[i]University of South-Eastern Norway
Faculty of Health and Social Sciences
Institute of Nursing and Health Sciences

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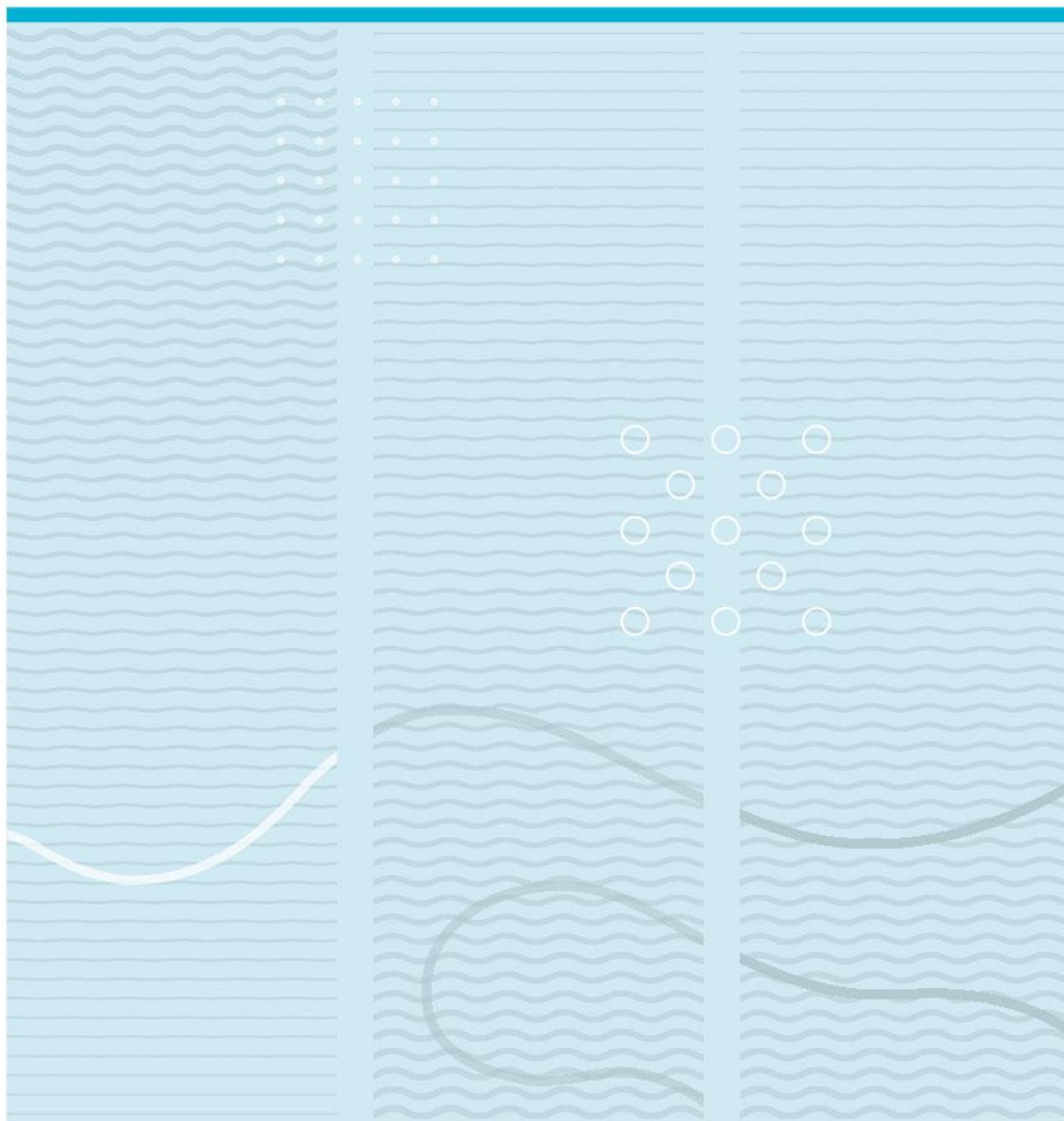
Margaret Florence Hunt

What does the literature say about collaboration between the General Practitioner and District Nurse in treating patients with chronic wounds in primary healthcare?



University of South-Eastern Norway
Faculty of Health and Social Sciences
PO Box 235
NO-3603 Kongsberg, Norway

http://www.usn.no

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This thesis is worth 30 study points

Summary

Title: Collaboration

Background: Wounds are called “the silent epidemic”, and it is estimated that 70 –80 % of wound management is carried out in primary healthcare. The General Practitioner and District Nurse play essential roles in the treatment of patients with chronic wounds.

Research question: What the literature says about collaboration between the General Practitioner and District Nurse in treating patients with chronic wounds in primary healthcare?

Aim: This study aimed to investigate the collaboration between the General Practitioner and District Nurse and identify, if possible, any gap in research in this field.

Method: A literature review in the form of a scoping review was undertaken, and a literature search was done in CINAHL and MEDLINE. A total of eleven articles were selected and critically analysed for their quality by using CASP assessment tools. Thematic analysis was used to analyse the literature.

Results: The results indicated that patients with chronic wounds are a complex patient group, and there are challenges in the collaboration between the GP´s and DN´s. Roles of responsibility are undefined. Developing knowledge and building on existing knowledge is not prioritised. Time and resources are a factor that limits the partners in carrying out complete assessments and following up of treatment.

Conclusion: In conclusion, evidence supports the importance of a team approach in managing this patient category, but collaboration is challenging. There is a need for further research and changes in clinical practice to accommodate this.

RESUME

Titel: Samarbejde

Bagground: Sår er blevet kaldt " Den stille epidemi" og det estimeres at 70 -90% af sårbehanding udføres i den primære sundhedssektor. Den praktiserede læge og hjemmesygeplejerske udgør vigtige roller i behandling af patienter med kroniske sår i den primære sektor.

Forskningsspørgsmål: Hvad siger litteraturen om samarbejdet mellem den praktiserede læge og hjemmesygeplejersker i behandling af kroniske sår i den primære sundhedssektor?

Mål: Formålet ved dette studie er at undersøge samarbejdet mellem den praktiserede læge og hjemmesygeplejersker og at identifcere mulige huller i forskningen omkring dette område.

Metode: Der er blevet udført et scoping literaturreview og søgninger efter littteratur er blevet udført i CINAH og MEDLINE. Elleve artikler er blevet udvalgt og analyseret for kvalitet ved hjælp af CASP hjælpeværktøjer. Der er udført tematisk analyse.

Resultater: Resultaterne tyder på at patienter med kroniske sår udgør en komplex patientgruppe. Der er udefinerede roller i forhold til ansvarsopgaver. Der er mangel på viden men også mangel på muligheder for at opnå ny viden. Tids- og ressourcepriotisering sætter grænser for udføresler af evaluering og behandling af patienter med kroniske sår.

Konklusion: Evidens peger på vigitigheden af en team approach for at behandle patienter med kroniske sår og studiet indikerer at smarbejdet mellem den praktiserede læge og hjemmesygeplejerske er udfordrende. Der er behov for videre forskning og ændring i klinisk praksis for at tilgodese dette felt.

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Caithlin has especially been "my rock" in this long process.

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Margaret Florence Hunt

Sorø, September 15, 2021,

"Nursing is an art, and if it is to be made an art, it requires as exclusive a devotion, as hard a preparation, as any painter´s or sculptors work, for what is having to do with dead canvas or cold marble, compared to having to do with the living body, the temple of God´s spirit? It is one of the Fine Arts; I had almost said the finest of the Fine Arts."

Florence Nightingale 18020-1910

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1 Introduction

Whilst this study was undertaken during my Masters at the University of South-East Norway, I am a Danish Tissue Viability Nurse and work in Denmark and therefore the The study relates to the Danish healthcare system to organizing. Furthermore, the study only focuses on the collaboration between the general practitioner and district nurse.

It is estimated that over 50 per cent of the nursing time in primary healthcare in Europe is spent in wound management (Probst, Seppanen, Gethlin, & et. al, 2014) and that 1.5 – 2 million people suffer from acute or chronic wounds in Europe (Lindholm & Searle, 2016). Wounds have been referred to as “the silent epidemic” (Smith & Nephew, 2007) and have a substantial impact on the healthcare system and the patient´s quality of life (Lindholm & Searle, 2016)
Chronic wounds, such as venous leg ulcers, can take approximately six months to heal (5.9 months). Of the people that suffer from leg ulcers, 26 – 69 per cent experience recurrent ulcers. One per cent of the health systems budget in the western world is spent on the treatment of venous leg ulcers (Harding K, 2015)The patients suffering from chronic wounds experience pain, anxiety, social isolation and even mortality (Lindholm, Sår, 2005)

Because of the need for both medical and holistic approaches, wound management is an area where collaboration can reflect on patient outcomes. Therefore, interpersonal collaboration has been recognised as an essential factor for healing (Baranoski, 1992; Bongiovanni, Huges & Bomengen 2006, cited in Friman, Edstrom & Edelbring, 2017). Evidence supports the importance of a team approach. That collaboration increases wound healing and improve patient’s quality of life compared to patients who do not receive a team approach (Dailey, 2005). For example, in the case of the leg ulcer, diagnosis and identification of the underlying disease is the physician's responsibility (Mooij & Huisman, 2016; as cited in Friman, Edstrom & Edelbring, 2017). The nurses

have responsibility for clinical judgements. They were changing the dressing and compression therapy and responsible for patient communication whilst maintaining a holistic perspective and ensuring that the patient received sufficient nutrition and physical activity (Adderley & Thompson, 2015; as cited in Friman, Edstrøm & Edelbring, 2017)).

Through my work as a tissue viability nurse in a municipality in Denmark, I have experienced that wound management may suffer from a lack of priority and resources and poor conditions for professional collaboration. The general practitioners are not constantly diagnosing patients' wounds, and the district nurses' workload in the treatment of chronic wounds, which is substantial, is not consistently recognized. This problem became even more evident while undergoing my clinical practice as an Advanced Practice Nurse, first under my training in general practice and later in a wound centre at a hospital. Both doctors and nurses made assumptions about district nurses not following recommendations for treatment or general practitioners not having interest or time to diagnose patients with wounds. These issues can affect the collaboration between the GP and DN and can have consequences for the patients suffering from chronic wounds. Therefore, I chose to undertake a literature review to find out if any research had been conducted on the topic of collaboration.

What does the literature say about the collaboration between the general practitioner and the district nurse in treating patients with chronic wounds in primary healthcare?

1.1.1 Background of the study

This chapter will describe wound management in primary healthcare, explaining how resources are divided in Europe and Denmark.

Then a description of the patients at risk of developing chronic wounds and how chronic wounds affect the patients 'lives. Lastly, I will describe how chronic wounds are treated and the roles and challenges of Collaboration between the GP and DN.

1.1.2 Wound Management in Europe and Denmark

In 2014, European Wound Management Association EMMA published a best practice document: "Home care -Wound care, describing the challenges of wound management in Europe (Probst et al., 2014). This document stated that chronic wounds are a significant problem in Europe, estimating that 2 – 4% of the total healthcare budget is used to manage wounds. 70 – 90% of wound management is conducted in primary healthcare, and it is estimated that at least 50% of nurses' workload is spent in this field of care (Probst et al., 2014)

In German-speaking countries such as Germany, Switzerland, and Austria, General Practitioners collaborate with community-based nursing to treat venous leg ulcers. GPs delegate some diagnostic procedures to wound care specialists in the community and refer patients to specialist treatment at the hospital. Local wound care is authorized by the GP and carried out by the district nurses or the GPs practice nurses (Franks, Barker, & et al, 2016)

Nordic countries such as Denmark are welfare states, which provide all citizens with high quality public social and health care services. Because of the economic recession and implementation of health reforms, services have been moved from secondary to primary health care, and patients with wounds discharged from hospitals earlier (Probst et al., 2014)

In 2007 Denmark underwent a major health reform where the transition for this reform started in 2006. One of the main aims of this reform was to improve coordination of patient pathways and collaboration from the secondary to the primary sector. The reform reduced regional authorities from 15 to 5 and municipalities from 271 to 98. The new municipalities had the full responsibility for prevention and health promotion, plus rehabilitation outside of the hospitals, together with the responsibility for healthcare services such as home care and nursing homes

The organization for Economic Co-operation and Development; reported that Denmark is among the OECD countries with the fastest discharge from the hospital to primary healthcare. Patients spend approximately four days in hospital after a heart attack before being sent home. The number of hospital beds was reduced to 3.1 per 1000 inhabitants compared to Norway, which are 3.9 (Frode, Nader, Socha-Dietrich,

Oderkirk, & Colombo, 2016) This puts enormous pressure on primary healthcare to ensure patient safety, quality, and at the same time, cost-effective treatment, this treatment also involves wound management.

In 2012 the national Telemedicine action plan initiatives were launched in Denmark; the Telemedicine Wound Management. The method involves trained nurses collecting data on the patients' wounds, which they tend to in the homes, taking photographs of the wounds, sharing the pictures, and uploading the information to the patient's online health record. The data is then accessed by a specialist at the hospital but can also be assessed by the general practitioner. The aim is to reduce visits to the hospital, increase flexibility in treatment and give more value for money in healthcare (Ministry of Health, 2017)
Telemedicine has proven to be a relevant use of resources during the Covid-19 epidemic, where hospital visits have been reduced to a minimum. This method also helps support the collaboration in wound management between the GP and DN.

1.1.3 Chronic wounds

Chronic wounds are defined as: -
"Wounds that fail to proceed through the normal phases of wound healing in an orderly and timely manner"
(Frykberg & Banks, 2015)

Normal wound healing is achieved through four overlapping phases: hemostasis, inflammation, proliferative and maturation phase. Haemostasis occurs just after the injury: where vasoconstriction and blood clotting prevent blood loss. In the inflammatory phase, which lasts approximately seven days, erythema, pain, and oedema is often seen. During the proliferative phase, which can last between 4 – 24 days, granulation tissue fills the wound. The maturation phase occurs when the damage has closed. Chronic wounds often stall in the inflammation phase (Frykberg & Banks, 2015)

According to Fryberg & Banks (2015), Chronic wounds can be put into three main categories: -1. vascular ulcers, which are venous and arterial. 2. Diabetic ulcers, and 3. Pressure ulcers. Venous leg ulcers, diabetic ulcers, and pressure sores.
These chronic wounds are characterized by prolonged or excessive inflammation, recurring infections, and the development of biofilms (Frykberg & Banks, 2015)
The risk factors for developing venous leg ulcers are over 65, family history of venous ulcers, obesity, lack of physical activity, multiple pregnancies, and women at a higher risk than men. Secondary risk factors are Deep vein thrombosis. Previous leg injuries such as fractures or burns, intravenous drug use or phlebitis can also damage the veins (Moffatt, Martin, & Smithdale, 2007)
The treatment for chronic wounds, such as venous leg ulcers, ranges from surgery pharmaceutical, topical agents, and compression therapy (Leach, 2004)
Compression helps to reduce vein diameter and thereby accelerate the venous flow, reduces venous reflux, and improves venous pump function (Moffatt, Martin, & Smithdale, 2007). But the need for weight reduction, walking, leg elevation and lymphatic drainage, smoking cessation all are essential factors in the treatment and adds to the complexity of wound management
The patients suffering from chronic wounds not only experience pain and anxiety (Lindholm & Searle, 2016), but their body image can also be affected.
According to Graubæk, people meeting under normal circumstances; the body is in the background. But when the body is damaged, as with a patient suffering from a chronic wound, the body comes in focus and becomes an object. The person or patient with the wound steps into the background this can cause even more anxiety and tendency to social isolation (Graubæk, 2010)

1.1.4 District nursing and their role in wound management

This study only focuses on the collaboration between the General Practitioner and district nurse, even though the General practitioner and Tissue viability also collaborate when treating patients with chronic wounds. The Tissue viability nurse is not employed in all

The use of the term “district nurse” can differ from one country to another. Norway and Denmark use “home nurse, or community nurse”, Sweden and England “district nurse”. This study focuses on the nurses who visit patients in their own homes, not on the nurses at GP clinics or nursing homes. Overall, the literature I have gathered in this study uses the term ´” district nurse, “and therefore, I have chosen to use this term.
A district nurse is a registered nurse trained to manage care in Primary healthcare, providing care for housebound patients. The district nurse has several duties and responsibilities depending on the level of care needed for the patient. Responsibilities can include risk assessments, medication support, rehabilitation, and wound management (Marshall, 2019)
The term ‘district nurse’ was first coined in 1859 in England when a Liverpudlian MP by William Rathbone employed a nurse to take care of his sick wife at home. Later, when his wife died, Rathbone carried on paying for the DNs services so that the people of Liverpool who could not afford to pay for hospital care could receive help. Rathbone then went on to work together with Florence Nightingale to develop and establish the service of district nursing. Rathbone founded a nursing school in Liverpool which provided specialist training and nurses for 18 districts in Liverpool, which resulted in the role of district nursing being created (Marshall, 2019)
Florence Nightingale (1820- 1910) had an enormous influence on Scandinavian nursing history. Students came to Florence Nightingale nursing schools and, after completing their studies in England, went on to become educators or managers of nursing in their own countries (Råholm, Hedegaard, Lofmark, & Slettebø, 2010)
Due to education reforms in Scandinavia, nursing education changed from an apprenticeship to a higher education system in the late 20th century. Nursing education became a Bachelor of nursing program. However, there is a difference in the length of education and content related to clinical studies in Scandinavian countries.
The Bachelor of Nursing program in Denmark consists of 210 ECTS and is 3½ years, full-time study. In Norway and Sweden, the programs are 180 ECTS and 3-year studies.
The clinical studies in Denmark and Norway consist of 90 ECTs, where in Sweden, the clinical studies are 45 ECTS (Råholm, Hedegaard, Lofmark, & Slettebø, 2010) . There is a difference in the length of education and content in relation to clinical studies in

Scandinavian countries. Therefore, it is not possible to compare the level of training based on the name and title qualifications. But in Denmark, the actual wound management training starts after the nurses have qualified and started their work in either the primary or secondary sector.

The World Wound Healing Society emphasizes that the best treatment for wounds is diagnosing the wound, finding the reasons that inhibit healing, and systematically evaluating and describing the patient wound (WUWHS, 2008).

An evidence-based method for assessing wounds, which district nurses use in Primary Healthcare, is TIME. TIME is an acronym, and T – refers to Tissue assessment and management, I – infection/Inflammation, M – Moisture imbalance, M – moisture imbalance management, and E – Edge of wound observation (Johansen, 2012)

Wound management is often one of the essential time posts for district nurses, and a study carried out in Denmark showed that wound dressings were changed on average three times a week and 23 % daily (Jørgensen, Nygaard, & Posnett, 2013)

A study carried out in Norway in 2003 aimed to investigate how district nurses collaborated with a department of dermatology and the nurse's knowledge and treatment of leg ulcers. In 2003, 158 nurses worked in 9 districts in a municipality in Norway, treating patients with leg ulcers. A descriptive design was used, and the nurses were asked to answer a questionnaire. 63% answered the questionnaire and took part in the study. The results showed that most nurses felt that they had insufficient knowledge on the treatment of leg ulcers and their primary sources of knowledge were their colleagues. The nurses changed the treatment without referring to the specialist wound centre at the hospital, and compression therapy and pain treatment was not a standard treatment for all patients. The results also showed that there was a lack of continuity in the treatment, and not all the patients had a diagnosis before the treatment started (Smith-Strøm & Thornes, 2008)

Although this study focused on the collaboration between the district nurses and dermatology department and not Collaboration with GPs, the results can still be used to highlight how problems with collaboration can delay the patients´ wounds from healing and thereby affect patient safety.

1.1.5 General practitioners and their role in wound management

General practitioners are the first port of call for the patients. They are responsible for diagnosing illness and treatment and referral to hospital care and services in the municipalities. Following the Health Act, Section 138, all citizens are entitled to home nursing when prescribed by the general practitioner (Ministry of Health, 2017). GP´s are responsible for the overall treatment of the patients in the municipalities and therefore play an essential role in patient care and wound management. In 2017 the Danish Ministry of Health published an overview of the health system in Denmark, where GP´s were referred to as "gatekeepers" because they play such an essential role in primary healthcare. One of the main objectives is to ensure that patients receive fast diagnosis and treatment (Ministry of Health, 2017). Then, this also includes the diagnosing of patients with wounds.

The increase of patients in primary healthcare and the complexity of their care stresses the need for coordination and collaboration between healthcare providers, GP, and home nursing professionals. Due to the complexity of patient care today, there is a need for cooperation on a different level, where patient safety and quality treatment is in focus (House & Havens, 2017)

The EMMA best practice document 2016 refers to the treatment of venous leg ulcers VLU and their management in primary healthcare. It describes how GPs in German-speaking countries such as Germany, Switzerland, and Austria work in collaboration with community-based nurses in the treatment of VLU

GPs delegate some diagnostic procedures to wound care specialists in the community and refer patients to specialist treatment at the hospital. Local wound care is authorised by the GP and carried out by district nurses or the GPs' practice nurses (Franks, Barker, & al, 2016)

A study in Australia, which included data from 3604 patients suffering from venous leg ulcers, showed that General Practitioners used different methods in the treatment of venous leg ulcers: 76 % received dressing, 25.7% received dressing or pharmacological treatment, 2.1 % received compression therapy and 4.9 % were referred to specialists (Weller, Bouguettaya, Britt, & Harrison, 2020). Even though compression therapy is

known as “the cornerstone” in treating venous leg ulcers (Gottrup & Karlsmark, 2008), only 2.1 % of the patients in the study were treated with compression.

1.1.6 Collaboration and wound management

In the Cambridge dictionary, collaboration is defined as “The act of working together with other people or organisations *to create or achieve something “* (Cambridge Dictionary, 2020).
According to Jody Gittell (Gittell, 2009), collaboration and using the power of relationships is essential for achieving efficiency and quality in healthcare (Gittell, 2009). Collaboration can involve different types of relations, and some kinds of collaboration will be voluntary, where others will be forced to collaborate. The General Practitioner and District nurse collaboration should not be seen as voluntary or forced but essential in treating chronic wounds in primary healthcare. Unfortunately, literature proves that physician–nurse collaboration has not always been easy.
According to Stein (Stein, 1967), historically, the physician-nurse collaboration was characterized by physician dominance and nurse subservience. In his seminal paper “The Doctor- Nurse game”, Stein described the partnership. The doctors were assisted in diagnostic decisions by acquiescent female nurses that typically only were responsible for patient care and housekeeping. Stein was critical of this relationship and claimed that there should be more openness (Stein, 1967).
When Stein and his colleagues in 1990 assessed the Doctor – Nurse game again, they discovered that the roles had changed. Nurses were beginning to offer direct advice; no longer were they handmaidens; they were more assertive. This was partly due to gender roles changing, the increase in female doctors and the ascending nursing status, mainly due to the development of nurse practitioner roles (Reeves, Nelson, & Zwarenstain, 2008)
But in the study by Steinhaus, Paulsen, & Melby indicated that GP´s often chose who they wanted to collaborate with. The qualitative research investigated the collaboration between general practitioners and municipal care providers in healthcare. Four GPs, six nurses and two physiotherapists took part in the study, which involved semi-structured

interviews. The study results showed that the GPs play an essential role in the healthcare system, but their collaboration depends on different factors.

1. GPs tend to make individual choices of whom they want to collaborate.
2. Inter-municipal organizational constraints could prevent the GPs from contacting collaboration partners.
3. The GPs fall outside the hospital–municipality collaboration.
   (Steihaug, Paulsen, & Melby, 2017)

This could course problems for the patient's treatment if the GP only choose to work with one DN. The results showed that the organisational system also gave issues; this could be due to sending ordinations and treatment plans to the district nurses at the municipalities or vice a visa.

In 2005, an article published in Home Health Care Management and Practice described how physicians and nurses are being challenged to work together to help manage costly and complex health care populations. Dailey points out that single disciplines and one-sided views must be replaced with a synergistic alliance. That there is a need for collaboration to establish safe and effective care (Dailey, 2005).

GP and DN have different educational backgrounds, and nurses are trained to focus holistically on health, whereas GP´s are trained to diagnose and cure medical conditions. They are trained separately and yet expected to know how to collaborate effectively in the treatment of the patient (House & Havens, 2017)

An article published in Community Wound Care in England described how PCN Primary Care Networks were introduced in England in 2019 to build better collaboration between general practices and community health services. PCNs aim to improve cooperation so that better patient outcomes can be achieved. Furthermore, it seeks to reduce costs by the sharing of staff and resources. The article claims that wound care might be an ideal focus for PCNs because the collaboration between general practices and community health services has an essential role in wound management. The author points out that there is room for improvement in wound management in primary healthcare, and the outcome for the patients is dependent on the professionals' access to evidence of best practice "*the sharing of evidence "between the right people, at the right time, in the right place.* "

(Benison, 2020)

2 Method

In this chapter, I will explain the aim of the study and the method used to identify literature for my research. I will describe my search strategy and the literature that was selected. Furthermore, I will describe the critical appraisal tool I used to examine the literature I had selected. Lastly, I will explain the method I used to analyse the literature why this method was chosen.

Because of the growing importance of evidence-based practice in healthcare, literature reviews are becoming more relevant. A literature review aims to collect research on a specific topic and then identify new ways of interpreting the research and present its findings (Aveyard, 2019). I wanted to focus on qualitative research because I was interested in the GP´s and DN´s experiences and perceptions of their roles in collaboration. I chose to undertake a scoping review because I wanted to identify relevant research on collaboration between GP and DN in wound management earlier. Scoping studies can be used to identify gaps in research or make recommendations for future research (Munn et al., 2018). It is recognised to provide an overview of existing evidence of a particular topic. It does not include everything written but that which is most relevant concerning the aim of the current study (Aveyard, 2014) and (Peters et al., 2015).

By undertaking a scoping review, I had the opportunity to collect research from a larger population and acquire a broader view of the topic. Suppose I had chosen to carry out an empirical study, for example. In that case, qualitative research in interviewing general practitioners and district nurses, my research could have been limited to a smaller sample and a narrower view of the topic.

2.1.1 Aim of the Study

As I have described in the introduction and background, the GP´s and DN´s play

an influential role in the treatment of patients with chronic wounds in primary healthcare. Unfortunately, the literature indicates that collaboration between these professionals is challenging and could negatively affect the patients' care. There is a need to investigate those challenges and work towards better collaboration. Therefore, in this study, the aim is to search, identify and analyse research on the topic of collaboration between the GPs and DNS in the treatment of patients with chronic wounds, in the hope of bringing knowledge to help improve the outcome of patients suffering from chronic wounds in primary healthcare.

2.1.2 Research Question

What does the literature say about the collaboration between the General Practitioner and district nurse in treating patients with chronic wounds in primary healthcare?

2.1.3 Selection criteria

I specified inclusion and exclusion criteria for relevant literature to answer my research question based on the research question.
Qualitative studies are used to investigate the participants' experiences, perceptions, and attitudes in a specific context. (Aveyard, 2019) In this study, I was interested in the GP´s and DN´s experiences of collaboration, and therefore quantitative studies could not be used in my research. I was looking for qualitative data that could describe and interpret the nature of the partnership between the GP and DN.

Inclusion: My focal point in this study was research literature relating to GP´s and DN´s collaboration when treating patients with chronic wounds. Therefore, I only included peer-reviewed original research articles and literature reviews relating to their collaboration. Furthermore, I was interested in the complexity of the issues relating to their experiences in their collaboration, and it was therefore only relevant to include qualitative studies. I wanted to find international literature on my topic and, therefore, only chose English Literature. I had literature older than ten years, even though some

might question this because, in my initial searches, I discovered relevant literature from 2006 that could be used to answer my research question.

Exclusion: Literature that was not directly related to collaboration between the GP´s and district nurses Studies and literature older than ten years and in any other language than English.

2.1.4 Search Strategy

Developing a search strategy is time-consuming and depends on repeating searches to identify feasible terminology. Each database has its way of indexing the articles and somewhat vary in their scope of research. This section will provide insight into how I developed my search strategy and finally selected papers.

2.1.5 Choosing databases

A systematic computerised search in CINAHL and Medline was undertaken according to the selection criteria. CINAHL, which stands for Cumulative Index to Nursing and Allied Health Literature, consists of international nursing journals. Around 600 journals are categorised in CINAHL, and approximately 65 per cent refers to nursing. Medline is the primary database for the National Library of Medicine and consists of literature within medicine, nursing, odontology, and hospital administration. Medline consists of 15 million categorised articles from 32,000 journals and consists of 95 per cent of the medical literature, including nursing journals (Willman, Stolz, & Bahtsevani, 2007). I chose to limit my search to these databases because they are most relevant to the literature I needed to collect. Another reason for limiting my search to these two databases was that my time was determined by carrying out a Master thesis, and I had to plan my time accordingly.

2.1.6 Developing search terms

In my initial searches, it was difficult to find literature on GP and DNs Collaboration in wound management in primary healthcare. When combined with chronic wounds and primary healthcare, I found literature relating to GP and DN´s Collaboration but not many hits. Therefore, I changed my search strategy. Instead of searching for chronic wounds, I searched for specific chronic wounds such as diabetic foot ulcers, pressure sores, leg ulcers and venous leg ulcers.

Databases use different indexing methods, which can be a challenge, especially for a novice researcher, such as myself. I, therefore, used subject clusters of keywords in my search for relevant literature. According to Aveyard, it is essential to use as many keywords as possible to represent the research question because the researchers might have categorised the topic in different ways(Aune & Struksnes, 2019)

For example, when searching for collaboration, I also searched interprofessional relations, nurse-physician relations, and patient-centred care because patient-centred care also involves coordinating clinical care, which could be interpreted as collaboration.

I used subject clusters of keywords to help in my search strategy.

Subject clusters: - Primary healthcare, community health services, community health nursing, home health care, home visits.
General practitioner, physician
Collaboration, interprofessional relations, nurse-physician relations
District nurse, registered nurse, community nursing
Chronic wounds, skin ulcer, leg ulcer, foot ulcer pressure ulcer

I did not find so many studies when I searched for Registered Nurse – contra district nurses. Registered nurses have the same education as District nurses, but it depends on whether it uses district nurses or registered nurses.

When I specified chronic wounds such as venous leg ulcers, it was easier to find literature. I changed my search strategy and divided my searches using Boolean operators (OR, AND) in the following way: -

I searched for keywords "Wounds, chronic, a venous ulcer, leg ulcer, diabetic foot, foot ulcer, and pressure ulcer and then combined with OR. I then used the keyword Collaboration and combined that with the different wound types.

In my initial searches, I found studies relating to GP´s and District nurse´s separate roles in wound management in primary healthcare but no studies relating to their collaboration:

In this study, I was interested in the Collaboration between GP and district nurses working in the community and not the registered nurses employed by the General practitioner, even though they might have similar experiences in collaboration.

When I experienced that it was difficult to find literature using all keywords, I chose to break the searches down. I used, for example, only to use chronic leg ulcers and General practitioner, or pressure wound and GP. I then found it was easier to find literature on GPs and leg ulcers, although the exact keywords in the title did not include collaboration; when I read the abstracts, it was relevant to my research question, so I then had the literature to further assessment.

When I realised that this strategy might enable me to find more literature, I carried on this way. Still, it also meant that it was more time consuming because I could not just look for the keywords in the title but had to make sure that I read the abstracts, conclusion, and results.

I chose to search for the different categories of chronic wounds in combination with collaboration and then used keywords of chronic wounds in combination with general practitioners, district nurses and primary healthcare. I used every combination I could think of relating to wounds and collaboration.

The following is examples of searches made in CINAHL:

Chronic Wounds and Collaboration

Search	Keywords	Limitations English, peer reviewed, 2000 - 2020	Results
S1	"wounds" chronic		3,758
S2	Venous ulcer		2,741
S3	Leg ulcer		3,871
S4	Diabetic foot		9,169
S5	Pressure ulcer		14,246

S6	Foot ulcer		1,474
S7	S1orS2orS3or S4 or S5 or S6		30,670
S8	Physician, family		19.863
S9	Community health nursing		31,240
S10	S8 or S9		50,872
S11	Collaboration		77,356
S12	Patient centered care		30571
S13	Interprofessional		32,275
S14	S11 or S12 or S13		130,674
S15	S7 and S10 and S 14		44

Search Chronic wounds and Collaboration

Search	Keywords	Limitations	Results
S1	"MH Wounds and chronic	Limitations English, Peer Reviewed, 2000-2020	3,774
S2	Venous ulcer		2,759
S3	Leg ulcer		3,886
S4	Diabetic foot		9,206
S5	Pressure ulcer		14,329
S6	Foot ulcer		1,481
S7	S1 or S2 or S3 or S4 or S5 or S6		31,670
S8	Collaboration		44,389
S8 AND S9	All wounds AND collaboration		230

Here are examples of searches made in MEDLINE when I made more specific searches relating to leg ulcers

I used different wound types and keywords: Nurse-physician relations, interprofessional, general practitioner, district nurse, primary healthcare, and community health nursing.

Leg ulcers and interprofessional relations

Search	Keywords	Limitations English, Peer Reviewed, 2000-2020	Results

S1	Leg ulcers		15,644
S2	General practitioner OR Family physician		19,869
S3	General Practitioner AND Leg ulcer		48
S4	Venous leg ulcer		2,743
S5	General Practitioner AND Venous leg ulcer		11

Leg ulcers and Primary healthcare

Search	Keywords	Limitations English, peer reviewed, 2000 – 2020	Results
S1	Primary healthcare		63,743
S2	Venous leg ulcer		2,743
S1 AND S2			53

When the hits were over 50, I used the limitations of the English language, years 2000 – 2020 and abstracts. For the hits 50 and under, I read all the abstracts and conclusions to see if they met my inclusion criteria and selected the relevant articles.

Hand search

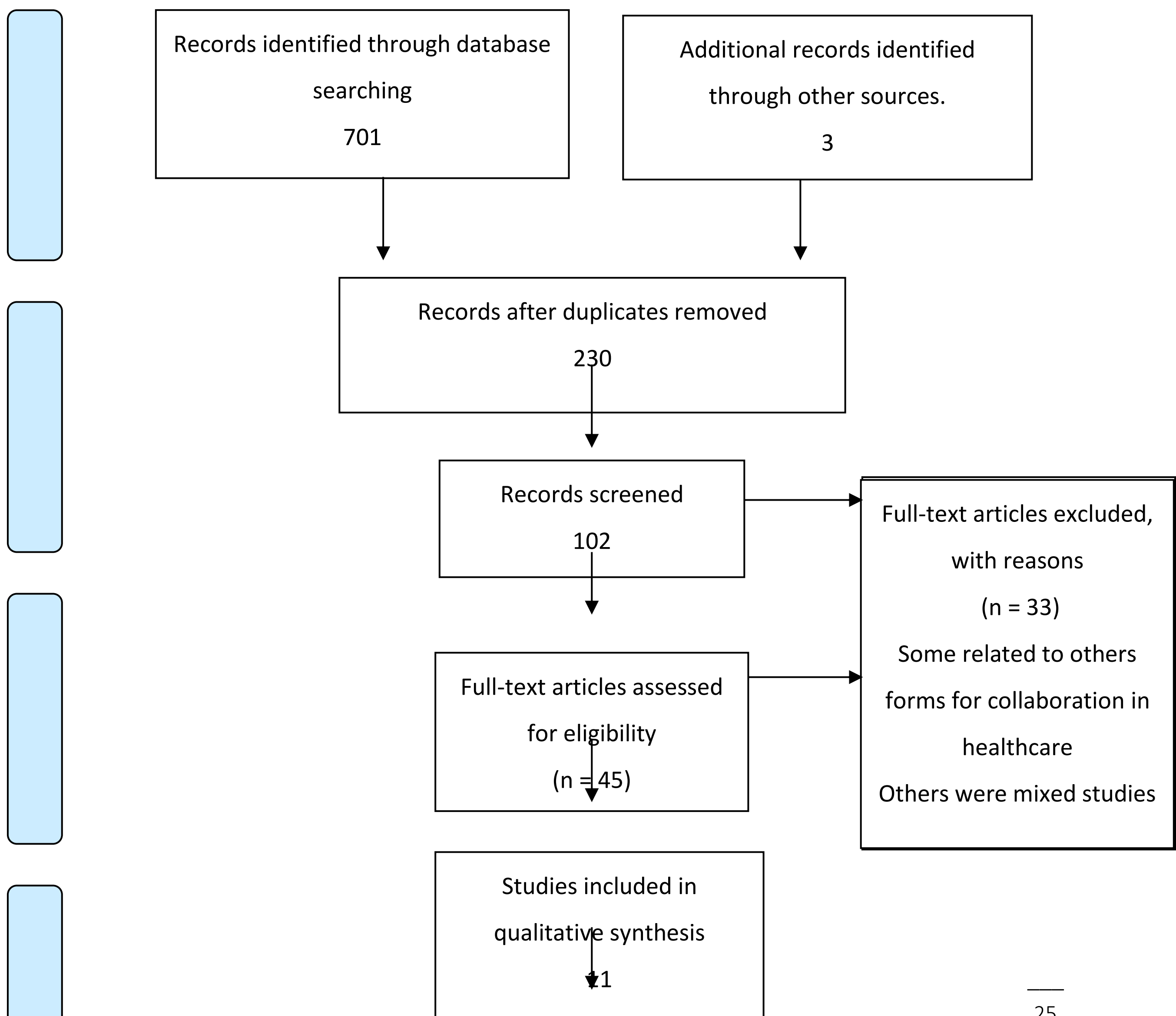
I also checked the literature references I had collected to ensure that I did not overlook any other relevant literature. I also looked for other published work by the authors of the literature I had already gathered.

2.1.7 Selection Process and quality assessment

The searches resulted in 45 articles, and 11 of these were identified as eligible.

The 11 peer-reviewed qualitative articles were selected from studies carried out in Australia, England, Ireland, Norway, and Sweden. Six articles on District nurses' experiences of working with patients with chronic wounds in Primary Healthcare, two articles on General Practitioners experiences of treating patients with chronic wounds and one article on the implementation of guidelines in primary healthcare.

The following is a flowchart over the searches made in CINHAL and MEDLINE.



Studies included in
quantitative synthesis
(meta-analysis)
(n = 0)

See Annex 1: List over searches in CINAHL and MEDLINE

Amongst the 33 studies that were excluded were quantitative analyses, and one of these was an RCT relating to the implementation of venous leg ulcers guidelines. Quantitative studies showing statistics and data would make it difficult to answer my search question.

I included eleven qualitative studies.

Four of the studies (1, 6, 7 and 11) used Content analysis to determine the presence of certain words, themes, and concepts.

Three of the studies (2,4 and 5) used Thematic Analysis to identify themes and patterns of the collected data.

One used Grounded theory (8), which is a method developed by Glaser and Strauss. It is aimed at identifying clusters of codes. It is like TA.

One used the Reflective lifeworld approach (Dahlberg & Nystrom, 2008) (3). The reflective lifeworld approach aims to describe the study's phenomenon as experienced by the participants – in this study, the nurses.

One used Phenomenology and in-depth interviewing (9) QSR N6 – computer program facilitating coding and connection of qualitative data.

See Annex 2: Summary over Articles selected

2.1.8 Literature´s Critical Appraisal

Critical appraisal is a structured literature assessment, assessing strengths and weaknesses and answering the research question. In a critical appraisal of the studies, I used a checklist to answer ten qualitative research questions.
I could see that the researchers in the studies had chosen to use different methods to analyze the data collected. Aveyard refers to the importance of understanding the processes of the studies selected before beginning the critical appraisal (Aveyard, 2019). I aquatinted myself with the different methods before choosing my way. I used this essential assessment method because it was recommended for studies in English, even though it is not expected when doing a scoping review. I could see a disadvantage of this method because there is no point system to score 1 – 10. This critical appraisal method is dependent on the researchers' background, and therefore, the outcome could be influenced by my perspective as a tissue viability nurse. The following table is an example of the critical appraisal of the first article and the other articles in the appendix.

Table: **Critical Appraisal**

Section A: Are the results valid?

1. **Was there a clear statement of the aims of the research?**

Article 1.	yes	No	Cannot tell	Comments
(Aune & Struksnes, 2019) Homecare nurses' experiences of providing healthcare to patients with hard to heal wounds	yes			Yes, it was relevant because the nurses use a significant amount of time in wound management and have a lot of responsibility

2. Is a qualitative methodology appropriate?

Yes, a qualitative method with the exploratory and descriptive design was relevant 21 nurses were included from 3 different municipalities. There was a questionnaire with semi-structured and open-ended questions.

3. Was the research design appropriate to address the aims of the research?

Yes, they carried out a pilot study with two nurses before this study, and they were made aware that the nurses need to explain their experiences of wound care and not just their knowledge.

4. Was the recruitment strategy appropriate to the aims of the research?

They explained how they selected the nurses for the study and chose a large community and a smaller one, but the answers reflected the same experiences.

5. Was the data collected in a way that addressed the research issue?

Yes, the data collection was in the community and nurses were chosen from different areas. They used a head nurse to contact the nurses, and they answered a questionnaire in 2 parts.

6. Has the relationship between research and participants been adequately considered?

Yes, the questionnaire was used for data collection, which means that the researchers influenced the nurses' replies less. The researchers were on hand if needed, but none of the nurses asked for assistance.

Section B Are the results valid?

7. **Have ethical issues been taken into consideration?**

Yes, the researchers have followed guidelines from NSD that answers should be written on paper and stored appropriately.

8. **Was the data analysis sufficiently rigorous?**

Yes, the description of themes and how they were derived was apparent. Only one researcher transcribed the answers verbatim, ready for analysis but bother researchers analysed the data.

9. **Is there a clear statement of findings?**

Yes, the study shows a clear statement of the complex challenges faced by nurses working in wound care. It covers relevant issues about nurses’ skills, Collaboration with GP´s and patients and organisational support.

Section C: Will the results help locally?

10. **How valuable is the research?**

Yes, I consider it valuable because it addresses nurses' knowledge and skills and how Collaboration with GP is essential. They identify General practitioners' lack of knowledge regarding wound care as an inhibiting factor regarding collaboration. They also recognize the need for further studies focusing on GP and nurse perceptions of collaboration may be helpful.

See Annex 3: Critical appraisal of other articles selected

3 Ethical Consideration

According to Aveyard, the method used in the study dictates ethical considerations. By undertaking a literature review as my method, I did not have to apply for acceptance from an ethical committee because I would be presenting work that has already been published (Aveyard, 2019) But I needed to show integrity to the authors, whose research I would be presenting and do this objectively (Jacobsen, 2015)

In the principles of the Nursing Code of Ethics, it states that: -

"The nurse, in all roles and settings, advances the profession through research scholarly inquiry, professional standards development, and the generation of both nursing and health policy."

(American Nurses Association, 2014)

One of this scoping reviews aims to contribute to the knowledge and development in wound management in primary healthcare.

3.1.1 Thematic Analysis

Thematic analysis (TA) is used in qualitative research but has also become a recognised method in systematic reviews (Braun & Clarke, 2013). I chose this method because I had been inspired by Braun and Clarke and believed that TA would be well suited for the aim of this study. Also, the guidelines of this approach made it easier to follow when I was carrying out a TA for the first time.

Braun & Clarke definition of thematic analysis: -

"A method for identifying, analysing, and reporting, patterns (themes) within data. It minimally organises and describes your data in (rich) detail. However, often it goes further than this and interprets various aspects of the research topic" (Braun & Clarke, 2013).

Braun & Clarke describe six phases of thematic analysis, although they emphasise, they are not rigid steps from one to six, but interchangeable phases. They point out that being systematic is essential in good qualitative analysis, but ´analytic sensibility ´is not a product of just ´following the rules. It also presupposes skills such as curiosity, creativity, and open-mindedness. Analytical sensibility skill of reading and interpreting data through your chosen method can be developed through experience (Braun & Clarke, 2013). Using the guidance of the method alongside professional background as a tissue viability nurse and genuine curiosity for the research material supported the analysing process.

The six phases of Thematic analysis

- Reading and familiarizing yourself with the data and identifying items of potential interest
- Developing or generating codes
- Developing themes
- Reviewing the themes and developing subthemes
- Defining the themes, giving the themes labels or names
- Producing the report, finalising the analysis.

I started the analysing process by reading the results in the selected material. Through familiarisation of the material, it was easier to identify items of interest for the research question. The next step was that I had to decide whether to use selective coding or complete coding. Selective coding is when the researcher only selects certain items from the data. Still, according to Braun and Clarke, this method requires that the researcher has the experience and the ability to identify analytic concepts (Braun & Clarke, 2013).

Whereas complete coding is when the researcher selects everything to answer the research question (Braun & Clarke, 2013). As I am a novice in the field of research and TA. I chose the latter. This also assured me that I didn’t miss any possible relevant data.

I gathered statements and information provided by the GP´s and DN´s in the articles into a separate document. This enabled further review to analyze them to ascertain how they related to my research question.
In the table below is a table of the nine statements made by the GP and DN in article 2

1, “Per day, you can have six to seven bilateral leg ulcers.”
2. “It becomes a daily routine, and less though the process is put into patient care.”
3. “The leg assessment process can take up to two hours, including holistic as assessment and bandaging, in most cases, it is difficult to complete a full assessment on the first contact
4 “These effects the patients emotional and mental status.”
4. “Patients have decreased mobility and leg ulcers that take long to heal.”
5. “Some patients like bandages, and some patients don´t”
6. “Summer can be challenging with the bandages, as they become hot and sweaty.”
8.“At times, patients complain that they are tight and bulky.”
9.“The initiatives expect to deliver complex care closer to home, but instead of expanding district nursing teams, we are downsizing them, merging as a way of not recruiting to fill the vacant post.”

Then the next step was to code the statements, which I did by labelling the codes with colours. When I identified a code in the data, I gave it a colour so it was easier to categorize. In article 2, as shown above, I identified principles, that in my interpretation, related to responsibility, knowledge, and time. I gave these codes colours: - red for responsibility, green for knowledge and blue for a time.

I did identify other codes in the data, such as the nurse's working environment in the patients' homes and caring for the patients. Still, I felt that these codes relating to time, knowledge and responsibility were relevant for this study.
For example, statement 2. *"It becomes a daily routine, and less thought process is put into patient care"* (DN). I gave this the colour code blue for a time, interpreting that the participant was expressing that the only importance was time

When it comes to codes, codes can be semantic, which means that they are apparent, that there is a clear meaning on the surface of the data. The participant intentionally wants to communicate something. Or the codes can be latent, they make assumptions under the surface meanings and invoke the researcher´s theoretical framework to identify meanings within the data (Braun & Clarke, 2013). In analyzing the data for this study, I used both semantic and latent codes, as this example shows. In statement 10 in article 2: -

> *. "The leg ulcer assessment process can take up to two hours, including Holistic as assessment and bandaging … in most cases, it is challenging to complete a full evaluation on the first contact. "*

When I interpreted this statement, I saw not only the semantic code, that the DN was expressing that there was not enough time to carry out the assessment, but it also showed that the DN knew because she was aware that assessment also involved a holistic approach. I also interpreted the statement to indicate that the nurse took responsibility for the treatment with my professional background.

The next step in the process was to develop themes.
According to Braun & Clark, themes do not emerge or suddenly appear, but they are generated or developed. It is an active process, not passive. An article is broader than a code and captures important patterns or meaning in the data, and a theme has many facets (Braun & Clarke, 2013). Three themes were developed by analysing the statements from the articles. Role of responsibility, Knowledge in treating chronic wounds, and the third and last theme, how time and resources are divided.   By recording the data provided by GPs and DN´s, I was able to review the themes again,

and by so doing, I was able to conclude that some of the data could be classified under more than one theme.

When I named the themes, I looked at what the GP and DN indicated in the data. The data showed that the respondents found collaboration a challenge in the treatment of wound management. Further, the data indicated that the roles of responsibility were undefined, and this

made collaboration problematic. The first theme I identified from the data was, therefore, the part of the responsibility. Theme two was identified as the balance of knowledge in wound treatment – analysis of the data indicated that the respondents had different levels of expertise, which made collaboration a challenge for them to treat the patients with chronic wounds. The third theme was generated from the data, which indicated that the participants found collaboration difficult because resources were divided into two separate organizations. The third theme was therefore labelled, how time and resources are divided.

The following example shows how coded statements relate to the themes.

Responsibility	Knowledge	Time
Sometimes you will not meet your goals and see that nothing helps. And you just have to do your best for the patient" (C6) "Some of the patients receive good monitoring from the GP while others do not get anything" (A2) "Almost all GPs pull away, and the assessment is left to the nurse" (B1)	"Nurses in-home care are good at making wounds heal." "I have experienced successful wound healing and have a general impression that we are good at it "(C11) "Initial good wound care procedures make the wound healing process shorter and less uncomfortable for the patient" (A3)	"Those who write worklists do not see the importance of continuous monitoring of a few carers" (B3) "When there are a lot of different nurses visiting the patient, it´s described as "many cooks" (C2) support from the head nurse and understanding that wound care is a challenging field to work with" (C1)

"I often experience that patients have less pain when there is a "Known" nurse visiting ..and we see a faster wound healing" (C10) "Effective cooperation that leads to optimal wound management**" (C10)**	Occasionally the procedures are changed before we have time to see results" (B3) ". Colleagues change the scheduled procedure, without checking up the initial plan" (C7) "The wound care procedure was constantly changed because health workers did not agree" (A1) "We are not good enough to document goals and to evaluate the wound, for instance with pictures in the journal" (C7) "Effective cooperation that leads to optimal wound management**" (C10)**	

See Annex 4: Thematic analysis

4 Results

In this chapter, I will present the results of the thematic analysis. And then, I will go onto the discussion section to debate the relevance of the results. Finally, I will describe the conclusion to this study and convey the limitations of undertaking a literature review

The analysis generated three themes describing different challenges related to the collaboration between the GPs and DNS in treating patients with chronic wounds. The themes were 1) Role of responsibility, 2) Balance of Knowledge in wound treatment,

and 3) How time /resources are divided. Even if the themes were distinctively separated through analysis, I also realized how they were intertwined, and thus Another challenge in their collaboration is how time and resources are divided. They work in two different organizations, and therefore their time and resources are dependent upon coordination within these organizations. The GPs can, to a certain extent, plan their own time, whereas the DN is dependent on others within the organization that plan the visits for the DN.

4.1.1 Role of Responsibility

The first theme identifies how the GP´s and DN perceive their responsibility in treating patients with chronic wounds. It describes the challenges they meet in their role of responsibility, how they perceive their roles, whether they consider functions well defined or if the lack of support creates a challenge for them to take on the patient entirely.

Analysis of the data obtained indicated that some of the GPs felt that the responsibility was an essential part of their daily practice and had no wish to hand this over to the district nurse. In article 9: -

"it's an area that I wouldn´t want to see completely removed from my practice. I don´t want to be sitting here saying, "you´ve got an ulcer, go and see the nurse", "you´ve got a rash, go and see the dermatologist."

"General practice is the ideal place. The patient is known, it is usually close to their home, and hopefully, the repository of skills there is as good as anywhere else. It is cost-effective, it is early interventionist, and it should prevent people from going into hospitals."

"If (the community nursing service is dealing with it, I´m not going to see it unless I´m going to do two house calls a week. I don´t know what´s happening, and I´m not too fond of that. I´m sure they are well trained and well-meaning. But ultimately, the doctor looking after them is responsible."

(Sadler, Russell, Boldy, & Stacey, 2006)

Although in article 4. the GP´s regarded the treatment, the responsibility of the nurses

"*As I think the nurses take quite a lot of responsibility, and some have specialist training in leg ulcer treatment, I pass a lot over to them. They keep tabs on the patient and all on that side of things" (GP 15)*

"We have a tough working environment, we have to do everything, and we have to prioritize. The hospital does what it has to do, and then, the patients are discharged quite early. There is not enough time. I feel that I do not know that area(dressings) the nurse should know that area, as has been said, an anyway they have more education and information about bandaging materials and the like" (GP16)

(A Friman, Edstrom, Ebbeskog, & Edelbring, 2020)

And this was also emphasized in article 5 because not only did a GP´s consider wound management the responsibility of the nurse but the statement could be interpreted as a latent code whereby the GP indicates that his role was more important in the treatment of other chronic diseases.

"I guess it´s because we are not responsible for the management of leg ulcers. It is in some way the nurses who are. We are, of course, the patients accountable GPs, but we don´t manage the wound care, as we don´t prescribe the specific dressings etc. The nurses carry out the care on their own. We are therefore a bit more peripheral in the comparison to, for example, the treatment of heart failure (GP 12)

(A. Friman, Edstrom, & Edelbring, 2018)

Analysis of my research suggests that district nurses seemed ambivalent towards this role of responsibility and expressed that the position of responsibility was a challenge.

In article 8, the DN´s expressed that responsibility was a burden, and they perceived that they had failed in their role

"It's like a failure, sort of, I mean, they´re helped their wounds were supposed to heal, but I couldn´t save this one, really, and it feels like when you were little, and you wanted to be a superhero and fix it, you want it to end well, but that´s not always the case. yeah, it's like a failure, sort of "

(Lagerin, Hylander, & Tornkvist, 2017)

Article 3 "*You'd think that it wasn´t clean and you´d never make it heal and that the home was 'not the cleanest on earth First a cat and then there were three or four kittens… and when you got there, there could be a compression bandage or an ointment stocking lying around somewhere in a corner…so you had to do your best, then really"*

4.1.2 Balance of Knowledge in wound treatment

The second theme I identified in my research was "Knowledge in wound treatment" both GP and DN´s expressed the challenges regarding lack of knowledge, obtaining knowledge and keeping their knowledge up to date to provide wound treatment to patients.

In article 4, one of the GP´s referred to a lack of training in medical school and the need for more focus on wound management.

"I think that so little time is given to many of the chronic diagnoses during medical school and that there is a lot of focus on the more significant, grander and acute: so, I think more emphasis could be given to this (leg ulcer treatment) during medical school actually so that medical students already have better knowledge (GP 7) (A Friman et al., 2020)

The district nurse´s challenge in obtaining knowledge in wound treatment was expressed differently. In article 7, a nurse described that her knowledge was obtained through experience “learning by doing”.

“Usually, I work with dressing changes on chronic venous leg ulcers…these are the most common, I think that it´s really hard and you are aware that you need to learn more but most of my experiences comes from these. Leg ulcers (DN 4)

(A Friman, Wahlberg, Mattiasson, & Ebbeskog, 2014)

4.1.3 How time and resources are divided

The third and last theme describes the challenges of resources within the GP´s and DN´s work environment. Not having time was a challenge for the GP´s to follow guidelines, or the DN´s work lists did not allow time for the DN´s to fully assess the patient’s wounds.

The GPs in this study expressed those resources made it difficult to follow guidelines for treating chronic wounds. They felt that they needed to prioritise the patients with chronic diseases and had to make do with the knowledge they had built up over time.

In article 11, a general practitioner expressed that there was no time to follow guidelines when treating patients with chronic wounds

“Well, to me, just looking at it (the guidelines) is overwhelming, to have that many pages for one medical condition, and in general practice, we deal with hundreds, so I wouldn´t be able to read that for every condition we have. Yeah, it does not like, if that was my only area, they you. I would go through it and with a fine-toothed comb, but because we have so many different conditions, there´s just no time, and I don´t like reading truth be told” (13 GP)

(Weller, Richard, Turnour, & Team, 2020)

In article 1, the DN´s experienced a challenge getting enough time to carry out the treatment. There was not always an understanding of how much time and resources were needed to treat chronic wounds.

“*Those who write worklists do not see the importance of continuous monitoring of a few carers” (B3)*

The nurses experienced a challenge to carry out wound treatment when too many nurses were involved in the treatment. “*When there are a lot of different nurses visiting the patient, it is described as “many cooks” (C2)*

They expressed that they needed the support of the head nurse *“…support from the head nurse and understanding that wound care is a challenging field to work with” (C1)* (Aune & Struksnes, 2019)

In article 2, the DN´s indicated that working with patients with leg ulcers was challenging because the organization did not recognize the complexity in treating this patient group. One of the DN´s made the following statement

“The leg ulcer assessment process can take up to two hours, including holistic assessment and bandaging…in most cases, it is difficult to complete a full assessment on first contact” (Chamanga, Christie, & McKeowan, 2014)

In article 5, a GP indicated that the challenge of collaboration was restricted by the organization’s structure, which resulted in the GP and DN working separately to meet their goals for the patients instead of together.

“*The team that we had previously is now gone... the GP is a lone wolf who should see many patients whilst at the same time our district nurses have to struggle with home care and try to meet the demands…it becomes a sense of them and us, and we have no straightforward way to share work between us as there was before so that I think it is a shame, I hope that the organization will become flatter and that all patient visits give roughly the same reimbursement and that would lead to more teamwork” (GP 11*
(Friman, Edstrom & Edelbring 2018)

In article 2, a nurse made a statement that described the challenges of collaboration because of the structure of the organization

“*The initiatives expect to deliver complex care closer to home... but instead of expanding district nursing teams, we are downsizing them, merging teams as a way of not recruiting to fill vacant posts” (DN)*

This statement would be recognizable to many nurses and could be interpreted to the organization wants good quality care. Still, with less nursing staff – so nurses are expected to work twice as hard.

Article 3 “*You’d think that it wasn´t clean and you´d never make it heal and that the home was ‘not the cleanest on earth First a cat and then there were three or four kittens… and when you got there, there could be a compression bandage or an ointment stocking lying around somewhere in a corner…so you had to do your best, then really”*

“It’s like a failure, sort of, I mean, they´re helped their wounds were supposed to heal, but I couldn´t save this one, really, and it feels like when you were little, and you wanted to be a superhero and fix it, you want it to end well, but that´s not always the case. yeah, it’s like a failure, sort of “

I see a latent meaning in this statement: the nurse experiences an enormous responsibility for the patient and treatment.

5 Discussion

This study investigated how the GP and DN in primary healthcare collaborated when treating patients with chronic wounds. Furthermore, I wanted to identify any gaps in research in this field and therefore chose to undertake a literature scoping review asking the following question: -

What does the literature say about the collaboration between the General Practitioner and District Nurse in treating patients with chronic wounds?

The systematic search identified 11 articles that were critically appraised using the CASP critical assessment support tool (CASP, 2020)and analyzed using Braun & Clarks' method of Thematic Analysis (Braun & Clarke, 2013).

The main results are that collaboration between these participants is challenging.

1. Role of responsibility

Responsibility for this complex category is underdefined. The GP´s in this study had different perceptions of whose responsibility it was. Some indicated that they considered it a regular part of their practice. In contrast, others stated that it was the responsibility of the district nurse because it was the DN that was most involved in the treatment.

The study indicated that some district nurses were willing to take on the role of responsibility because they felt their knowledge in wound management was sufficient and, in some cases, better than the GPs knowledge. Others indicated that they took on the role of responsibility because they had no other choice in the absence of the GP. Lastly, it was by some DNs suggested that the position of responsibility was a burden

But how can this complex and vulnerable patient group receive quality care when the professionals who should take responsibility are ambivalent in their role?
The recommendations from the world wound healing society WUWHS clearly state that the best treatment for the patients is diagnosing the wound. The general practitioner can only take on this responsibility because the district nurse does not have the educational background or qualifications.

2. Balance of Knowledge

Knowledge is a challenging factor in the GPs and DN collaboration because they come from different educational backgrounds (House & Havens, 2017) The GPs under their training have a medical approach to the patient, whereas the DN a more holistic approach

The study indicates that GPs do not always receive the educational background to treat patients with chronic wounds.
The GP´s lack of knowledge is emphasized when compression therapy in patients wound treatment is not prescribed, even though it is known as the "golden standard" (Karlsmark, 2008) in treating venous leg ulcers.

The nurses describe that it is difficult to find time to update their knowledge in wound management, and there are restrictions within the organization to develop a new understanding. The evidence-based method for assessing wounds TIME (Johansen, 2012) is recommended to all professionals. This method is also used In Denmark and is integrated into the Telemedicine Wound Management journal introduced in Denmark in 2012 (Ministry of Health, 2017). Unfortunately, I experience in my daily practice that the method is not always used because of time restrictions.

The results indicate that both the GPs and DN´s are challenged in developing their knowledge because of the restrains in their organizations

Both GP´s and DN`s agree that continuality in wound management is essential, but this means that someone must take responsibility for these patients and ensure that time and resources are allocated appropriately.

How time and resources are divided

Another challenge in the GPs and DNs collaboration is how time and resources are divided. They work within two different organizations, and therefore their time and resources are dependent upon coordination within these organizations. The GPs can, to

a certain extent, plan their own time, whereas the DN is dependent on others with their organization that plan their visits.
The GPs argue that they have other patients that they must prioritize, and this is a relevant argument, but if the GP was to make a full assessment of the patient with a wound on the first meeting, could there not be a possibility this would save time in the long run?
The DN depends on their organization allocating time for a full assessment, which involves a holistic approach and not just about changing a dressing.
As mentioned in the background of this study, German-speaking countries in Europe collaborate with district nurses and wound specialists to treat patients with venous leg ulcers (Franks, Barker, & et al, 2016) . This could inspire Norway and Denmark.

Collaboration

Historically collaboration between the Physician and Nurse has been a challenge (Stein, 1967) and the results of this study show that there is a gap that must be filled.
Because of the complexity of this patient category (Leach, 2004), the need to improve collaboration is essential, and as Daily argues, *“single disciplines and one-sided views must be replaced with a synergistic alliance”* (Dailey, 2005)

I think it would also be safe to say that I have identified a gap in research by focusing on the collaboration between the GP and DN and not just on the treatment of patients with chronic wounds. Further research should focus on how this collaboration can be strengthened.

This study was not undertaken to come with a solution or answer to solve the issues of Collaboration between the General Practitioner and District Nurse. It was conducted to identify, if possible, why general practitioner does not always diagnose wounds and DN´s do now always follow procedures.

Another aspect of this study is that if the restrictions of GP working environment makes it difficult for them to take on the responsibility for this patient category, who can take on this role? Is it now that we should think of new roles for nurses – such as the

Advanced Practice Nurse with background, qualifications, and skills to attend to complex patient situations? This study does not provide answers for that, but it indicates an exciting area for further exploration and development of clinical health care and areas for research.

Last comments

This study only focused on the collaboration between the GP and DN and not the specialist nurse in wound management or Tissue viability (who have other qualifications)

.

Wounds can no longer be known as the "Silent epidemic". We must address the "elephant in the room."

5.1.1 Implications for further research

Even though this is a small sample study, the evidence indicates a need for further research into the GP and DN collaboration and its effect on treating patients with chronic wounds.

5.1.2 Implications for clinical practice

The study identifies that there is a lack of knowledge surrounding the complexity of this patient category. There is a need to put more emphasis on clinical assessment and follow up on these patients.

6 Conclusion

In conclusion, the study results indicated that the patients with wounds are a complex patient category. There is a need to optimise the quality of care in wound management for these patients. The main results of this study indicated that there are challenges to the collaboration between the General Practitioner and District Nurse in the treatment of patients with Chronic wounds in Primary Healthcare: -

1. The role of responsibility for this patient category is undefined, resulting in delayed wound treatment for the patients.

2. There is an imbalance in knowledge and limited opportunity to develop that knowledge for both the General Practitioners and District Nurses

3. The restrictions of the two organizations where the GP and DN work make it difficult for the parts to prioritize this patient group.

7 Limitations

7.1.1 Strengths and limitations to the study

The strengths of this study were that even though I had undertaken a scoping review, the search was carried out systematically, and I did not restrict my search to one specific chronic wound but searched for all wound types. Although on reflection, I can also see that the articles in this study mainly relate to the treatment of hard to heal wounds, such as venous leg ulcers.

As I mentioned earlier, the limitations are that I am a novice researcher and, therefore, not so experienced. I was alone doing this research researcher. This meant that it was only my perspective that I was taking into this research

Lastly, it must be considered whether my background as a Tissue Viability is a strength or weakness to the study. One could argue that I had a different perspective, and it was easier to interpret the statements made by the doctors and nurses. The comments given by the nurses, expressing the need for more time to carry out the leg ulcer assessment, was not difficult to relate to. I did, however, focus on be objective, and that is why all the statements in the articles given by the GPs and DN nurses were included in the TA. I did not "cherry-pick" only the one's information relating to the DNs issues on time.
The critical appraisal section of this study was recommended because the literature being assessed was in English. Still, evaluating the articles by one to ten was not straightforward, where scores could have given a more transparent assessment. This meant that the articles were again interpreted from my perspective.

There are limitations in doing a literature review because it can seem overwhelming. Aveyard (2014) states that a systematic review can only be obtained with the help of team research to review the sources (Aveyard, 2019). I mainly undertook this study on my own. Still, I had support from a librarian in developing the search strategy and my supervisor in discussing the selection of articles, assessment of quality and analysis. Nevertheless, this study would benefit from a more team-based approach in literature research, selection process and analysis, including reviewing a broader spectrum of articles and ensuring quality in all stages. I must acknowledge that a complete overview of the field was not attainable with the time and resources for this thesis. With that said, I have tried my best to fulfil and describe the systematic approach characterizing a literature review and to attend to a profound approximation to analysis. There is, in my opinion, factors that favour the study in terms of transparency. The included articles were presented in a table to ensure transparency to the data giving rise to the results of this study, contributing to the trustworthiness of the study. The quality of the results included in this review included four articles written by the same researcher Friman. Some might see this as bias, but one of the reasons for this was that even though I had carried out an intensive search, it was difficult to find literature relating to General practitioners' collaboration in wound management with district nurses. In Friman, I

found a researcher interested in GPs and DN perceptions of their roles in Wound management.

It is argued that qualitative research cannot be assessed in the same way as quantitative research because the quantitative analysis is measured by validity and reliability, whereas qualitative studies are based on the researcher's interpretation (Aveyard, 2019)

8 References

American Nurses Association. (2015). The Nurses code of Ethics. Retrieved from http://www.nursingworld.org/mainMenuCategories/EhticsStandards/CodeofEthicsforNurses/Code-of-Ethics-For-Nurses.html

Aune, E., & Struksnes, S. (2019). Home care nurses´experience of providing healthcare to patients with hard-to-heal wounds. *Journal of Wound Care, 28*(3), 178-187.

Aveyard, H. (2019). *Doing a Literature Review in Health and Social Care - A Practical Guide* (4th ed.). London: Open University Press.

Benison, L. (2020). Primary care networks: an opportuntiy to improve community wound care. *Community Wound Care, 25*(3), 20-25.

Braun, V., & Clarke, V. (2013). *Successful Qualitative Research a practical guide for beginners* (1st ed.). London: SAGE.

Cambridge Dictionary. (2020). *Cambridge Dictionary*. Retrieved from Cambridge Dictionary: https://dictionary.cambridge.org/dictionary/english/challenge

CASP. (2020). Retrieved from https://casp-uk.net/casp-tools-checklists/

Chamanga, E., Christie, J., & McKeowan, E. (2014). Community nurses´experiences of treating patients with leg ulcers. *Wound Care, 28*(6), 27-34.

Dailey, M. (2005). Interdisciplinary Collaboration: Essential for Improved Wound Care Outcomes and Wound Prevention in Home Care. *Home Health Care Management & Practice, 17*(3), 213-221. doi:10.1177/1084822304271808

Eskilsson, C., & Carlsson, G. (2010). Feeling confident in burdensome yet enriching care: Community nurses decribe the care of patients with hard-to-heal wounds. *International Journal of Qualitative studies on health can well-being, 5:3*(5415), 1-9.

Franks, P., Barker, M., & et al. (2016). Venous Leg Ulcer: Challenges and Current Best Practice. *Journal of Wound Care, 25*(6), 1-67. doi:10.129868/jowc.2016.25.Sup6.S1

Friman, A., Edstrom, D. W., & Edelbring, S. (2017). Attitudes and perceptions form nursing and medical students towards towards the other profession in relation to wound care. *Journal of Interprofessional Care, 31*(5), 620-627. doi:10.1080/13561820.2017.1336991

Friman, A., Edstrom, D. W., Ebbeskog, B., & Edelbring, S. (2020). General practitioners´ knowledge of leg ulcer treatment in primary healthcare: an interview study. *Primary Health Care Reserach & Development, 21*(e34), 1-6. doi:10.1017/S1463423620000274

Friman, A., Klang, B., & Ebbbeskog, B. (2010). Wound care by district nurses at primary healthcare centres: a challenging task without authority or resources. *Journal of interprofessional Care, 25*, 426-434. doi:10.1017/S1463423620000274

Friman, A., Klang, B., & Ebbeskog, B. (2010). Wound care by district nurses at primary healthcare centres: a challenging task without authority or resources. *Scandinavian Journal of Caring Sciences , 25*, 426-434. doi:10.1111/j.147-6712.2010.00839

Friman, A., Wahlberg, A. C., Mattiasson, A., & Ebbeskog, B. (2014). District nurses´ knowledge development in wound management: ongoing learning without organizational support. *Primary Health Care Research & Development, 15*, 386-395. doi:10.1017/S14634236130000303

Friman, A., Wahlberg, A. C., Mattiasson, A.-C., & Ebbeskog, B. (2014). District nurses´knowledge development in wound management: ongoing learning without organizational support. *Primary Health Care Research & Development, 15*, 386-395. doi:10.1017/S14634236130000303

Frode, I., Nader, C., Socha-Dietrich, K., Oderkirk, J., & Colombo, F. (2016, December). *Primary Care Review of Denmark.* Retrieved from Directorate for Employment, Labour and Social Affairs: https://www.oecd.org/health

Frykberg, R. G., & Banks, J. (2015). Challenges in the Treatment of Chronic Wounds. *Advances in Wound Care, 4*(9), 560-582. doi:10.1089/wound.2015.0635

General practitioners´ perceptions of their role and their collaboration with district nurses in wound care. (2018). *Primary Health Care Reserach & Development, 20*(e39), 1-8. doi:10.1017/S14634236180000464

Gittell, J. H. (2009). *High-Performance Health Care: Using the Power of Relationships to achieve quality, efficiency and reliance.* New York.

Gottrup, F., & Karlsmark, T. (2008). *Sår, Baggrund, Diagonse og Behandling* (2nd ed.). København: Munksgaard.

Graham, I. D., Harrison, M. B., Shafey, M., & Keast, D. (2003). Knowledge and attitudes regarding the care of leg ulcers: a survey of family physicians. *Canadian Family Physician, 49*, 896-902.

Graubæk, A.-M. (2010). *Patientologi at være patient* (1. oplag udg.). (A.-M. Graubæk, Red.) Gyldendals Bogklubber.

Harding K, e. A. (2015). *Simplifying Venous Leg Ulcer Management. Consensus Recommendations.* London: Wounds International.

Hjort , A., & Gottrup, F. (2019). Cost of wound treatment to increase significantly in Denmark over the next decade. *Journal of Wound Care, 19*, 174-4,176,178,180,182,184.

Hoffer Gittell, J. (2012). *Effektivitet i sundhedsvæsenet - samarbejde , fleksibiliet og kvalitet.* København: Munksgaard.

House, S., & Havens, D. (2017, March). Nurses´ and Physicians´ Perceptions of Nurse-Physician Collaboration - A Systematic Review. *The Journal of Nursing Administration, 47*(3), 165-171.

Jacobsen, D. (2015). *Hvordan gjennomføre undersøkelser? Innføjring i sammfunsvitenskaplig metode.* oslo: Cappelen Damm Akdemisk.

Johansen, E. (2012, (6)). TIME-modellen. *Sygeplejersken*, pp. 70 - 75.

Jørgensen, S. F., Nygaard, R., & Posnett, J. (2013). Meeting the challenges of wound care in Danish home care. *Journal of Wound Care, 22*, 540-2,544-5.

Karlsmark, T. (2008). Kompressionsbehandling. In F. Gottrup, & T. Karlsmark, *Sår* (2nd ed., pp. 111-121). København: Munksgaard Danmark.

Kommunernes Landsforening. (2010). *Hjemmesygepleje Dokumentaion og styring.* København.

Lagerin, A., Hylander, I., & Tornkvist, L. (2017). District nurses experiences of caring for leg ulcers in accordance with clinical guidelines: a grounded theory study. *International Journal of Qualitative Studies on Health, 12*(1), 1-12. doi:10.1080/17482631.2017.1355213

Leach, M. J. (2004). Making sense of the venous leg ulcer debate: a literature review. *Journal of Wound Care, 13*(2-6).

Lindholm, C. (2005). *Sår* (1 udgave, 1 oplag ed.). (B. K. Nielsen, Trans.) Gyldendals Bogklubber.

Lindholm, C., & Searle, R. (2016). Wound management for the 21st century: combining effectiveness and efficiency. 5-15. doi:10.1111/iwj.12623

Lindholm, C., & Searle, R. (2016). Wound Management for the 21st century: combining effectiveness and efficiency. 5 - 15.

Marshall, R. (2019, June 17). Community Nursing: What is the Difference Between Community and District Nursing . *Medacs Healthcare*.

Ministry of Health. (2017). *Healthcare in Denmark.* Ministry of Health.

Moffatt, C., Martin, R., & Smithdale, R. (2007). *Leg Ulcer Management* (1st ed.). Oxford: Blackwell Publishing.

PRISMA . (2015). Retrieved from PRISMA Transparent Reporting of Systematic reviews and Meta-analyses : http://www.prisma-statement.org/

Probst, S., Seppanen, S., Gethlin, G., & et. al. (2014). *EWMA Document: Home Care-Wound Care.* Journal of Woundcare.

Reeves, S., Nelson, S., & Zwarenstain, M. (2008). The Doctor-Nurse Game in the Age og Interprofessional Care: A view from Canada. *Nursing Inquiry, 15*, 1-2.

Råholm, M.-B., Hedegaard, B. L., Lofmark, A., & Slettebø, Å. (2010, March 5). Nursing education in Denmark, Finland, Norway and Sweden - from Bachlelor´s Degree to PhD. *Journal of Advanced Nursing* , pp. 2126 - 2137.

Sadler, G. M., Russell, G. M., Boldy, D. P., & Stacey, M. C. (2006). General practioners´ experiences of managing patients with chronic leg ulceration. *General Practice - Clinical Practice, 185*(2), 78-81.

Smith, & Nephew. (2007). Skin breakdown - the silent epidemic. *Smith & Nephew Foundation, Hull*.

Smith-Strøm, H., & Thornes, I. (2008). Patient safety regarding leg ulcer treatment in primary health care. *Vård i Norden, 28*(3), 29-33.

Steihaug, S., Paulsen, B., & Melby, L. (2017). Norwegian general practitioners´ collaboration with municpial care providers - a qualitative study of structural conditions. *Scandinavian Journal of Primary Health Care, 35*(4), 344 - 351. doi:10.1080/02813432.2017.13972264

Stein, L. (1967, 6 16). The Doctor - Nurse Game. *Journal of Amercian Medical Association*, pp. 699 - 703.

Vinge, S., Kramhøft, K., & Bøgh, A. (2006). *Hjemmesygeplejen i Danmark.* København: DSI Insititut for Sundhedsvæsen.

Walsh, E., & Gethin, G. (2009). The lived expereince of community nurses treating clients with leg ulcers. *Wound Care*, 24-29.

Weller, C. D., Bouguettaya, A., Britt, H., & Harrison, C. (2020). Management of people with venous leg ulcers by Australian general practitioners: An analysis of the national patient-encounter data. *Wound Repair and Regeneration , 28*, 553-560. doi:10.1111/wrr.12820

Weller, C., Richard, C., Turnour, L., & Team, V. (2020, February). Understanding factors influencing venous leg ulcer guideline implementiation in Australian primary care. *International Journal of Nursing Studies, 17*, pp. 804-818. doi:10.1111/iwj.13334

Willman, A., & Stoltz, P. o. (2007). *Evidensbaseret Sygepleje - En bro mellem forskning og den kliniske virksomhed.* København: Glydendals Bogklubber.

WUWHS. (2008). *Principles af Best Practice : Diagnostics and Wounds.* London: World Union Wound Healing Societies.

Annexes

Annex 1: Literature search

Annex 2: Articles selected

Annex 3: Critical Appraisal over articles

Annex 4: Thematic Analyse