg ulcer management or tissue viability. Opportunities for learning in addition to the formal learning also included working with nurses as they delivered care and modelling good practice.

4.10 Interviews: Group 2 Students

This section details the themes that arose from analysis of the data from individual interviews with Group 2 Students (see table 2.3 for interview questions). The themes related to their personal experience of being a student on a leg ulcer course and their journey to competence, and comprised:

- early experiences of encountering people with leg ulceration
- being a student
- value of support and role models in practice
- self-perception of confidence levels
- experience after the course, having been assessed as competent

Students also talked of their views of leg ulcer management more generally in practice and these themes were:

- problems in leg ulcer management practice
- education in leg ulcer management
- views of competence

4.10.1 Early Experiences Of Encountering People With Leg Ulceration

Students were asked about the time when they first encountered patients with leg ulcers. They talked of near misses and a lack of awareness of what they were seeing in practice. 'Luck', 'lucky escape', 'getting away with it'- were words used when reflecting on early career encounters with patients experiencing lower limb conditions. Examples were given such as failure to identify an exposed tendon and never having seen a patient with a healed leg ulcer. Exposed tendon in the lower limb, if damaged, could affect a person's ability to walk again (Nichols, 2015). The comment about not having seen a patient with a healed ulcer was expressed in the context of treatment of the wound being ineffective with no experience of progression

to healing that in hindsight they could see was poor care. The examples also illustrate a lack of awareness of how to manage patients' lower limbs when there are problems. The quote below demonstrates that in relation to wound care nurses can have preferences and familiarity for certain types of wounds. In this case the participant's experience was in a surgical ward in a hospital dealing with uncomplicated post-surgery wounds and they had no experience or knowledge of leg ulcer management and felt at a loss when such a patient was being treated in the ward:

"I'd probably try and run a mile unless it was a massive, clean, surgical wound...I wish I knew back then, even more basic stuff. And things like that tendon, I was a qualified nurse, I had had two years' experience by that stage, I should have known that that was a tendon in a way, I knew it wasn't right and you're lucky, you know what I mean, you think 'God'.....I had a really lucky escape to be absolutely honest." (RB)

The Students were candid about their early experiences and recognised the risk to patients of their lack of knowledge typified by these 2 quotes:

"I hadn't got a clue what I was doing I think, yeah because I don't think, we rarely took people through to that healing phase in my experience on the district, which is awful isn't it?" (QC)

"...very scary.....I wasn't aware of the risks, looking back on it.... to be fumbling my way through it was wrong, but it was like every new skill that I learnt on that job it was um....kind of a technique, you learnt ... to do the technique ... maybe it was just pure luck that we got away with it in the early stages, I think that has a lot to do with it, that's what's the scary part, thinking that you were just relying on pure luck." (DN)

4.10.2 Being a Student

In relation to their own journey Students expressed a high level of motivation to learn; wanting to learn more, enjoying reading, thirst for knowledge, and they have experienced, and valued, support to develop their own skills. Almost invariably university leg ulcer courses they studied were a requirement of their role in order to plan and execute the care of people with lower limb conditions as a specialist nurse. Students had studied leg ulcer management in various UK universities. The participants described their learning experience on a leg ulcer management course which was very positive as well as feeling a sense of exposure as they gained knowledge and skills that were new to some and certainly at a deeper level for all. There was talk of 'light-bulb moments', reflection on the precariousness of their previous practice, and the perception that 'luck' saved their patients from harm

especially in early encounters before their learning about leg ulcer management (see section 4.9.1 above).

Students were asked what it was like to be a student on a university leg ulcer course.

“Terrifying! [laugh].... I haven’t been in that sort of environment really since [many years].. ...having to get back into education and being based in the university and learning a completely different way, it was just, it was really [emphasis] scary....I really didn’t think I was capable of doing it.” (AP)

“I like being a student actually. I quite enjoy that. I think it is good to get time out from the clinical place as well. There is a lot to learn, but I enjoy learning, I never really see it as a chore....I enjoyed all of it really. I think it is my thirst to gain more knowledge really makes it enjoyable for me”. (CC)

I just found it really interesting and I wanted to learn more... obviously I learnt so much more in that course than in the two day course... now I encourage anyone who has done the two day course to go and do it ‘look you really need to do it if you are bandaging on your own’..... anybody who is working that way does need to know as much as they possibly can, don’t they?....I love learning.” (EH)

“... enjoyed the practical side of it, it was the assignments I struggled with. But the practical side of it I absolutely loved and the reading, my massive anxiety was the assignments right through. But the practical, the learning, what was good was that there was a practical aspect to it as well.” (RB)

There was some anxiety expressed by most of the participants at being a learner again especially in relation to academic assessment but overall, for all the participants, the theme was one of enthusiasm for learning both theoretical and practical aspects of the course.

The Students reflected the Assessors’ views of how nervous one becomes when being observed and assessed for competence. This participant typifies the experience of the participants:

“It was OK [slight hesitation]. Most of the time I was fine, but there were sometimes when, I remember doing the Doppler one morning with [name] and my hand was shaking, and she said to me afterwards ‘were you really nervous? Was I making you nervous?’ And I said ‘no, I don’t think so’, but I think I was just like worrying so much that I was not going to be doing it right that, and I think I was, my hand was shaking.” (AP).

The quote above resonates with the findings in the Assessors Group 1 individual interviews and is different to the perception in the Group 1 focus group interviews that feeling nervous was not such an issue.

4.10.3 Value Of Support And Role Models In Practice

All the participants expressed admiration and gratitude for the support they had received from mentors and from colleagues in other areas who allowed them to visit and see different aspects of practice. The mentoring and support were from nurses who were highly skilled and experienced in leg ulcer management and it was these skills that were detailed rather than any reference to their seniority or qualifications. One referred to “bandage queens” in admiration of the level of skill they observed in practice, seeing such nurses as role models.

“I think, well not just think, the literature says, that it depends on how good you are at it, how much compression you achieve, and I still have colleagues who are queens of short stretch bandaging [laugh] and I myself am still striving to achieve that sort of, that kind of standard.” (GR)

Support could be variable especially if the Student had a job title encompassing ‘specialist’ and was then perceived by managers to be skilled in all aspects of tissue viability including leg ulcer management. This, despite the manager being the person who normally agrees the funding of the university course and the person with whom learning and support needs are discussed- namely the particular skills required for leg ulcer management.

“I speak to colleagues, people in other parts of the Trust, it sounds as though they have got much more support, because [the organisation thinks] ‘there is somebody who has been doing tissue viability for years..... get on with it’. Yes, there is definitely a lot of support, but, at the same time it was basically sink or swim and you just had to shout for help, whether it was grabbing somebody or calling someone, whatever it is.” (GR)

4.10.4 Self-Perception Of Confidence Levels

Discussions about practice and competence generally resulted in confidence being discussed. Therefore, Students were asked about their level of confidence and how this may have changed throughout their journey to competence in education and practice. The levels were explored in the survey and included in the interviews to explore it further.

Participants were asked about their level of confidence while on their course. They were asked to rate this on a scale of 1-10 (1= low level, 10= highest level).

Participants reflected on growing more confident during their course and it was clear that this was not a linear process as survey results suggested (section 4.3.2) but rather it was a journey of highs and lows. This language of highs and lows/peaks and troughs was explained as outcomes for patients more frequently than in relation to academic challenges although it was evident that academic work was not comfortable for some participants. These exchanges in two interviews illustrates the views of the Students in relation to the trajectory of how their confidence built:

“Probably seven or eight [score], I’ve come a long way, considering it is only a three-month module and it is quite a short length of time, there was a lot packed into that, so my confidence has come up quite a lot.”

I asked: Do you think from day one to the final day that you made a steady rise in that confidence level or were there peaks and troughs?

“It was probably quite a slow incline, it took a while, I mean the first - I don’t know month probably - my confidence was really, really low and it did take a little while to get [pause], to increase I suppose. There probably were a few dips every time we did something new, or had something new to tackle, you know I would reach one point and think I can do that that and then I would dip again and then I would bring myself up again and try to tackle something else.” (AP)

“At the end of the course probably gone up to seven or eight, now I would score myself perhaps a bit higher with experience post- course I think.”

I asked: Did your confidence level go up in a straight line or was it a bit of a wobbly line?

“.. a wobbly lineoh I just feel weird that I was treating people blind before and now I’m realising the dangers or the things that could go wrong and it is more by luck than judgement that it hasn’t I suppose, whereas now I’d be happier to get somebody’s second opinion than withhold pressures and just blundering ahead [laugh].” (QC)

Considering the process of building confidence in this question enabled the Students to reflect on their journey. In the first quote the Student recognises that new things impacted on confidence but that confidence levels increased with exposure to new aspects of leg ulcer management, and in the second the Student is recognising that not knowing something is a trigger to seeking advice rather than “blundering” on. Both appear to be recognising the positive impact of learning on their confidence.

4.10.5 Experience After The Course Having Been Assessed As Competent

Students were asked what happened on completion of the course after they had passed a competency assessment and resumed their normal clinical role. Once deemed competent, the participants told how they then were expected to work autonomously in the sense that they were not considered in need of supervision by colleagues. In the main they still had opportunity to discuss issues with colleagues but there was a change in the dynamic where this became a clinical discussion sometimes with the “student” becoming the mentor and the more experienced person in the practice setting to support others. The way the participants talked about their current work illustrated that they had now become the mentors and assessors, albeit one participant (AP) asserted this was not yet the case as they had joined the course with little prior experience. This participant was the newest member of a small practice team so there was not yet newer staff to mentor and assess in leg ulcer management.

Participants were asked how they felt after passing a competence assessment. One participant summed it up in a way that reflected most of the Students’ views:

“I didn’t really feel any different then, I was still thinking like, do I really know what I’m doing? And I think because we hadn’t submitted our assignments then, had we? So that was still looming I think and so there wasn’t a moment, no I still felt like, you know even though you think yes you are competent, I didn’t feel competent, it was like OK, but I’m still learning.”

I asked: But do you feel differently competent now?

“Yes, yes I do actually. I had a Monday morning recently and I think every patient I had was a leg ulcer patient and I got to the end of the morning and I thought ‘wow, I coped with that!’ And that was a moment that I thought ‘OK I can do this’.” (AP)

Additionally, another participant emphasised the importance of passing the academic element of the course too:

“I just carried on doing the clinicsI just sort of got on with running my clinics, seeing the patients I knew, seeing other patients I didn’t know”

I asked: Did you feel different?

“Probably not on the day after, but when I got my mark I felt, I did feel different, I thought oh that’s you ... and I was quite pleased that I had got a good mark as well, so yeah.” (GR)

Imposter syndrome was suggested by these exchanges and appeared to be reflected by most of the interviewees to some extent. The Students were experienced, had completed a university course and had been deemed competent

by assessors yet they did not feel it (competent) initially. Imposter syndrome is often a short-term phenomenon, but for some it can endure and become a barrier to career progression (Haney et al., 2018). However, to date, the interviewees do not appear to be adversely affected.

4.11 Views On Leg Ulcer Management More Generally

The Group 2 Students were then asked more generally about leg ulcer management practice and they were keen to share their views. This was a shift from focusing on them as a student to their experience as nurses who had built up knowledge and experience in leg ulcer management.

4.11.1 Problems In Leg Ulcer Management Practice

Group 2 Students were asked if they felt there is a problem in leg ulcer management. Unanimously they stated there is a problem with leg ulcer management in clinical practice and there was some vehemence in the way the Students expressed this which mirrored the views of the Assessors (see figure 4.7). The issue was discussed in relation to problems 'out there' (in non-specialist practice areas) rather than in the specialist clinics or services where most of the interviewees were based.

Problems were identified as poor practice leading to unsatisfactory outcomes for patients. Poor practice included a lack of initial and ongoing clinical assessment of patients and therefore a less than optimal management plan and sub-optimal compression therapy. They felt there was a lack of recognition when there was deterioration in the patient's condition or a need for an amended clinical plan, linking these to workloads and inadequate training. These two quotes represent the views of most of the participants in relation to inconsistency and unknowledgeable care:

".....here leg ulcers are basically managed by district nurses and tissue viability nurses; we run the clinics for mobile patients and district nurses see housebound patients. So, in theory, obviously, they should be getting an equal level of treatment, that is to say level of care, but what actually happens is the district nursing services are overstretched, it is that I guess people get minimum competencies....." (GR)

"I think I was lucky because I was well supervised and I wasn't given carte blanche ...there are some places that might not be so and people will just get on and manage leg ulcers, you know they think they can manage without having any training." (AP)

Other identified shortcomings of non-specialist nurses were lack of motivation to become more skilled in leg ulcer management and a focus on tasks rather than reflective, evidence based, practice. However, just as with the Group 1 Assessors there was considerable empathy with nurses expressed by the participants, and a

recognition of their high workloads and competing priorities in an increasingly pressured health service. Sometimes the competing priorities deemed more important than leg ulcer management, such as end of life care were seen as understandable by the participants and at other times were expressed as preferred priorities by general nurses:

“they [general nurses] do not like leg ulcers” (EH)

There was a view that one had to actively like leg ulceration in order to be an effective practitioner. The first quote below shows the potential that the nurse is not averse to leg ulcer management (they have a “favourite bandage”) but that time pressures result in inadequate care. The second quote however is much more direct in the lack of interest in leg ulcer management, and sadly therefore, according to the Student, in the person with the leg ulcer.

“..now I know there isn’t enough staff out there, so they have less time to do Doppler testing for patients who are housebound, so they will just want the quickest job done, so they will get their favourite bandaging and use that system.” (QC)

“Well, I think it is lack of, well, ... lack of interest in the person.So some district nurses, for example, their niche might be palliative care and their leg ulcers patients are just something that they have to, part of their daily process that they have to go through, whereas they would far rather be sitting in a house supporting family..... nurses who are just happy to just tick along on the basic levels of knowledge and remain beginners as such.” (DN)

In three of the interviews Students expressed concern that reduced levels of compression were applied to a patient’s leg which is not the recommended, evidence-based, treatment (Harding, 2016). There was some recognition that at times this was necessary in the short or long term for individual patients, but the concern was about there being a blanket approach to all patients. This was felt to be due to a lack of confidence and knowledge.

“just because somebody doesn’t feel confident in applying the right level of bandage, perhaps there should be some question somewhere what effect they think it is going to have on the patient by not applying the right treatment.” (CC)

I asked: So if somebody said I’m not quite sure what I am doing here, so I’m going to apply reduced compression to keep my patient safe, would you see that as safe practice?

“At that stage possibly, but that might indicate that that person needs more support, supervision, education, because obviously we want to give all our patients the gold standard, whatever is going to give them the best outcome, that’s what we want to

do, but ultimately.....I think if you are in a district nursing role and you are not confident, you're absolutely correct base is to refer on, don't just think 'oh well I don't know what to do here, so we'll just let it go'." (CC)

There was recognition that sometimes reduced compression is used as a result of compromise with patients to ensure they at least have some compression to help control leg swelling:

"I still get a few disappointments when perhaps patients can't or won't go into the compression that they need and then you can only put them into reduced or they will take it off and then things start to deteriorate and that's when I start thinking 'have I got this right, you know'..... anybody that is of real concern to us we can discuss." (DN)

Seven of the Group 1 Assessors raised the issue of reduced compression as an indicator of less than effective practice and focus group participants echoed this view. Anecdotally in professional forums and conferences this is a view often expressed in the context of frustration that it negatively affects healing rates.

4.11.2 Education In Leg Ulcer Management

Participants were asked to talk about their views and experience of engaging in a university leg ulcer management course and encouraged to make suggestions about topics they would recommend being included for future students based on reflecting on their experience. Their stated satisfaction with the course they had studied meant that it took several prompts to elicit information as the Students felt their university courses met their needs and expectations. This may have been influenced by my position as a university academic who runs a leg ulcer course; albeit some Students had completed their course in other universities. Students were invariably pragmatic about the courses in relation to recognising there was finite time:

"Everything doesn't have to be in the classroom and it is how well you use your own opportunities... you can't cover everything..." (DN)

"I think the content was good, I mean it covers most of what, everything I needed to know, I can't think that there was; no I mean the only thing that I would say really is if you had more time you could go back to things and do them again [after the course is completed and there has been time to apply learning in practice]just to make sure I've got a good understanding or I know what I'm doing....coming back to it after you've had time to apply it, you do understand." (AP)

The Students had relatively little to say about the university course they had studied but had much more to say about education opportunities for staff who are managing

most of the patients with lower limb problems. This ranged from a see-one-do-one approach to a two-day course mainly run inside the clinical organisation. The participants' views were that these were felt not to be adequate but were increasingly the only opportunity for nurses. The participants all expressed views about the inadequacy of this brief education and four expressed their views in the context of reflecting on staff not realising 'what they did not know' and how precarious their own practice had been even after engaging in brief education events. Some training and education was given by company representatives from manufacturers of medical device products and this was felt to be unsatisfactory due to its perceived biased nature, short duration, and lack of accountability. This account illustrates the concerns discussed:

“what I did was a workshop, Dopplering and bandaging workshop and basically I'd gone to the leg ulcer clinic and developed my competencies ...I kind of got my competencies like that. You know when I look back, I think oh it is actually the two days, study days and that's the actual procedure you do two study days and then you basically do the competencies.... and then they get signed off but...[shrugged and raised both hands to indicate “what can you do”?]....” (GR)

Some participants discussed mandatory training in healthcare such as moving and handling and basic life support (annual training) , some also have this as a mandatory requirement in relation to pressure ulcer prevention in tissue viability. This is not a feature of leg ulcer management despite there being many more patients affected with leg ulceration than other wound types (Guest et al.,2017).

“I do think that there should be some mandatory training or induction for anybody who is going to encounter leg ulcers, primarily community nurses and practice nurses, that should be part of their mandatory training ... and examples on leg ulcer aetiology, so that they know which one, what's an arterial ulcer, what's a venous leg ulcer and again about the different bandages and how to apply them properly”. (DN)

4.11.3 Views of Competence In Leg Ulcer Management

Participants were asked how they define competence in leg ulcer management. It was explained that there is not an agreed definition and I reassured them that if they had given a definition in their survey response, I could not attribute it to them. None of the interview responses appeared to be the same as in the survey (at least 5 of the participants had completed the survey) when the survey answers were compared to the interview transcripts. Definitions were much more speculative in the interviews

than in the survey (tables 4.3 & 4.6) and the idea of different levels of competence was prominent.

“I think there is a big difference between, [pause] it is conflicting, putting a bandage on somebody and doing that right and doing that properly, and making the decision [voice emphasis] about whether, or not to put a bandage on, and what is going to be the best bandage for that patient. To me a beginner can be taught a routine....step by step, but if you are talking about decision making, in and around leg ulcer management and assessment and Doppler, then I think you are further on up that continuum.” (GR)

I asked: There are different levels [of competence]?

“Absolutely. One example is health care assistants, the argument would be if they are trained and shown how to put on a compression bandage, which they would be in some areas, is that just a technique, are you taught, does that mean they can go out and do that, and yet I don't think, that hasn't happened in [organisation] yet, but I don't think in any way they should be out carrying out leg ulcer assessments....it is whether you look at it as just a clinical skill or a technique or whether you looking at it as making an assessment.” (DN)

However, competence was not seen as an end point in itself:

“I personally think that competence is an ideal that you will always strive for, I don't think you ever will become truly competent,every new study day I go to brings me a different perspective, you see different practices and I think competence is an OK term, but I don't think I would ever deem myself as being fully competent and never having anything more to learn.” (DN)

This reflects earlier comments from Group 1 Assessors (Section 4.7.1) about signing someone off as competent at a moment in time which does not always reflect their ongoing practice:

“Competence is a personal thing isn't it?when I feel safe and I know that I know what I am doing and I understand what I am doing.... not somebody who has just assessed as a one off and you think 'oh yes', I like to think I can see consistency,I've seen bandages put on in all sorts of different combinations and thinking 'my goodness me', you know, it is frightening sometimes what you see.” (CC)

“I work with fairly newly qualified nurses, sometimes just because they can tick all the boxes [in a competence framework], doesn't mean to say that they can actually apply something in a safe manner..... [they need] well common sense, or adaptation to the patient.” (QC).

4.12 Group 2 Student Conclusion

Students exhibited a willingness to learn and reflected on their opportunities. 'Near misses' they shared in interviews troubled them even years later. There was evidence of 'imposter syndrome' for some as they explained their feelings of being

competent after their course and it was notable that they felt academic achievement helped validate their competence. Students expressed concerns about practice and the experience of patients when practice was not of an effective standard. One measure of poor practice expressed by the Students was the use of reduced compression levels due to a lack of skills and confidence in managing patients. They valued their experience of education and the support they received to hone their skills and knowledge. As Students described their work in leg ulcer management and their interaction with colleagues it was evident that there was an expectation by managers that once deemed competent, they were more likely to be expected to work autonomously and become mentors to, and assessors of, others.

As was clear from the analysis of the Student survey in section 4.3, increased confidence in the period after the course was attributed overwhelmingly to increased knowledge of theoretical principles that they had learned during the course that they could apply to practice. Aspects detailed were the benefits of understanding the science and principles underpinning patient assessment, Doppler and compression therapy as well as pathophysiology, all of which they felt were important to patient assessment and establishing a diagnosis of the ulcer and a treatment plan. The period following the course was characterised by consolidation of skills which was particularly influential in increasing their confidence and practice skills.

There was agreement with the Assessors in relation to concerns about practice and unanimity about there being a problem in leg ulcer management. Students and Assessors called for more education that was robust enough to equip nurses with knowledge and skills in leg ulcer management. Support for investment in education and the resources within clinical practice areas, particularly GP settings was common to both groups as was concern and frustration about services for patients.

4.13 Overall Conclusion

This chapter presented the findings from the data in relation to the online surveys (Stage 2) and the interviews from Group 1 Assessors and Group 2 Students participants (Stages 2 and 3). See figure 2.1 in Chapter 2 for a summary of the stages of data collection. Survey data analysis detailed the characteristics of the participants and presented initial commentary on the findings followed by a discussion section of the overall findings in relation to the context of the perceived

problem in practice and the educational issues arising from them. Stages 2 and 3 involved Group 1 Assessors and Group 2 Students. There were 43 survey respondents in the Group 1 Assessors, most of them in specialist posts for many years and most using a competence framework. In Group 2 Students there were 50 respondents with almost 70% of them having been assessed as competent using a framework. It was evident that the students valued education, and ongoing support in this field of practice and that their levels of confidence increased as a result. Both groups confirmed that there is a problem in practice with leg ulcer management and that patients receive less than optimum care. The survey data from both groups highlighted problems in practice and enabled questions to be developed for deeper exploration of these problems in the individual interviews and focus group. Fetters et al. (2013, pg. 2143) explain this as “expansion” where data from different sources enable greater insight into the nature of phenomena (see also 2.6.1). The focus group (Group 1 Assessors) echoed the perspectives elicited from the individual interviews. The Braun and Clarke thematic analysis framework (2006, 2013) guided the qualitative data analysis into themes from initial coding across a wealth and large volume of data across 2 groups of participants and two methods of data collection. The next chapter presents discussion of the themes in the data presented by the Group 1 Assessors and Group 2 Students.

Chapter 5 Discussion of Findings

5.1 Introduction

This chapter discusses the key findings from the data and links this to my study's aims and research questions. Following the introduction and a table orientating the section headings to the research questions (table 5.1) discussion of the data is set out in three main parts: problems in practice, competence, and education to encompass the three main areas in the study. Problems in practice and competence relate to research questions 1 and 2, and education relates to research questions 3 and 4. Table 5.1 contains the initial question put to participants: is there a problem in leg ulcer management and, if so, what are the reasons for it? This relates to research questions 1 and 2 and it was the key question put to all the participants. Due to its fundamental importance it is reported on in the opening sections (5.2 to 5.2.9). Each part of the sections below has a conclusion, there is a conclusion offered for each of the three parts of the chapter in turn followed by an overall conclusion of the chapter.

5.1.1 Aims And Research Questions

The overall aims of my study were to advance understanding of the nature of competent practice in leg ulcer management education, develop an educational strategy and a framework of recommendations that supports practitioners to be adequately prepared for the demands of leg ulcer management practice. In order to achieve these aims my research questions were:

1. What are the perceptions of competent practice and how it is assessed, from the perspective of senior specialist nurses/lecturers who engage in teaching and assessing competence in leg ulcer management courses?
2. What are the experiences of leg ulcer education, being a student and being assessed for competence, from the perspective of qualified nurses completing leg ulcer courses?
3. What policy/guidance and modes of assessment underpin leg ulcer education and assessment?

4. What factors affect leg ulcer management education from the perspective of learners and teachers/assessors?

Table 5.1 is a guide to the sections in which the research questions are considered.

Table 5.1 Signposting To Research Questions In Chapter 5

Chapter 5 Part	Research Question Number	Research Question	Section
Part 1		Initial Question: is there a problem in leg ulcer management and the reasons for it?	5.2-5.2.9
Part 2	1	What are the perceptions of competent practice and how it is assessed, from the perspective of senior specialist nurses/lecturers who engage in teaching and assessing competence in leg ulcer management courses?	5.3-5.3.7
Part 2	2	What are the experiences of leg ulcer education, being a student and being assessed for competence, from the perspective of qualified nurses completing leg ulcer courses?	5.4.2-5.4.4
Part 3	3	What policy/guidance and modes of assessment underpin leg ulcer education and assessment?	5.4, 5.5
Part 3	4	What factors affect leg ulcer management education from the perspective of learners and teachers/assessors?	5.4-5.4.4

Part 1 Problems In Leg Ulcer Management

5.2 Is There a Problem In Leg Ulcer Management?

Stage 1 of data collection (figure 2.1) confirmed my belief that there is a problem in leg ulcer management and that issue was followed up in stages 2 and 3 of the data collection. Participants were unanimous in answering yes to this question and the possible reasons for this were explored in depth from the perspective of Group 1 Assessor and Group 2 Student.

Data in this study shows that there is a problem in leg ulcer management. The reasons for this situation were many and varied but centred on nurses' priorities,

motivations, and workloads as well as organisational issues and specific clinical settings. Discussion of the findings related to problems in leg ulcer management practice are set out under the following headings:

- practice
- low priority and incivility
- passion and the challenges of the work environment
- environment
- pressures in the NHS
- workload pressures and motivation of staff
- variations in care
- deficiencies in general practice leg ulcer care provision
- flaws in hospital settings concerning leg ulcer care provision

5.2.1 Practice

The participants' views are that patients are not being assessed and treated in a timely and accurate way, are not receiving evidence-based and skilled treatment nor having clinical management plans evaluated over time. Health economic data confirm this as an enduring problem. When there is not a clear diagnosis of ulcer aetiology it is not possible to instigate the correct treatment and support for the patient. This can increase costs, prolong healing and possibly pain, risks complications for the patient, and impacts on workloads (Guest et al., 2015, 2017). A study by Moffatt et al. (2017) exploring non-adherence to treatment by patients found a disconnect between the perspectives of patients and health professionals about reasons for non-adherence. One of the findings in the study was that the decisions that health professionals make can negatively impact on patients and can significantly demotivate patients to adhere to the treatment prescribed.

Poor practice may be related to a lack of education and/or lack of awareness of leg ulcer management practice and skills, and perhaps a lack of motivation in this area of practice. For instance, specialist nurses in the interviews and in the literature relate instances of damage to patients' legs, or increased pain from inappropriate compression therapy and poor assessment and monitoring. In some instances, care is delegated to inexperienced staff without proper supervision or appreciation of the skills required (Heyer, Protz & Augustin, 2017).

Participants expressed understanding and empathy with non-specialist nurses who are trying to manage rising workloads and increasing complexity of patients. In the interviews with Students and Assessors there was recognition of some effective work by nurses especially in district nursing, and specifically admiration for the nurses managing to do this despite heavy workloads and competing priorities. The perception is that high workloads generally lead to a task focused approach to care, with little will or time to stand back and assess care or consider a more effective model of care. There was also frustration and anger expressed where nurses were felt not be demonstrating interest in, or compassion for, affected patients. GP practices were consistently singled out as a concern, but service arrangements limited the power of specialist nurses to influence care in this setting other than to take on leg ulcer management from GPNs which they do not have the capacity or the commission contracts to do.

The number of people with lower limb problems and the complexity of the patients continue to rise (Lagerina et al., 2017). Therefore, given the deficiencies, challenges, and cost of the current situation the participants indicated that there is a need to reshape services and the preparation and support of nurses delivering care to patients. The apocryphal quote attributed to Einstein - "We cannot solve our problems with the same thinking we used when we created them." encapsulates the situation where patient numbers are increasing but services have developed in a fragmented way that is not necessarily cohesive and strategically planned. Overall, the view is that practice carries on "doing what it does" without question or pause for thought, and it is not sustainable. Service arrangements, workloads and a lack of effective education are stifling care according to the participants, which means patients experience less than ideal treatment.

5.2.2 Low Priority And Incivility

There was recognition of competing priorities in nursing practice by the interviewees, but also recognition that leg ulcer management was not high on that list of priorities. One Assessor was very forceful in her reaction to poor practice (*"rip their head off"*) but was careful to point out that although a single nurse may be the focus of such wrath, it was in fact a complex problem about services rather than one individual. However other participants shared instances of themselves and patients experiencing rudeness, *"oh this room smells, open the window.... the patient was sitting there..."* (KE), and a lack of compassion from staff. Inappropriate behaviour of

this sort, known as incivility, can adversely affect patient outcomes and relationships between staff, and between staff and patients (Mikaelian and Stanley, 2016).

5.2.3 Passion And The Challenges Of The Work Environment

Passion was a term that featured in the data and was linked to behaviours that participants felt were positive traits in motivation to learn and to ask questions or seek further advice when a patient has not progressing as expected. Gómez-Salgado et al., (2019) developed a theoretical analysis of what psychological elements impacted on nursing and nurses. Passion was defined as “a strong tendency towards an activity that people like” (pg. 6) and was deemed to have a positive impact on motivation. They conceptualised “harmonious passion” which is linked to autonomy and feelings of being supported. This also led to increased staff retention and better outcomes for patients. Gómez-Salgado et al. also highlighted that leaders in organisations influenced employees when they overtly exhibited harmonious passion in their work, a phenomenon identified by Li et al. (2017) as “emotional contagion”. However, Gómez-Salgado et al. (2019) linked harmonious passion to a number of circumstances including autonomy, and this may be the element missing from the work reality for most general nurses; a heavy and relentless workload with many competing priorities may not lend itself to autonomy as work presents as a series of tasks with limited control over how and when they are to be completed. Data reflected this in relation to a task focus and nurses not stopping to assess the progress (or not) of patients, failing to revisit clinical assessments and seek specialist advice, and giving sub-optimal care such as reduced compression. Gómez-Salgado et al. (2019) also identified the converse of harmonious passion which was termed “obsessive passion”, which was a state when something once pleasurable then became a “chore” and therefore a negative entity to be avoided.

The concepts of harmonious passion and obsessive passion as two sides of a coin resonate with the findings in two ways. The first, concerning harmonious passion, is in relation to a key finding in the data where Students and Assessors talked of their commitment to leg ulcer management overall, and to patients affected which were inherent in everything they said: frustration with services, their journeys into leg ulcer management and the influence education had on that journey. In their descriptions of recognising what they perceived as positive traits in staff (their mentees) such as interest, enthusiasm, “getting their hands dirty” , and in describing people who had

supported and inspired them on their journey, it reflected a positive and “emotionally contagious” environment where staff were interested and engaged in the in the subject of leg ulcer management. The second, concerning obsessive passion is in relation to such enthusiasm being negatively affected by the environment. In an environment which is increasingly pressured, enthusiasm may be hard to sustain, and the risk is that their mentees/students (and potentially they themselves) may move from a harmonious state to an obsessive state where leg ulcer management practice becomes a chore and no longer pleasurable or fulfilling.

In the data most participants (all of those in community settings) expressed concern about GP settings and the perceived lack of interest in leg ulcer management by GPs and practice managers. The effect of this could then influence GPNs who have to work within the aims and priorities of the surgeries which often do not prioritise lower limb management. This negatively impacts on enthusiasm and motivation for leg ulcer management especially if leaders exhibit little interest in leg ulcer management services. GPNs are often experienced nurses but the GP is the employer and sets the remit of the service which limits the autonomy that nurses have. In a similar way district nursing works within commissioned services which may not include leg ulcer services. Since 2010 there has been a 45% reduction in district nursing and in the East of England there is a vacancy rate in community nursing in excess of 10% (Fanning, 2019). This impacts on a service which experiences an increasing number of patients especially those with complex needs.

As the interviews progressed I could feel the “passion” of the interviewees and I shared their view that this was an admirable quality. I am mindful however that the participants, especially the Assessors and Students in specialist roles have a degree of autonomy and influence at work and the passion they are looking for in others (non-specialist nurses) is not necessarily realistic given the non-specialist nurses’ workloads. Specialist nurses also have high workloads but it tends to be within more defined parameters than a more general nurse. It is noticeable in this study that no participant expressed concerns about their own workloads specifically, albeit they recognised their service does not have infinite capacity when other services were not available for patients. The overall healthcare structure in the UK determines approaches to care and is a frequently changing environment under considerable pressure.

5.2.4 Pressures In The NHS

The NHS is under considerable financial pressure and nursing is experiencing high staff turnover and increasing workloads. New routes into nursing are in place which government anticipates will ultimately increase nurse numbers and the new routes will mean changes in the workforce. Nursing Associates have been introduced and the first cohorts completed their programmes in early 2019. Currently this is only in England; the numbers are relatively small but are anticipated to increase because the new programmes are apprenticeships and part of the government's levy scheme (<https://www.gov.uk/government/publications/apprenticeship-levy/apprenticeship-levy>). Following legislation, Nursing Associates (NA) are registered with, and regulated by, the Nursing and Midwifery Council from 2019. However, it is worth noting that the NA role is generic in nursing and new staff are spread across all 4 fields of nursing (Adult, Child, Learning Disability and Mental Health). Briefly, this means that some NAs could become more involved in leg ulcer management which raises the discussion about whether leg ulcer management is a series of 'tasks' or an inherently assessment role which the NMC is clear is the role of the Registered Nurse, not the NA (NMC Standards, 2018). Participants talked about whether healthcare assistants should be involved in bandaging and the NA role will potentially open this debate wider.

The NHS People Plan (2020) outlines the aim of recruiting more nurses and doctors to the NHS and to reduce attrition of staff. In 2022 the government revised their code of practice for the recruitment of health and social care staff from overseas and this indicates that currently such recruitment is still possible (<https://www.gov.uk/government/publications/code-of-practice-for-the-international-recruitment-of-health-and-social-care-personnel/code-of-practice-for-the-international-recruitment-of-health-and-social-care-personnel-in-england>). The government have also stated their commitment to increasing funding for apprenticeships (<https://www.gov.uk/government/news/national-apprenticeship-week-2022-building-the-future-with-apprenticeships#:~:text=Government%20funding%20for%20apprenticeships%20is,2.7%20billion%20in%202024%2D25.>) Unless these campaigns are successful in relation to nursing and healthcare more generally, the shortage of staff will continue to impact on patient care (Oliver, 2019). If the new routes to nursing do enhance the

number of Registered Nurses significantly, this will take time, realistically several years and depends on ongoing government strategy and funding.

The conclusion drawn therefore is that both individuals and organisations have to be invested in competence in leg ulcer management in order for there to be an improvement. Woods' (2016) trialectic framework of social dynamics is helpful in considering the challenges. This asserts that people's agency (affective and cognitive domains) and structure (organisations - mainly NHS in this context) are important, but also highlights practice as a third factor. Woods is discussing practice in the context of leadership and describes practice as an unfolding entity that is co-constructed and which includes the creation of "knowledge, values, identities and power relations" (pg. 72). This echoes the practice setting of the NHS which is predicated on a set of values (NHS Constitution for England, 2015, updated 2021) but arguably increasingly wrestles with identity (NHS Providers, 2019) and power relations especially in relation to working arrangements for staff (People Plan, 2020).

5.2.5 Workload Pressures And Motivation Of Staff

All the respondents in both groups returned repeatedly to workload pressures in nursing and described their belief that this fundamentally affects the care of patients with leg ulceration. Their views were that workload pressures were apparent in relation to:

- A lack of time to care for patients- the time needed for each care episode which normally includes a minimum of clinical assessment, dressing, bandaging
- A lack of time and motivation to think more widely than the task at hand- care plans may not be revisited and revised leading to long periods of ineffective treatment or patients not being referred for specialist advice on treatment
- Lack of empathy and compassion for patients- interviewees reported instances of patients not being at the centre of care decisions, and reporting that patients are anxious not to upset "their" nurse
- Reduced interpersonal skills- interviewees report instances of other staff being rude to them and to patients, and a perceived lack of

interest in patients and their treatment in the presence of specialist nurses because the nurses are busy

- Ineffective application of skills to patient care- this was particularly mentioned in relation to poor care and the application of reduced compression levels which could be ineffective therapy for many patients. The view was that this was due to staff not increasing their knowledge about leg ulcer management and focusing only on specific tasks rather than looking more holistically at the patient
- Competing priorities – there was recognition by Students and Assessors that workloads are high and that patients have other health needs; there was a perception that leg ulcer management did not feature highly on a list of priorities

The lack of effective and appropriate education in leg ulcer management and therefore knowledge and skills of nurses was also raised as a significant problem by all participants and led to poor care in many instances and considerable inconsistencies in care (see also section 5.4). In relation to this section, as well as the lack of effective and appropriate education the participants felt that workload pressures are resulting in low levels of motivation which meant that nurses were not asking questions about lack of progress or finding out more about the condition and treatments affecting their patients.

5.2.6 Variations In Care

It was evident in the interviews with Group 1 Assessors and Group 2 Students that they experienced considerable care variations and fragmented services in their areas. The division in community nursing between mobile and immobile patients means that some patients see DNs and others see GPNs. Generally, DNs tend to have more experience and support in leg ulcer management. Many leg ulcer and tissue viability specialist nurses in community settings have a district nursing background and most of such specialists are funded from DN budgets. The way that most GP practices are run means that they can opt not to manage patients for their leg ulcers. This is due to the way funding is awarded through the QOF (Quality and Outcomes Framework) point system from the General Medical Services (GMS) contract to general practices. Points, and therefore funding, are given for set targets

which may include blood pressure management and cervical screening or dementia screening among many others. In relation to the lower limb this may include diabetic foot ulceration but not leg ulcers that are the more prevalent ulcer type (Guest et al., 2015). This is not to suggest that it is incorrect or undesirable to focus on diabetic foot ulcers. This condition carries a high morbidity and mortality rate as a complication of diabetes and patients can deteriorate quickly (Paisey et al., 2019).

5.2.7 Deficiencies In General Practice Leg Ulcer Care Provision

GPNs may be working solo or in very small teams of nurses and are not part of the remit of Tissue Viability Nurses. If there is not a commissioned leg ulcer service, with capacity to take patients, that patient may be in the care of a nurse with few leg ulcer assessment and management skills and who is working within a structure of short and rapid appointments. When the participants described inadequacies in care to patients, this is the area that caused them most concern (see sections 4.6.2 and 4.7.1). The impact of protracted healing times and complications in lower leg conditions affects patients' quality of life increasing the personal burden, professional workloads and the cost to health services (Green et al., 2018). Services in different parts of the NHS are run in different ways that can become further fragmented for patients based on whether they are mobile or not. The view of all the participants was that the power base lay with the GP and as the employer of GPNs they could decide if there was to be investment in leg ulcer services either directly in the surgery or funding for sending mobile patients to community leg ulcer clinics. An influential Canadian study (Harrison et al., 2011) concluded that what had the most beneficial outcomes on healing were nurses having specific training and an evidence-based protocol being in place. The concern of the Assessors and Students was that this is predominantly not the case in general practice. In a study of leg ulcer assessment and management using data on 14,000 patients from primary care settings, Petherick et al. (2013) identified that only 20% of patients had documented assessment and concluded that skills and confidence were low in relation to leg ulcer management in GP settings. The NHS has been turning its attention to the standards of care for people with leg ulcers as part of a national wound care strategy which helps illustrate the issue in GP settings. It produced a fictional scenario based on "Betty" and tracked the cost of effective and ineffective decisions and how cues to action were missed as the patients' lower leg deteriorated (NHS Right Care, 2017).

5.2.8 Flaws in Hospital Settings Concerning Leg Ulcer Care Provision

Leg ulcer management in hospital settings featured much less in the data but it was mentioned by a small number of participants in both groups. For Group 1 Assessors this was in the context of care not being continued when a patient was admitted to hospital and nurses in hospital settings having little knowledge or skills in leg ulcer management (see for instance 4.6.2) and the care not being good enough (see section 4.7.2 and 4.8). One Group 2 Student interviewee used this setting to describe a “near miss” in a hospital setting (section 4.10.1). People with leg ulcers who are inpatients do not generally have active leg ulcer assessment and management while they are in hospital (Anderson, 2017). However, such patients may be on bed-rest, or at least in or on the bed more often than they might be at home meaning that their lower limbs are not in a dependent position which reduces the amount of ankle oedema. Controlling or reducing lower limb oedema helps prevent skin breakdown or worsening of an existing ulcer (Anderson, 2017). However hospital admission per se does not mean a greater likelihood of ulcer healing (Reeder et al, 2013). Most of the participants are from a community setting or work in an integrated trust with responsibility for hospital and community patients but in their responses focused on patients in the community. There are many fewer patients in hospital than community healthcare settings and published literature is mainly about community services in the UK, so it is perhaps logical that this was their main concern.

5.2.9 Conclusion Of Part 1

There is no question across the data that there is a problem in leg ulcer management. The nature of the problems is multifactorial and complex but appears to centre on knowledge and skills, passion in leg ulcer management, workload pressures and organisational issues. Part 2 considers the findings in relation to competence in leg ulcer management.

Part 2 Competence

5.3 Perceptions Of Competence

This section discusses the findings in the data related to competence. This is presented under the following headings:

- defining competence
- domains of competence
- changes in perception of competence

- assessment of competence
- variations in expectations of competence
- recognising competence

5.3.1 Defining Competence

Competence is a commonly used term when healthcare practice is being discussed, taught, practised, and measured and is the most common term used in relation to leg ulcer management practice. However, there is not a clear definition of what it means, which adds to the subjective and variable nature of how it is assessed “if we don’t know what it means, how can we measure it?” The surveys and interviews therefore sought to explore the concept of competence from the perspective of the nurse participants. Questions were posed to establish a personal view of competence; how competent practice was identified and whether views of competence had changed over time.

As presented in (Tables 4.3 & 4.6) survey data on competence were compared between groups 1 and 2. The words and phrases used by each group were broadly similar in relation to being able to assess a patient and interpret the results. Doppler and compression therapy featured in all the responses and many highlighted the need for consistency and being patient centred. Being knowledgeable was presented in different ways such as knowing:

- Fundamental principles
- Theoretical underpinning
- Rationale for therapy
- Contraindications
- Limitations (own)
- Guidelines

One of the most common words used in the survey was “safe” and this was followed up in the interviews which led back to the terms used in the surveys in relation to defining competence:

- Safe Doppler
- Safe bandaging
- Understanding risk

- Accuracy
- Knowing when to refer/knowing own limitations

Table 5.2 summarises the similarities and differences between Assessors and Students in relation to perceptions of competence in a nurse involved in leg ulcer management.

Table 5.2 Similarities and Unique Factors In Perceptions Of Competence Between Group 1 Assessors and Group 2 Students

Similar	Unique (Group 1 Assessor data)	Unique (Group 2 Student data)
Aetiology	Compassion	Autonomous
Qualification (in leg ulcer management)	Assessed by another	Being professional
Knowledge of theory	Experience	Problem solving
Knowing limitations and referring on		Networking
Communicating with patients		Recurrence prevention
Interpretation of results		
Confidence		
Assessment of patient		
Doppler ABPI		
Compression therapy		
Skin care		
Safety, understanding risk		
Holistic approach		
Evidence based		
Consistency/accuracy		
Observed in practice		

The similarities mainly focus on knowledge and skills. Words unique to either Group 1 or Group 2 group tend to be in the affective domain of professional behaviours which are more difficult to measure and interestingly includes the prevention of recurrence of the ulcer which is mentioned in the Group 2 Student data. Recurrence is a significant clinical issue (Finlayson et al., 2018) but features seldom in the data overall.

5.3.2 Domains Of Competence

Arranging the terms into the domains of cognitive, affective and psychomotor is problematic as they overlap and remain difficult to quantify. For instance, clinical skills and “how well defined tasks are carried out” could sit logically within the psychomotor domain as it is an act e.g., applying a bandage. However, taking the application of a bandage as an example, when considering “how well” this is carried out could also encompass cognitive and affective domains when the nurse being

assessed is called upon to explain the pathophysiology of the condition, the rationale for the therapy and its evidence base (cognitive), and demonstrate compassion, person centredness and confidence (affective). These are part of the same action; each could be completed sufficiently for an assessor to “tick a box”. The cognitive and affective elements could be incorrect, but the bandage could still be applied in the correct way and therefore be effective. As long as the applier of the bandage was not responsible for making the decision to commence the therapy in the first place (i.e. making an incorrect diagnosis) the psychomotor part is correct, and the correctly applied bandage is “safe”. This example resonates with the initial small-scale study where a focus group explored their adjusted/changed view of competence. One participant said; “their attitude might stink, but they can still apply a bandage - they are competent at applying a bandage”. This illustrates the conflicting feelings of ‘gold standard’ and ‘good enough’, and the concept of levels of competence.

5.3.3 Changes In The Perception of Competence

Exploring the concept of competence in the Assessor interviews it appeared that their views of what competent practice looked like had changed for almost all the Assessors over the time they have been assessing staff. None of them attached a timeframe to the change in their perception. Most patient contact takes place in the community setting. As participants attributed the problems in leg ulcer management and their changes in perceptions of competence to workloads and staff shortages it would be reasonable to assume this stems from 2012 when the Health and Social Care Act was passed which was the most recent fundamental change to primary care [community] services (Lau et al., 2015) and a Kings Fund report (Appleby et al., 2015) highlighted the downward trend in community nursing figures and the increasing reliance on agency nurses to keep services running. Based on this, it could be argued that the participants were seeing a change in workloads and pressures over the past 8-10 years. The reasons for their changing perspectives were mainly the result of their recognition of increasing workloads and the impact of this in moving leg ulcer management further down a list of care priorities. In addition, there was a perception among most participants that nurses often prioritise conditions they find interesting and fulfilling which may not include lower limb management. Lack of prioritisation of leg ulcer management services often leads to it being labelled a “Cinderella service” (Young, 2014).

Nurse shortages also meant staff are too busy to attend training and clinics where they could develop their skills. This was a sobering and concerning part of the discussion around competence and the distress and frustration at the situation was evident in both groups (see table 4.2 and section 4.7.2: *“really, really dire out there”* and *“not a comfortable space to be in”*). It is important to notice that the participants overall expressed understanding and empathy for non-specialist nurses and their work (see sections 4.7.2, 4.7.6, 4.9.9). Participants invariably pointed out that not all practice was “bad”. They often used the phrase “out there” and recognised this as different from their own working environment.

5.3.4 Assessment Of Competence

The range of methods used to establish and record competence centred round the use of a framework, but it was clear from the interviews that evaluation of competence went beyond this structured framework. The tacit evaluations of interest, engagement, and the concepts of safe and holistic practice are undefined and individualised among participants and in how they apply them to staff. Polanyi’s (1966, pg. 4) summary of tacit knowledge is “that we know more than we can tell” but that making explicit the “knowing” can cause one to lose sight of the “whole”. However, he also asserts that examining elements of an unknown (he uses the word “dismembering”) can either lead to a deeper understanding of the entity or destroy it. The implied risk therefore is that if competencies are broken down into too many parts it may not amount to a person competent in the leg ulcer management overall. (This is discussed in section 1.2.4) . Group 1 Assessors were asked to define competence and how they recognised it in others. The ideas of a “gut instinct” or “intuition” or “get a feeling” were evident and that these were influenced by:

- Prior knowledge of the person
- Expectations of what should be expected in the role the “student” held
- Behavioural traits that were perceived as positive

A key point from this appears to be, that although tacit knowledge is inherent in the assessment of competence, there are abstract components of competent practice in leg ulcer management that also matter, such as interest and engagement, and holism and safety, which have individualised perspectives of meaning for participants. To distil competence to a series of tasks or individual components that

can be measured risks losing the 'whole' as in the ability to manage the patient and their condition in an effective and holistic way.

The challenge comes in seeking to explore and define the elements of competence in a way that lends itself to being tangibly recognisable and measurable as competent practice. The references that were made to intuition and gut instinct illustrate the tacit knowledge used in assessing for competence. In the literature review evidence pointed to emphasis being on psychomotor skills because they are easier to identify and assess- because they are overtly visible. However, the data across the participant groups sets out multiple aspects of competence that go far beyond the psychomotor. The risk in continuing without understanding what we are trying to measure is that we continue to value what is the most readily measurable and not what is important.

Having prior knowledge of the nurse being assessed was felt by Assessors to make the determination of competence quicker. This could be because the Assessor had watched them carry out leg ulcer management practices many times and the formal assessment confirmed this observation over time. Conversely it could also mean that the Assessor has formed an opinion already and is more willing to see the whole picture and be more forgiving of elements of the assessment not carried out as well (in effect tacitly filling in the blanks) whereas this same element would be more closely scrutinised in someone they had no prior knowledge of.

5.3.5 Variations In Expectations Of Competent Practice

The Assessors were asked about their expectations of the nurse they were assessing based on the nurse's existing job role. Although they used the same competency framework for each nurse the majority responded that they would have different expectations of nurses based on their job and seniority (band). This gives rise to the concept of levels of competence. However, this is complex as a nurse may be a band 5 community nurse (early career staff nurse), already working in a leg ulcer clinic for some time and recently completed an accredited leg ulcer course in a university. A second nurse may be a band 7 (experienced Sister/Charge Nurse/Ward Manager level) having recently been appointed as a Tissue Viability Nurse in a general hospital and completed the same course as the band 5. Following the logic of the participants there would be a higher expectation of the band 7, as the senior

nurse in a specialist role notwithstanding that a hospital nurse is much less likely to encounter patients with leg ulcers and participate in clinical assessment and compression therapy for inpatients. The increased expectation would therefore sit more logically with the nurse with the leg ulcer management qualification and experience (albeit more junior). The participants gave their views in response to the question being posed and the logistics of how a layered assessment could work was not fully explored.

5.3.6 Recognising Competence

Positive behavioural traits were presented by Assessors as asking questions, being passionate and enthusiastic. The perception appeared to be that these traits equalled knowledge and skills, or at least a willingness to learn. Recognition of the traits valued by the Assessors are based on their experience of teaching and assessing and the tacit nature of this identification, when a student appears to conform to a type or tacit expectation which arguably may preclude a quieter, shyer person. This is especially important in relation to comments from participants that suggest first impressions influence their assessment of competence saying that they “know quickly”.

5.3.7 Conclusion Of Part 2

The key difficulties in defining and measuring competence in leg ulcer management are; variation in definition and aspects of practice that are deemed important; overlapping domains; feelings of concern and personal conflict for assessors who need to manage a service when there is a shortage of staff leading them to compromise on what is deemed competent practice; and the tacit or hidden elements that are included in assessment of competence beyond the framework used.

The difficulties in defining competence in leg ulcer management are revealed in the data with a variety of words and phrases used by participants as they explained their views (tables 4.3,4.6 and 5.1). Even when elements of competence are identifiable the participants were concerned that competence was sometimes at best just “good enough”. Most Group 1 Assessors had lowered their expectations of competence in light of staff shortages and increasing workloads and all participants expressed concern at this situation and the negative impact on patient care in leg ulcer management. Frustration about their perceived deficits in care was balanced with

recognition of the pressure that general nurses are under and the competing priorities in their clinical workload.

Most Assessors and Students have experience of using a competence framework and most (all of the Group 1 Assessors and most of the Group 2 Students). It was evident that assessment of competence was established by more than the content of the framework and included perceptions of the student being assessed showing interest and engaging in care, having prior knowledge of the person in a leg ulcer management context and “intuition”. Part 3 considers findings in relation to education in leg ulcer management.

Part 3 Education

5.4 Insufficient Effective Education In Leg Ulcer Management

There have been substantial cuts in CPD budgets (House of Commons Health Committee, 2018) and an increase in budget in 2022 compared to the previous two years only goes partway to address the cuts (RCN, 2022). This has affected university courses for leg ulcer management which have experienced fewer students enrolling in leg ulcer management (and tissue viability) modules. It is this picture that the participants are so concerned about in relation to the number of nurses available, reducing investment in education and inadequate care received by patients with lower limb conditions.

As participants described the format of education, the focus was on brief teaching sessions which were not felt to be sufficient to increase skills and knowledge to make a difference to patient care. In individual interviews with Students they were extremely positive about their education in leg ulcer management and the support they experienced during this period, albeit they then generally “got on with it”. Assessors and Students expressed concern that there was a lack of engagement with staff not turning up even for brief teaching sessions, or time pressures resulting in too few attendees for the session to be viable. There was also concern expressed that managers felt that a brief teaching session would be enough to enable nurses to be able to manage any patient with a lower limb problem. Following a morning session on leg ulcers one Assessor recalled a situation concerning an attendee at a single day training session who was called back to practice:

“..when she went back in the afternoon, she was allocated leg ulcer patients and expected to put on compression bandaging and Dopplers, she didn’t know how to do it” (TL).

Another told how they were put under pressure to condense a formal accredited course into half a day by community nurse managers. An oft repeated adage in healthcare is 'see one, do one, teach one' and this was the anxiety that the participants expressed about practice managers' expectations. A debate by medics on the pros and cons of this see one, do one, teach one approach to education highlighted issues and risks of this still popular method of skills development (Speirs, 2018; Khodaverdi, 2018). However, in their accounts of the debate it became clear that in the 'Yes' camp of the debate the author (Khodaverdi, 2018) asserted this (see one, do one, teach one) had to be part of a robust structure of learning over a period of time and medics were not to be 'neglected and unsupervised to muddle through procedures by themselves' (pg. 108). It is the muddling or 'fumbling' with little structure or quality control of education that the Assessors and Students found so concerning in practice.

It is not known how many leg ulcer modules are available in UK universities. Estimates are around 8-10 including at least one each in Scotland, Wales, and Northern Ireland. Some areas advertise two or three-day short courses. The Student participants stated they had attended courses as a requirement of their role. Some described how they had started out attending workshops and individual days but highlighted their views on how unsatisfactory that was for their practice, recognising that it was only when they attended an accredited module, they realised how limited their knowledge and practice was.

5.4.1 Professional Responsibility And Pressure To Sign Off Competencies

Group 1 Assessors and Group 2 Students expressed concern that as well as feeling "pushed" to provide education unsuitable for safe patient care, they also felt under pressure to sign people as competent (section 4.7.1). They felt this responsibility weighed heavily on them. There was a clear view that these "quick-fix" options were not safe for patients and increased their own stresses and workloads. The NMC Code (2018) requires nurses to use the best available evidence and 'maintain the knowledge and skills you need for safe and effective practice' (section 6.2 of the Code) and 'support students' and colleagues' learning to help them develop their professional competence and confidence" (section 9.4 of the Code). However, assessing one's own confidence can be challenging if unaware of what is involved in that competence (you don't know what you don't know).

5.4.2 Early Experiences Of Leg Ulcer Journey

Group 2 Students were frank about their early experiences of managing patients with lower limb problems and terms such as “luck” and “near miss” illustrate their alarm at what might have happened to patients in their care at that time. Their subsequent education brought out how different the patients’ experience and outcomes might have been without “luck”. This gave a different lens through which practice was viewed and the early experiences and subsequent professional development shapes and influences their practice and opinions years later.

5.4.3 Valuing Education And Mentorship

Although Group 2 Students had knowledge and skills and were applying them (and being tested on them) in clinical environments, they were under supervision and had at least one mentor to call on. Once they were “signed off” they either lost that supervision or it was reduced, and they had to become more self-reliant. It is important to appreciate that the majority of Students were in specialist roles and all had experienced at least a three-month period of education with additional education prior to this in most cases (such as study days) and had experienced a relatively intense period of clinical supervision and workshops. They generally felt themselves competent with increased confidence. However, nurses who had a less intensive experience and who are signed off as competent may also have the same feelings. However this may be misplaced for some, they may also feel less confident, but expectations are made of them by colleagues and managers because they have been deemed competent. Education is highly valued by all the participants, as is the support they received while developing their skills, and for most, the support networks around them as they continue in practice. The ad hoc and fragmented approach to education in leg ulcer management, where it exists at all, is not satisfactory for patient care and participants expressed concern for patients in relation to their experience, prolonged healing rates and risk of harm.

5.4.4 Expert To Novice

As Student interviewees shared their journey in relation to leg ulcer management and Assessors recounted their observations of assessing learning in leg ulcer management skills, the relevance of Benner’s (1984) conceptualisation of a “novice to expert” was striking and led me to ask interviewees about this. No-one raised it unprompted although they appeared to know what I was referring to. Students who were being observed by assessors were invariably experienced qualified nurses.

Participants in the Student group were all in relatively senior and mostly quite specialist roles, many ran, or had run other services (not leg ulcer - related), wards and departments including emergency departments but they self-assessed as beginners when managing people with leg ulceration and beginning their learning journey. Therefore, the concept could be reversed as “expert to novice”. The Students are qualified nurses and have a wealth of knowledge, skills and experience so would not be novice in the sense of knowing nothing but the Students did speak of the realisation that the knowledge and skills they had in relation to leg ulcer management initially were not enough, and it was only after completion of their course and being expected to manage in practice they felt their competence was justified and their confidence increased. One participant likened it to driving where you really start to learn after passing the test, which appears to be borne out by driver research, albeit in young novice drivers (Day et al. 2018). It was evident in some of the data that competence was not an end point but a continuous journey of learning. Although participants (mainly in the Student group) recognised vulnerability in being a learner when a qualified nurse, all participants embraced the concept of lifelong learning which is an important concept in professional practice (Graebe & Chappell, 2019).

5.5 Modes Of Assessing For Competence

Questions in the survey for Assessors and Students and interviews asked participants about what was included in frameworks: If an assessment framework/portfolio document was used to assess competence, what elements were assessed? They were also asked to itemise any elements that were not included in my list of suggestions. In chapter 4 tables 4.1, 4.3 and 4.4 give some detail on what may be included in a competence framework and brief information on the type and setting for competence assessment:

- Table 4.1 (Group 1 Assessor characteristics (survey) shows the use of a competence framework and setting for the assessment
- Table 4.3 and table 4.4 (Group 1 Assessors) suggested the content of a competence framework and how competence might be recognised but not what was in their framework

However, there is little indication of what is in their individual frameworks. Section 1.1.6 explains that there are no national standards for leg ulcer education and that university courses tend to use the 2010 SIGN leg ulcer guidelines as an outline

structure of education in leg ulcer management. Bianchi (2007) reviewed four universities (including my own institution) for their content which confirmed the SIGN structure. These comprised:

- Aetiology (how a leg ulcer develops)
- Epidemiology
- Physiology (of the lower limb)
- Surgery
- Dermatology
- Evidence based practice
- Vascular assessment (including Doppler assessment)
- Wound assessment
- Compression

Section 4.11.2 explains that Group 2 Students were asked about the university course they attended and if there was any content they would add. The list above is the general content of their course and they expressed no further suggestions. In universities the normal quality assurance policies apply in relation to learning outcomes and appropriate assessment (Quality Assurance Agency, n.d.) of them but the content of individual courses in health topics are driven by the educational leads in the course or programme. This question is picked up again in section 6.4.3.3 in chapter 6.

5.6 Conclusion Of Part 3

Data across both groups demonstrate the perception that education provision is insufficient. All the Group 2 Students felt that their university course was a positive experience and, together with support and mentorship, led them to be competent and to have increased confidence in their knowledge and skills. Across all the data there is strong evidence that education courses are generally too short with insufficient content. Staff shortages and workloads reduce capacity for nurses to engage with education where it exists, and that it is not seen as a priority by managers. Participants considered that it was a problem that the content of education is not standardised and that practice managers have little knowledge of what content is required and give insufficient support to the CPD needs of staff to ensure evidence based and effective practice in leg ulcer management.

5.7 Overall Conclusion Of Chapter 5

Data in this chapter have been presented in 3 main parts: problems in practice, competence, and education. There is no disagreement in the data that there are problems in practice and that in some cases, outside of specialist practice and specific leg ulcer management settings such as clinics, this problem was significant and causing harm to patients. A key factor causing this appears to be the lack of priority given to leg ulcer management by service managers and significant staff shortages with resulting high workloads. There was a shared frustration and concern about current practice in the management of people with leg ulceration. The main focus of the problem was seen as general practice with a common perception that GP and therefore GPNs are often not motivated, funded, or supported to engage meaningfully in leg ulcer management. There was acknowledgement that in some clinical areas, there were staff who managed people with leg ulceration well and there was considerable empathy and understanding expressed for nurses in general about workloads. However, in relation to leg ulcer management this tended to be quite individual or localised. The emphasis on general practice as a problem area was sustained throughout the data. This is known to be a problematic area of practice (Petherick et al., 2013; Guest et al., 2015 & 2017). My study has highlighted key reasons for the problems. Locating care in this clinical setting in the face of concerns and potential costs to patients and the NHS is problematic and is service-centred, not patient-centred.

Competence is poorly defined and understood and is difficult to measure even when a framework document is used. Added to which there appears to be a shift in the expectations of staff competence because the perception of most participants is that staff do not have the level of knowledge and skill deemed appropriate for leg ulcer management. Education is felt to be variable and many participants feel pressured to deliver education in as short a time as possible and have concerns that this is insufficient. Where education does exist, the perception is that nurses find it difficult to engage with it and this is thought to be due to work pressures. Whether that interest is due to workloads or a lack of interest in leg ulcer management is difficult to ascertain and participants' perceptions indicate that both are important.

Assessing staff as competent in leg ulcer management was an activity common to all the participants. (All but one of the Group 2 Students took on assessing once they had completed their courses as part of their job). Some participants were concerned

they felt pressure from managers to deem staff competent and were sometimes conflicted between that pressure and their own professional accountability.

Group 2 Students shared their journeys through leg ulcer management education in a university setting, and the value of having support and role models. This contrasted with the views of all the participants that such education was increasingly hard to access due to CPD funding cuts and the workload pressures in healthcare settings. The dominant view among the participants is that education is insufficient in volume, content and accessibility and that there is a fragmented approach to the content of education and the depth of learning required.

Benner (1984) states competence is a state of being “consciously aware” and that it was a journey towards being an “expert”. However, the key challenge is to create a definition and framework that can be measured in a meaningful way in relation to leg ulcer management. This final quote summarises a challenge that runs through my study.

I asked: Do you think there is a base level of competence?

“.. (long pause) I don't want to say yes, because then you will ask me to tell you what it is, and it would be impossible to define a base level of competence..... I think well then no, because if I can't define it, if I can't tell you what it is”

I asked: How can you measure it?

“How can you measure it? So there isn't one [base level of competence]?” (MT)

My response: My research question in a nutshell

Chapter 6 Conclusions and Recommendations

6.1 Introduction

My study has focused on leg ulcer management practice and education. From the initial focus group and conference workshop (Stage 1) to surveys (Stage 2) and interviews (Stage 3) my data has given detail of the problems underpinning practice and education. These understandings and insights which have not been explored before give opportunity for issues to be addressed from an informed and detailed evidence base. This chapter begins by reflecting on my research journey and considering competence and education in the context of the National Wound Care Strategy (2021). I then state my contribution to knowledge and the extent to which my research questions are answered. The strengths and limitations of my study are considered before proposing a series of recommendations. Recommendations include a definition of competence, and a proforma for assessing competence in leg ulcer management. An education structure is proposed along with education content aligned to the components of competence. This then leads to recommendations for future research and reflection on the impact on services of the global pandemic before the conclusion of the chapter.

6.2 My Study Journey

My data shows clearly that there is a problem in leg ulcer management and that the problems are multifactorial but fundamentally centre on lack of investment in practitioners managing this cohort of patients. Leg ulceration is the foremost wound type (Guest et al., 2017) yet has only recently begun to have a focus in the UK, albeit just England for now, through the Lower Limb Strategy (LLS, 2021). For two decades I have been part of a national charity, Leg Ulcer Forum (www.legulcerforum.org) ; a network of practitioners and educators focused on the education and support of practitioners involved in lower limb condition management of which I am a committee member, education lead and past Chair. As a result of this work and my many publications in this aspect of patient care area of practice I was co-leader of an NHS England funded project in 2016-2018 to explore lower limb management issues among specialists, societies, and myriad health settings (Anderson, King & Norton, 2018). My involvement came about due to my work on this research into the problems in leg ulcer management and competence, and activity in professional forums. The initial NHS England work led to two major initiatives on wound care generally and other workstreams including the LLS (2021). The first project was a

campaign called Legs Matter (2021) seeking to highlight lower limb conditions in the general public and supported by a confederation of societies including the Leg Ulcer Forum. The Legs Matter campaign partly arose from discussions at the NHS England project where the lack of information for the public was raised. The second initiative was the National Wound Care Strategy as stakeholders agreed that wound care and lower limb management did not have a positive profile, or funding to develop, and that costs to healthcare and patients was spiralling with inadequate care and outcomes.

[6.3 Competence And Education In The Context Of The National Wound Care Strategy.](#) The National Wound Care Strategy (NWCS), (2021), is a welcome and long overdue national initiative that although currently focused on England, has the potential to engender debate and focus on wound care generally across the UK. The Lower Limb Strategy (LLS) (2021) as a sub-group should develop in the same way nationally. However, because the LLS includes the diabetic foot as well as ulceration the issue of leg ulcer management may be diluted or misunderstood. The LLS document has clear recommendations for “red flags” indicating deterioration and clinical re-assessment at intervals which are very helpful. Implementing the strategy depends on the “buy-in” of all health sectors and a clear education approach across all health and social care settings.

[6.3.1 Terminology](#)

The NWCS uses the term capabilities and presents these as three tiers of attainment (Skills for Health, 2021). Recommendations are given for education and training providers in terms of basing education on the tiers but state the framework document is not a syllabus and it does not give recommendations for the format, duration, or quality assurance mechanisms of the education.

The use of terms capability and competence in recent documents in the NWCS and LLS (2021) remain as overarching statements lacking granularity of specific requirements which arguably does not lend weight to consistency and fundamental basis against which outcomes can be measured. The concept of competence and how it is defined is not agreed in the literature. Indeed, it remains hotly debated and variously understood and measured. The key measurements relate to the observation of psychomotor skills and measurements are fragmented and do not necessarily add to an outcome of a practitioner who can accurately assess, diagnose, and manage a person experiencing lower limb conditions.

6.3.2 NWCS Framework

The NWCS produced a Core Capabilities framework (2021) (figure 6.1) in relation to wound care generally under five broad domains.

Figure 6.1: National Wound Care Core Capabilities Framework For England (2021)

Domain	Domain Title	Topic/Capabilities
A	Underpinning principles	1. Underpinning principles
B	Assessment, investigation and diagnosis	2. Assessment and investigations 3. Diagnosis
C	Wound care	4. Care planning 5. Wound care and interventions 6. Referrals and collaborative working
D	Personalised care and health promotion	7. Communication 8. Personalised care 9. Prevention, health promotion and improvement
E	Leadership & management, education and research	10. Leadership & management 11. Education 12. Research, audit and quality improvement

The justification for the use of the term capability is interesting as the framework states “in recent years there has been a move towards making a distinction [between capability and competence]” (Wound Care Framework, 2021, pg.12. However, this claim is not supported by a citation. The two terms are defined overall as competence being about actions- “observable performance” and capability as “attributes”- “skills, knowledge and behaviours” and the framework document states that there is a great deal of overlap between the terms. The document also states capability was chosen as “this describes the potential to be competent...” and add “the [capabilities in the framework] are not intended to form a summative list of competence against which the performance of an individual is assessed”. In my research, the literature review, data analysis, and review of the NWCS documents have not changed my view that competence is the right term rather than capability. In a sense it is a “rose by any other name” where the gap in understanding is the definition of competence in the context of leg ulcer management. This definition of

competence then becomes an entity that can be agreed and measured. The NMC uses the term proficiency (albeit in a rather unclear way, see section 1.2.7) instead of competence, and overall, each term is trying to achieve the same objective; to have health services delivering on improving outcomes for patients. My view of competence, based on my research is that it encompasses capability and affective, cognitive and psychomotor domains and is a holistic view of the person, their knowledge, skills and ability to apply these in the context of leg ulcer management. The NWCS initiative gives a broad framework from which practice is anticipated to develop. My research is focused on the nature of the problems in leg ulcer management and the reasons for this in order to make specific recommendations. The next section considers the extent to which the research questions have been answered.

6.4 Research Questions And The Extent To Which They Have Been Addressed

6.4.1 Aims

The key aims of this study were as follows: firstly, to advance understanding of the nature of competent practice in the field of leg ulcer care education and secondly, to develop an educational strategy by investigating;

- a. the extent to which there is a problem in leg ulcer care and the reasons for it
- b. the perceptions of nurses engaged in teaching and assessing leg ulcer management in relation to the nature of competent practice and how it is taught and assessed
- c. the perceptions and experiences of nurses undertaking leg ulcer management courses with regard to being a student and undergoing assessment of competence in leg ulcer management
- d. assumptions underpinning current approaches to leg ulcer education

6.4.2 Research Questions

In order to achieve these aims the research questions were:

1. What are the perceptions of competent practice and how it is assessed, from the perspective of senior specialist nurses/lecturers who engage in teaching and assessing competence in leg ulcer management courses?

2. What are the experiences of leg ulcer education, being a student and being assessed for competence, from the perspective of qualified nurses completing leg ulcer courses?
3. What policy/guidance and modes of assessment underpin leg ulcer education and assessment?
4. What factors affect leg ulcer management education from the perspective of learners and teachers/assessors?

The research questions demonstrate the multifactorial and complex issues in relation to leg ulcer management and the approaches to education in this field. There are significant deficits in patient care that results in enormous costs to health service and the well-being and safety of people with lower limb ulceration.

6.4.3 Addressing The Research Questions

The research questions were addressed and there were positive and encouraging findings, and areas of concern.

6.4.3.1 Research Question 1

1. What are the perceptions of competent practice and how it is assessed, from the perspective of senior specialist nurses/lecturers who engage in teaching and assessing competence in leg ulcer management courses?

This question was answered. Tables 4.3 and 4.4 set out the perceptions of competence from the perspectives of Group 1 Assessors in both interviews and survey data. These perceptions were clustered in the affective, cognitive and psychomotor domains with an overarching expectation of an holistic approach to leg ulcer management. The Assessors' approach to assessing competence appeared to be challenged as they articulated this experience and views and reflected on how these had changed over time. To a large extent there was synergy with Group 2 Students who also had roles in assessing competence and supporting skills development after they completed their leg ulcer management course. Participants were mostly using a competence framework but it emerged that their intuition and wider perceptions of the person being assessed were used too. The participants' perceptions of the problems in practice focused on staff not being competent, partly due to work pressures but also due to a lack of investment in education that was of sufficient depth and quality to enable a rational approach to care in many settings,

especially general practice. Group 1 Assessors were very concerned about the overall level of practice in many leg ulcer management contexts and particularly highlighted general practice settings. Both groups, in interviews, expressed empathy and understanding of the pressures on general nurses in all the settings discussed but felt that service managers needed much more appreciation of the complexity of leg ulcer management practice.

Subjectivity in the assessment of a nurse's competence in leg ulcer management was clear in the analysis of the transcripts for Group 1 Assessors. The Assessors clearly demonstrated that tacit knowledge is brought to bear on assessment of students. This was evident in comments about being able to know very quickly if a person is competent and the identification of behavioural traits such as passion as an important factor in competence. Showing interest by asking questions and becoming physically involved in care were valued traits from the perspective of Group 1 and Group 2 participants and fit in the affective domain of competence. This is tacit knowledge based on the experience and beliefs of the assessor and was referred to as "gut feeling" or "intuition" (table 3.3). In my research the most common means of assessing for competence was by being observed managing real patients. There were expectations of practitioners being assessed by the assessors based on their job title/role, whether they were known by the assessor (this could work for or against the student) and their demeanour. This latter point would potentially disadvantage a person who was shy or more hesitant even if they had excellent psychomotor skills.

Factors that negatively affect leg ulcer education are mainly attributed to managers especially in relation to general practice settings. This was perceived to be the area with the least focus on lower limb services. Every participant whether in interview, focus group or online survey singled out general practice settings as problematic.

6.4.3.2 Research Question 2

2. What are the experiences of leg ulcer education, being a student and being assessed for competence, from the perspective of qualified nurses completing leg ulcer courses?

This question was partly answered. Group 2 Students valued their education experience and highlighted that depth of understanding is key to underpinning practical skills and decision making. They also valued support as their skills and confidence developed. It was clear that for many, their early experiences with

people with leg ulcers was a cause for concern when they reflected back in light of their current knowledge base. This gave a lens through which their concerns about practitioners who do not have this knowledge emerged. Group 2 Students were mainly in specialist roles and were responsible for supporting learners and assessing their competence. This then gave a particular view of their education experience which may not have enabled a full picture to emerge of the experience of being on a leg ulcer course from the perspective of a nurse in a relatively junior and non-specialist setting (see section 6.6 strengths and limitations) and see section 6.7 for recommendations for further research in this group.

6.4.3.3 Research Question 3

3. What policy/guidance and modes of assessment underpin leg ulcer education and assessment?

This question was answered. Education was largely based on the content of the SIGN (2010) guidelines for leg ulcer management but this was a loose structure and there is no overall policy/guidance for education in leg ulcer management. Assessment of competence varied with most respondents stating they had a competence framework, many based on the framework developed by me (Anderson, 2003). Workloads, lack of knowledge of leg ulceration and its management, and a perception of a lack of investment by service managers in education and support impacted on patients and their outcomes.

6.4.3.4 Research Question 4

4. What factors affect leg ulcer management education from the perspective of learners and teachers/assessors?

This question was answered. Education in this field of practice was lacking, and where it existed was not felt always to be of sufficient depth and quality, nor always accessible to the nurses who needed it. Care was widely held not to be evidence based and was fragmented and inconsistent. There is not a structured and consistent approach to education even in university settings although there are many core components in common. Education outside university settings is much more varied and came up predominantly as concerns. Availability, quality and depth of

education, as well as lack of support for ongoing skills development were consistent concerns across all the datasets.

6.4.3.5 Conclusion Of The Extent To Which Research Questions Were Answered

Overall the research questions were answered. The aims were addressed and interpretation of the data shed light on the nature of the problem and the reasons for it.

6.5 Contribution To Knowledge

My study makes a significant contribution to knowledge by focusing on understanding the problems and challenges in leg ulcer management practice and education. These are topics that have not been investigated in previous studies. I used a systematic and reflexive approach to generate and then analyse a large volume of rich data from multiple sources to highlight perceptions in order to understand the problems. Based on this data and new understanding I propose a way forward in this field of education. Data analysis confirmed that the problems span all the countries in the UK and there has not been an exploration on this scale previously. My research has enabled detailed understanding of the issues and the areas that need to be addressed in order to improve those outcomes and the experiences of patients and nurses.

I have explored the motivations, needs and barriers to education and the impact of this on consistent and effective practice. My data raises concerns from the perspective of many practitioners across the UK and is intended to inform part of the matrix of understanding, funding and future planning of leg ulcer services. If as the LLS (2021) recommends, care is to be moved into specialist centres there needs to be consideration of the vast number of people who may not be able to access this care including frail and elderly housebound people, and those not within reach of a centre. Likewise, practitioners in specialist centres will need education and support as the workforce is expanded to meet the requirements of the lower limb strategy (LLS, 2021). If the issues in general settings are not addressed and education is not of sufficient depth and quality (or accessibility) patients will have poorer outcomes.

Dissemination of this study through publication, conference presentations and discussion is intended to feed into national work on wound care (NWCS, 2021) and the lower limb strategy (LLS, 2021). This will be specifically in relation to the educational content of leg ulcer management education and components of

competence that can be measured in a consistent manner. This study's finding of the nature of problems will inform a targeted and evidence based approach to education and support for practitioners involved in leg ulcer management across general practice, community and hospital settings.

Whether the term competence or capability is used is immaterial if the fundamental understanding of what this means is not in place. Current definitions of both in the national documents are not clear on their origin and lead back to the myriad understandings in the literature. Therefore the question remains: if we do not understand what it is, how can we ensure its quality? The next section discusses the strengths and limitations of my research.

6.6 Strengths and Limitations

There are strengths and limitations in this study which are detailed in the following sections (6.6.1-6.6.6) which consider the geographical reach, clinical settings, clinical experience of participants, participant groups and the volume of data.

6.6.1 Geographical Setting

In relation to sampling a key strength is the inclusion of participants in Groups 1 and 2 from all four nations in the UK from a range of settings, clinical experience, and job roles. The inclusion of participants from all four nations in the UK in the interviews was a real bonus and reflected the membership and reach of professional forums and the willingness of their leads to engage with my research. Data analysis confirmed the ubiquitous nature of the problems in leg ulcer management regardless of the setting in Scotland, England, Wales, or Northern Ireland. It was not possible to assess the spread in the survey data except where respondents gave their contact details but both surveys indicated at least one respondent in each group (Assessor and Student) from across the UK.

6.6.2 Clinical Settings

A range of health settings were represented by the survey respondents and interview participants from Groups 1 and 2. These included hospital, community, general practice, and specialist clinics. Most of the Group 1 Assessor participants also worked part time or had visiting lecturer arrangements with higher education institutions as well as clinical roles. The full range stated here was also featured in

the surveys. Community health settings were most prevalent in the surveys and interviews but some participants were in integrated care systems that encompass hospital and community services, and a much smaller number from general practice. This range enabled an overview of different practice settings.

6.6.3 Clinical Experience

The samples also covered a range of clinical experience. The nurses came from a diverse span of experience in this clinical field. This ranged from very high profile practitioners in the field (some participants in Group 1) and those at earlier stages of their specialist career (Groups 1 & 2). This brought a wealth of experience to inform answers to the questions posed, and depth to specific examples of where issues lay. The synergy between experiences of Group 1 Assessor and Group 2 Students was striking and when aligned with the initial small scale study focus group and the survey data with confirmation from professional workshops and presentations throughout the period of this study, serves to illustrate the picture of fragmentation and enduring less than effective care.

6.6.4 Group 2 Student Sample

Sampling was a strength but also gave rise to a limitation in relation to research question 2:

What are the experiences of leg ulcer education, being a student and being assessed for competence, from the perspective of qualified nurses completing leg ulcer courses?

This was because Group 2 Students were experienced nurses and most (but not all) were in specialist roles with a degree of autonomy. They were also very quickly in a role of teaching and assessing others to become competent and this could have influenced their perspective of being a novice, and their views of problems in more general settings. Their experiences are still valid but represent the perspective of one set of nurses, albeit across a range of settings (please also see section 6.13).

6.6.5 Research Data

The volume of data posed challenges to my study, adding complexity. On reflection and given the synergy of much of the data in Groups 1 and 2 in the survey and interviews, I could have focused on one of the groups specifically to reduce the time required for data gathering and analysis. The volume of data was immense and

although it gave strength and depth to understanding the problems it also resulted in a much larger undertaking than originally anticipated. I took a systematic and staged approach to my study design combining quantitative and qualitative data with each step informing the next in a logical flow from the initial focus group and conference workshop (Stage 1) to the surveys (Stage 2) and then the interviews (Stage 3). Analysis and interpretation of the data resulted in a rich picture of the problems, the reasons for them and the areas that need to be addressed in order for solutions to be found.

6.7 Recommendations

Based on my research findings this section proposes recommendations to:

- Address the key problems identified in defining and measuring competence in leg ulcer management
- Improve the structure and content of education in leg ulcer management

6.8 A Definition Of Competence In Leg Ulcer Management

The findings of my research lead me to propose a new definition of competence in the context of leg ulcer management. Competence encompasses affective, cognitive, and psychomotor domains of practice (Dreyfus and Dreyfus, 1980; Eraut, 1994). In health services these domains are grounded in effective patient care and professional accountability (the practitioner and the service managers and commissioners). The definition of competence is unlikely to achieve a universal definition which will remain a challenge across healthcare education generally and in leg ulcer management particularly. However, based on my data analysis (see for example table 5.2 for key terms attributed to competent practice) my proposed definition of competence in leg ulcer management is presented below as a full definition of competence underpinned by three supporting statements (6.8.1).

Competence in leg ulcer management is the ability to explain the development of a leg ulcer and the signs of risk of such development. It is the demonstration of enthusiasm and curiosity to learn more about the conditions, and the application of that knowledge to practice. It is the ability to adapt practice in a rational and evidence based way and to include others in care according to diagnoses and patient needs. It is ultimately to make a material and measurable difference to the condition of the lower limb that impacts positively on the patient. It is also the ability to teach others

about the condition and demonstrate in an auditable way, ongoing professional development in leg ulcer management.

6.8.1 Additional Statements To Support The Proposed Definition

The following three supporting statements explain the components of the proposed definition of competence in leg ulcer management.

Competence involves being able to

1. Explain to a leg ulcer management assessor how a leg ulcer develops, the potential differential diagnoses, methods of clinical assessment, interpretation of clinical findings as well as designing a management plan and giving an account of the evidence base and guiding principles for the explanation given to the assessor.
2. Demonstrate to an assessor the implementation of the competence statement one (6.8.1) with patients in real time, formatively and then summatively over a sufficient period of time and number of patients. To have documented evidence of the specific management of patients with lower limb related complexities. These include, as a minimum, chronic oedema, pain levels affecting clinical management decisions, arterial flow deficits and a range of compression therapies to include bandages and hosiery as a minimum.
3. Demonstrate to an assessor the ability to explain in real time, assessment, diagnosis and management options to a patient in a way that engages that patient appropriately with their condition and shows knowledge, confidence and compassion as well as being able to explain to the assessor and patient any management variations justified by the patient's condition, risks and preferences.

6.9 A Proposed Proforma For Assessing and Documenting Competence In Leg Ulcer Management

Using the definition above and breaking it down to each of the components in sections 6.8.1 above would result in a framework where each constituent part is important but the overall framework keeps sight of the holistic and patient-focused "whole". A document would be held by the student and assessor that sets out the component parts of what is being assessed and would enable each part to be assessed and where appropriate signed off by the assessor. Such a competency

document enables assessments and outcomes to be recorded formally in a course. It also serves as evidence for job roles and career progression. Formative and summative stages enable support and ongoing progression to competence. The Nursing and Midwifery Code (2018) requires registrants to ensure:

- information or advice is evidence-based [Code 6.1];
- maintain the knowledge and skills you need for safe and effective practice [Code 6.2];
- work with colleagues to evaluate the quality of your work...[Code 8.4].

Therefore, the proposed proforma focusing on the component factors in demonstrating competence in the affective, cognitive and psychomotor domains serves a wider role in professional development and professional body requirements.

6.10 Recommendations For Leg Ulcer Management Education

Education needs to be wider than a list of topics. It must include the appraisal of robust evidence and the skills to contribute to that evidence base as well as the economic, political, and equitable aspects of care provision. In my research the survey and interviews data showed there was a view that leg ulcer management skills should be part of a health organisation's mandatory training. This would be an effective way of supporting and maintaining skills although it leads back to the question of what is to be measured, and how, to ascertain this as competence. The current assumption by health service managers, from the views expressed by participants in Group 1 and Group 2, is that education is perceived as an end in itself and not an ongoing endeavour of building skills and keeping abreast of practice developments.

In relation to the underpinning policy/guidance, leg ulcer education is predicated on custom and practice and leg ulcer guidelines such as SIGN (2010). In 2007 Bianchi surveyed four universities and listed general content as physiology, aetiology, epidemiology, surgical intervention, dermatology, bandaging, vascular and wound assessment with all four universities being largely similar. A review of in-house and medical device manufacturer education aligns with this list. Indeed, most of us who lead university courses and assess students are involved in the design and/or delivery of such education.

On the basis of my findings, I propose that this list be taken further to encompass the understanding of motivation and ongoing support of those undergoing education.

This would include enabling the student and lecturer (and practice mentors/assessors) to set out clear targets, aspirations and goals for the education experience. It would also include analysis of the support structure in the workplace and consideration of the commitment by clinical managers to the support for the student during the education and a support plan following the conclusion of the course. The list should also include development of skills in patient advocacy and negotiation (with patients and with other healthcare staff). This is a requirement of professional practice (NMC, 2018) but there is evidence that there is still a balance of power affecting service delivery that is not on the side of nurses other than those nurses in senior and specialist roles.

The education format has to be substantial enough to encompass the topics in sufficient depth to be meaningful and needs to include a significant practical element to bridge theory and practice. The topics need to include a sound understanding of the evidence-based rationale for decisions and the ability to adapt practice to individual patient's needs.

6.11 Proposed Framework And Infrastructure To Support Leg Ulcer Management Education

Building on the definition of competence in leg ulcer management and interpretation of my study data across the surveys and interviews, this section details the recommended component parts of leg ulcer education (table 6.1). The table comprises three columns. The first relates to my proposed definition of competence in leg ulcer management and the constituent parts set out in 6.8.1. The second column gives more detail on what is included in column 1 and the third column gives the rationale for inclusion based on interpretation of the data from the surveys and interviews on what should be included and what a person deemed competent should be able to do. See for examples tables: 3.3, 4.2 and 4.3 in chapters three and four respectively.

Table 6.1 Component Parts Of Leg Ulcer Management Education

Section of definition that refers (6.8.1)	Components	Competence indicators to be recorded in the competence portfolio (a range of assessment methods may be used to include oral, written and practical component- including a triangulation of assessments).
Supporting Statement 1		
Defining leg ulceration	Range of definitions and their usefulness.	Identify the source of definitions and the differences between definitions.
Leg ulcer aetiology	Range of aetiologies Ulceration risk and development Focused education on most common conditions	List a range of definitions and demonstrate understanding of the underlying components of each, how the ulcer develops and common presenting factors. As a minimum: venous, arterial, mixed.
Clinical assessment of the patient, lower limb & wound	Holistic overall patient assessment, lower limb assessment :size, shape, colour, changes over time, skin condition and texture, pain, mobility (overall and ankle joint). Wound history based on minimum data set (Coleman et al., 2017). Previous treatment history, others involved in care and outcomes. Patient's views, experiences and beliefs about their conditions.	A full, holistic assessment of the person, their limb and wound, and the factors that affect them most with their condition. Asking the right questions in a structured and systematic way, picking up nuances in the clinical history that affect reaching a diagnosis and clinical decision making. Empathy and understanding throughout. Treating the person respectfully, gaining consent, explaining throughout the assessment and recording findings accurately.
Vascular assessment of the person and their lower	Assessment for/ of arterial deficit to lower limb. Assessment using a hand-held Doppler. Arterial disease risk assessment.	Demonstrating the assembly of equipment, managing the environment in which the assessment takes place, adjusting for complicating factors such as noise, comfort, pain. Carrying out the procedure and recording findings accurately. Interpreting the results and explaining them to the patient in an appropriate way.

limbs: to include hand-held Doppler assessment of ABPI	Methods of vascular assessment the patient may experience- referral to a specialist nurse, referral to a vascular consultant, methods of assessment such as Duplex scanning. Health education advice based on findings.	
Diagnosis based on clinical assessment interpretation	Differential diagnoses Multi-factor diagnoses Risk assessment and management priorities. Writing a management plan based on clinical findings, risk assessment and patient's wishes/tolerances.	
Clinical management planning	Treatment objectives aligned with diagnosis. Monitoring improvement progress and/or deterioration to include limb shape and size, skin condition, pain, mobility, wound bed and size, infection, patient's overall condition.	
Monitoring outcomes: progression and deterioration	Predicting and managing deterioration and involving others in management.	
Prevention of recurrence	Ongoing evidence based care post-healing to prevent recurrence.	

Sources of evidence and making evidence based decisions.	National and local guidelines, regional and national strategies for lower limb management, identifying and appraising the evidence base for leg ulcer management knowledge, therapies and understanding the impact on patients.	
Supporting Statement 2		
<p>Ulcer (wound) management</p> <p>Diagnosing and managing chronic oedema</p> <p>Assessment and management of pain</p> <p>Assessment and management of lower limb skin conditions</p> <p>Compression therapy: theoretical principles,</p>	<p>Wound management principles; wound bed assessment, setting treatment objectives, wound management aligned with symptom control and with compression therapy if appropriate.</p> <p>Pathophysiology of chronic oedema and management principles.</p> <p>Pain assessment tools and evidence based methods of managing pain and referral to others in the health team as appropriate. Recognition of the impact of pain on the patient.</p> <p>The range of compression therapies' for the prevention of limb</p>	<p>Demonstrate wound assessment, management, documentation and monitoring of objectives and outcomes.</p> <p>Description of the limb and its changes, measurements and monitoring of the limb and the impact of skin care, health advice and compression therapy if used.</p> <p>Using pain assessment tools and understanding the contributory factors to pain levels. Making clear treatment decisions including involving others as appropriate. Monitoring the effects of interventions and keeping the patient at the centre of all decisions and advice.</p> <p>Identification of the range of compression therapies. Explain and demonstrate the application techniques of each therapy used. Demonstrate and justify any adjustments made and the potential impacts of such decisions.</p>

<p>therapy options, effective use of the therapy</p> <p>Patient experience of lower limb conditions and involvement in their care</p> <p>Health literacy</p> <p>Health beliefs</p>	<p>deterioration, leg ulcer management, and prevention of ulcer recurrence. Scientific principles of therapy aligned to expected outcomes and evidence-based adaption of therapy relative to the condition and consent of the patient.</p> <p>The application of the therapy according to the manufacturer's instructions and a clear evidence base for any variation in the therapy.</p> <p>Recognition of therapeutic value of the treatment and any harms that may be evident. Monitoring, reporting and management harms or non-efficacy of the treatment.</p> <p>Evidence on the experience of people with lower limb conditions and leg ulceration.</p> <p>Evidence based guidance on involving patients in their care based on their health literacy, health beliefs, the extent to which they wish to be involved in their care and the available health services.</p>	<p>Demonstrate the involvement of the patient in their therapy including actions to take if problems or queries arise.</p> <p>Demonstrate assessment of treatment outcomes, recognition of deterioration and appropriate actions if this occurs.</p> <p>Identify and appraise evidence of the patient's experience and the impact on their well-being, concordance with treatment, and body image of living with a lower limb condition.</p> <p>Explain and apply knowledge of health literacy and beliefs to clinical management and support.</p>
<p>Supporting Statement 3</p>		
<p>Involving patients in their care: principles</p>	<p>Service provision models</p>	<p>Demonstrate communication techniques for explaining to patients, colleagues, other healthcare workers the clinical assessment finds, management plan and strategies for involving the patient in the management plan in appropriate depth and level according to need.</p>

<p>of shared care, education of the patient and family/carers where necessary</p> <p>Design and monitor appropriateness of lower limb services in relation to the prevention and management of leg ulceration</p>	<p>Developments in lower limb management- local, regional and national.</p> <p>Methods of negotiating care, advocacy and principles of shared care with patients and other health and social care services.</p>	<p>Identify available services, means of engaging them in evidence based evaluation of the service relative to the needs of the patients.</p> <p>Demonstrate understanding and compassion alongside health education and expected outcomes. Demonstrate accountability for decisions and outcomes, collegiate working and advocacy for patients.</p>
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In order for education to be more than a discrete entity there needs to be a scaffolding infrastructure to ensure professional development, monitoring, and accountability for outcomes. Therefore table 6.2 recommends the infrastructure framework that needs to be in place to support and quality assure education provision. The table is derived from interpretation of the datasets in the survey and interviews. based on the views of the participants in this research. Column two in table 6.2 gives the rationales for each recommendation and these rationales are based on the interpretations of all the data that refers to education in leg ulcer management.

Table 6.2 Recommended Infrastructure To Support Leg Ulcer Management Education

Recommendation	Rationale
Education provision includes the content listed in table 6.1 as a minimum	Table 6.1 sets out the minimum list of content based on the findings in the qualitative and quantitative data in this study. It also aligns with findings from Bianchi (2007) and the LLS (2021).
Education is designed and overseen by a qualified teacher	To ensure adherence to structure, outcomes and assessment and that education is pedagogically sound with accountability to the learners and funders. There is no reason to exclude input from a range of personnel but the data suggests the need for consistency of content and level.
Learning is protected time with agreement for this in place from managers	Learning needs to be focused and structured with completion of the programme and competence confirmed before learners are practicing autonomously in leg ulcer management.
Agreement from managers for a period of learning application under supervision in practice to enable development of skills (recorded in the competence portfolio) and development of confidence.	Findings in this submission indicate concern about ongoing support in order to develop skills and confidence. Assessors in particular expressed concern that staff attended a short educational event and then were expected to manage patients without supervision. The student group echoed this concern from their own experiences.
Assessments of competence are carried out in the workplace under the supervision of an assessor – the workplace can be the learner’s own or a suitable setting deemed so by the assessor	Developing skills in the presence of, and guidance from an assessor will enable the learner to achieve the requirements of their competence portfolio. The learner is also more likely to have a concentrated patient population to ensure a range of conditions and experiences are included in the assessment. This is also more likely to be time efficient for the assessor.
Assessors to have protected time for the supervision, support and assessment of learners and liaison with education providers	A tripartite approach to education and support of learners is more likely to be a timely and effective means of developing skills and confidence leading to autonomous and evidence based practice.
Formative and summative assessments cover each aspect of the learning including at least venous, arterial, mixed aetiology	Assessors were concerned that a competence assessment was a moment in time and were wary of that responsibility. Working with a learner over a period of time and range

<p>ulcers, chronic oedema, associated skin conditions, hand-held Doppler assessment and at least two types of full compression therapy to include bandaging and hosiery.</p>	<p>of conditions may help to address this concern to some extent and benefit the learner who will build focused experience.</p>
<p>There is manager commitment for evidence based and accountable leg ulcer management practice.</p>	<p>Service managers were cited as gatekeepers to education provision and were thought not to appreciate the needs of learner and the needs of patients to receive evidence based care in busy and pressured health settings.</p>
<p>Leg ulcer management service provision should not sit within the GPN service provision unless there is a clear service level agreement for evidence based care of people with lower limb problems but there must be a clear care pathway for patients presenting with lower limb problems that eliminates delay.</p>	<p>Delays in appropriate, evidence based care is costly to health services and patient outcomes. Evidence such as Guest et al., (2015, 2017) clearly detail the significant deficits in clinical assessment, diagnosis and management of patients with leg ulceration. The data in this submission points firmly to GP services not being equipped or incentivised for lower limb management and that GPs and practice managers are cited as the gatekeepers.</p>
<p>Leg ulcer management is given value and respect by health service managers who are often seen as obstacles to the time and care that affected patients need. This includes a period of consolidation of learning for the development of skills and confidence in autonomous practice *(please see note below).</p>	<p>A service that is rushed with the perception given that the patients, and the staff advocating for time and suitable environments for care are difficult or problematic leads to demoralised staff and poorer outcomes for patients.</p>

* Group 2 Students highlighted the importance of consolidation after their course and the positive influence this had on their confidence and skills. Consolidation sits within the concept of experiential learning, specifically the latter two stages of abstract conceptualisation and active experimentation (Kolb, 2014). In the context of the recommendations based on my research, this also needs to be underpinned by mentorship and crucially, management support during the consolidation period when classroom learning is applied in the clinical practice setting. The finding that some managers expected independent and unsupported leg ulcer management practice in the see-one-do-one model was identified as a cause of concern by Groups 1 and 2. Even advocates of this model (Khodaverdi, 2018; Kotsis and Chung, 2013) caution that the model has to sit in a framework of mentorship and holistic support.

6.12 Further Research

In light of the findings of my study I have proposed a series of recommendations including a new definition of competence in leg ulcer management, a proforma for assessing competence and a structure for education. There is a need for further research in relation to competence and education in leg ulcer management and this section presents my recommendations for the focus of future research.

6.12.1 Hospital Inpatient Settings

In analysis of the data, the focus of where problems lie predominantly sat in general practice settings. Although hospital inpatient settings were represented in the sample, issues there did not feature in the data other than from the few survey respondents and interview participants who worked in specialist roles in hospitals. There is clear evidence that such patients mostly do not receive adequate lower limb care in this setting (Lian, Anderson, Keevil & Gohel, 2020; Anderson, 2017).

As stated in section 4.6.2.2d by a hospital wound care specialist nurse:

“So if patients come in [hospital], it is quite often that I won’t have time to get to everybody to get the compression back on so then it will come off and then it will be restarted in the community, and in my mind you wouldn’t stop any other treatments when patients come into hospital, so why would you stop the compression” (LM).

Future research could include hospital inpatient service provision for people with leg ulceration and related lower limb conditions. Often such patients are admitted for other conditions and happen to have a leg ulcer on admission. Lian et al.’s (2020) work indicated over 8% of patients in a large teaching hospital had leg ulcers and was the first hospital focused prevalence study in many years.

6.12.2 General Practice Nursing

Further insight to develop my area of research would be gained by researching the experience of general practice nurses (GPNs) and GP practice managers to understand the constraints and barriers to investment in leg ulcer management, motivations of the service managers in relation to these conditions, and the experience of the GPNs in relation to the management of people with lower limb conditions.

6.12.3 General Nurses In Non-specialist Roles

As stated in relation to research question 2 it would be useful to research the experience of non-specialist, relatively junior nurses in leg ulcer education to ascertain their experience and perspectives of being a student and undergoing competence assessment.

6.12.4 Overall Experience Of Becoming Competent

Based on the proposed education content and proforma for the assessment and documentation of competence in section 6.10, recommendations would include researching outcomes following leg ulcer management education at early, mid and later points following the education programme. Such outcomes should explore the education experience, the process of achieving competence, changes in confidence levels and the presence of, and nature of, any support structure. Ultimately research needs to focus on the impact of education in relation to patient outcomes and health service costs.

6.12.5 Recommendation For Research On The Impact Of Recent Service Changes In Leg Ulcer Management

The global Covid 19 pandemic has resulted in many changes in health provision (Fletcher et al, 2021; Ousey & Schofield, 2021). In community services it was not possible or safe for patients to have community nurses in their home unless absolutely essential and visits to GP services were not possible for anyone. There was a fundamental and rapid shift to self-care (even the concept of shared care was not possible for many). Patients and family members that were allowed to be with them had to learn wound management and compression therapy techniques very quickly, and with minimal input. Future research is important to understand and measure the impact of this type of practice on patients and their clinical outcomes, and on staff. There are anecdotal reports of mixed experiences from patients recognising the situation and doing what they could for themselves and other reports of patients feeling abandoned and overwhelmed. Nurses too report feeling worried about patients and concern that their condition had deteriorated. This will be an important and developing area of research in leg ulcer management.

6.13 Conclusion And A Hopeful Future For Leg Ulcer Management Education

Reflecting on my journey in leg ulcer management research, clinical practice and education, led me back to my early paper on assessing competence. I wrote “The

future of the measurement of competence in leg ulcer management may be strengthened by debate on the essential core skills required and working towards consistency in the assessment of that competence.” (Anderson, 2003). Twenty years later I have had the opportunity to explore this concept from the perspective of practitioners learning, teaching, and assessing in this field of practice. The agreement that there is a problem in leg ulcer management is unquestionable and the need to address the problems is pressing if health costs are to be contained and patients are to experience improved care and outcomes. The enthusiasm, commitment of, and encouragement from, the participants to highlight the parlous nature of leg ulcer management lends hope for the determination to improve outcomes for people who suffer lower limb problems and the will in the specialist sector to engage with education and support for practitioners. Throughout the interviews there was a shared experience in nursing and in particular the topic of managing people with leg ulceration. Laughs, shrugs and facial expressions during the interviews with both groups were visual reminders of a bond in the profession of nursing, but participants were angry and upset at the plight of patients and the lack of universal recognition of the need for improved care in leg ulcer management. They saw the main solution as education, investment in education and recognition that education in leg ulcer management requires depth, and ongoing support to enable practitioners the opportunity to improve care.

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