Received: 10 March 2022 | Revised: 4 May 2022 | Accepted: 16 May 2022

DOI: 10.1111/jocn.16382

Journal of Clinical Nursing WILEY

REVIEW

# Competencies of nurse practitioners in family practices: A scoping review

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**Funding information**
Funding for this review was provided by the Foundation of Nursing Science Switzerland

## Abstract

**Aims and objective:** To explore the existing literature related to nurse practitioner (NP) competencies in family practices and to examine the evidence and develop a list of competencies.

**Background:** The integration of NPs into the healthcare system is at different stages of progress around the world. Therefore, an overview and clarification of competencies are important to ensure successful implementation of new roles in existing healthcare systems. However, detailed knowledge is lacking about the competencies of NPs in adult care in family practices.

**Design and methods:** We conducted a scoping review in accordance with the JBI methodology for scoping reviews and the PRISMA-ScR guidelines. We considered studies published in English, German or French from 1965 to the present. Databases searched included MEDLINE, CINAHL, Web of Science and PsycINFO. Sources of grey literature that were searched included ProQuest Dissertations and Theses, OpenGrey and websites of national NP organisations. Two reviewers retrieved full-text studies and extracted data independently. We described the competencies using Hamric's model of advanced practice nursing.

**Results:** We included 23 publications. Competencies in direct clinical practice were described most often particularly pertaining to nursing or medical tasks. Indirect care activities were frequently mentioned. Less information was found regarding competencies in leadership, ethical decision-making and evidence-based practice. We found elementary and extended competencies required to perform the role in family practices. Depending on the country, the role was either emerging or already well-established.

**Conclusions and relevance to clinical practice:** This review provides insight into current knowledge about competencies of NP in family practices. The identified competencies can be used to develop job descriptions or to conceptualise professional development programmes in countries where such roles are just recently emerging. A

list of competencies will promote a common understanding of the NP role and to help clarify interprofessional collaboration in clinical practice.

**KEYWORDS**
adult care, family practices, primary healthcare, competencies, nurse practitioners

## 1 | INTRODUCTION

Primary healthcare systems worldwide are facing the challenge of caring for an aging and multimorbid population with increasing chronic conditions (Nolte et al., 2014; World Health Organization [WHO], 2020). At the same time, there is a shortage of health professionals who must maintain and provide primary care to the population. To meet these challenges, expanded nursing roles, such as advanced practice nurses (APN), are being introduced to many countries. The International Council of Nurses (ICN) defines an APN as an 'Advanced Practice Nurse who integrates clinical skills associated with nursing and medicine in order to assess, diagnose and manage patients in primary healthcare settings and acute care populations as well as ongoing care for populations with chronic illness'. (Schober et al., 2020, p. 6) The term APN refers to a 'generalist or specialized nurse who has acquired, through additional graduate education (minimum of a Master's degree), the expert knowledge base, complex decision-making skills and clinical competencies for Advanced Nursing Practice, the characteristics of which are shaped by the context in which they are credentialed to practice. The two most commonly identified APN roles are Clinical Nurse Specialist (CNS) and Nurse Practitioner (NP)'. (Schober et al., 2020, p. 6) Although there is some overlap in function between these two roles, a major area of differentiation, as well as confusion, is the focus on direct clinical practice (NP), in contrast to indirect care supporting clinical practice at organisational level (CNS) (Schober et al., 2020). In this manuscript, we focus on the NP role, as one of the main settings for this role is primary healthcare, especially in family practices. In the USA, 88.9% of 325,000 licensed NPs are certified in primary healthcare (AANP, 2021). In rural areas, this constitutes approximately 25% of all primary healthcare providers (Barnes et al., 2018). In the USA and Canada, NP roles have been established since the 1960s. These countries have a strong tradition of integrating NPs into primary healthcare. Other countries, such as Australia, the Netherlands, New Zealand, Ireland, Finland, and the UK, have only begun to implement NPs 20 to 30 years later. In Switzerland and Germany, pilot projects with NPs in primary healthcare have recently been initiated (Maier et al., 2017). In our study, we focus on NPs as the integration of NPs into the healthcare system is at different stages of progress around the world (Maier et al., 2017). Despite the fact that NP roles are well established in some countries, confusions remain about their role in direct clinical practice and the combination of nursing and medical activities.

As a frame of reference for this study, we chose Hamric's model (2014) of Advanced Nursing Practice. This framework constitutes the basis of the ICN considerations and that of many countries with regards to the role of NPs. In this framework, various advanced roles are described (including NPs), and core competencies of these roles are clearly defined. Core competencies include direct clinical practice, guidance and coaching, consultation, leadership, evidence-based practice, collaboration and ethical decision making. NPs are expected to possess and employ these competencies, which constitute extensions to the nursing role. As part of these extended competencies, NPs have a holistic view of patient situations. They consider the physical and emotional well-being in the social and cultural context. In our scoping review, we focus on these extended competencies as well as elementary competencies. Both are necessary to perform the NP role. For this purpose, competencies are defined as comprising the knowledge, skills, abilities and behaviours that contribute to individual performance (Moghabghab et al., 2018; National Institutes of Health [NIH], 2021).

The competencies of NPs and their legally recognised scope of practice vary internationally, due to differences in role development processes as well as legal and structural differences (Maier & Aiken, 2016; Maier et al., 2017). A systematic review of 15 studies demonstrates that the number of practicing NPs is increasing if the respective state provides greater scope of practice authority, as is the case in some USA states (Xue et al., 2016). NPs improve healthcare delivery; however, they also contribute to increased healthcare utilisation, especially in rural and vulnerable populations. This review does not indicate the instrument used to assess the quality of the enclosed studies. In countries with established NP roles, NPs often work as substitutes for family doctors (Laurant et al., 2018). Within the legally defined contexts of these countries, NPs have competencies to independently diagnose, order diagnostic tests, interpret results and prescribe medication (Barnes et al., 2018; Maier & Aiken, 2016). A scoping review published one year later includes

**What does this paper contribute to the wider global clinical community?**

- This scoping review identifies competencies of NPs in family practices across the globe.
- The findings will contribute to a better understanding of the NP role to help clarify interprofessional collaboration and delineating professional boundaries in family practices, especially in countries where the role is emerging.

74 articles concerning the work of NPs in primary healthcare in developed countries (Grant et al., 2017). NPs were found to encompass the focus on one specific disease process as well as addressing individual health and well-being needs holistically. The quality of the studies included in this review is rated from moderate to high according to the Critical Appraisal Skills Program (Grant et al., 2017). A recent Cochrane review, including a total of 18 studies, demonstrates that NPs achieve higher patient satisfaction, slightly higher quality of life and equal or better health outcome compared with physicians. However, consultations last longer and return visits seem to occur more frequently, and various nursing qualifications are included in this recent review (Laurant et al., 2018). The evidence level of the included studies is considered to be moderate according to GRADE. Neither of these reviews address NP competencies in family practices in detail. In the USA, where the role is established, only 10% of the participating NPs reported that their roles are unclear. However, 16.3% of NPs find that their competencies are misunderstood by their team (Poghosyan et al., 2017). In countries with well-established NPs, the role seems to be clear and generally understood, whereas confusion and a need for clarity remain in countries with more recently developed NP roles.

Clarification of professional competencies, therefore, is important to ensure successful implementation of the NP role into existing healthcare systems. A lack of consensual definition and differing expectations of NPs' areas of responsibility on the part of the team members both constitute obstacles. Interprofessional collaboration can be impeded by these uncertainties regarding competencies. Factors such as lack of confidence and self-doubt make negotiating and clarifying the scope of practice challenging for NPs (Torrens et al., 2020). Obstacles to the implementation of the NP role also include a lack of awareness or acceptance by the medical profession and other health professionals. Fewer referrals to NP take place when uncertainties regarding NP competencies persist (Josi et al., 2020). To counter these challenges, the clarification of competencies will build trust between NPs, family doctors and other health professionals and lead to a positive attitude toward NPs (Torrens et al., 2020).

## 2 | AIMS

The objective of this scoping review is to explore the existing literature related to NP competencies in family practices, to examine the evidence and develop a list of competencies. We aim to identify any gaps in the literature regarding NP core competencies as defined by Hamric's model (2014) of Advanced Nursing Practice. The study aims to answer the following specific research question: what are the competencies of NPs in adult care in family practices?

## 3 | METHODS

We used the JBI methodology to complete this scoping review in accordance with an a priori protocol (Peters et al., 2020; Schlunegger et al., 2021). This methodology involved the following steps: (1) defining and aligning the objective/s and question/s, (2) developing and aligning the inclusion criteria with the objective/s and question/s, (3) describing the planned approach to evidence searching, selection, data extraction and presentation of the evidence, (4) searching and selecting the evidence, (5) extracting of the data, (6) analysis of the data, (7) presentation of the results (Peters et al., 2020). The reporting of the review follows the PRISMA-ScR (Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Review) guideline by Tricco et al. (2018) (guidelines for reporting systematic reviews and meta-analyses [Appendix S1]). We did not identify existing scoping reviews or systematic reviews (or any currently being conducted) on the topic in a preliminary search of PROSPERO, MEDLINE, the Cochrane Database of Systematic Reviews and the JBI Evidence Synthesis.

**TABLE 1** Inclusion and exclusion criteria

| Criteria | Inclusion | Exclusion |
|---|---|---|
| Participants | • NPs with a Master's degree in nursing or higher<br>• NPs working in direct clinical practice | • Nurses with a bachelor's degree or lower in nursing<br>• Pre-registration nursing students<br>• No definition of Master's degree described in the publication |
| Concept | Core competencies defined by Hamric et al. (2014)<br>• Practice activities (skills and knowledge)<br>• Established or emerging defined by classification of Maier et al. (2017) | • Publications that focused on management and education |
| Context | • Family practices and home visits (including adult practices, internal medicine practices, community health centres)<br>• Adult care | • Home healthcare<br>• Nursing homes, hospital, hospice<br>• Children/adolescent care |
| Types of sources | • Experimental and quasi-experimental study designs<br>• Analytical and descriptive observational studies<br>• Qualitative studies<br>• Dissertations, theses, and websites of national nurse practitioners' organisations | • Study protocols<br>• Summaries/comments/discussions |

## 3.1 | Inclusion and exclusion criteria

We used the following inclusion and exclusion criteria (Table 1).

### 3.1.1 | Participants

This scoping review considered studies that included NPs in family practices globally, irrespective of age, gender or race. We included NPs who have a minimum of a Master's degree in nursing according to the ICN definition and work in direct clinical practice (Schober et al., 2020).

### 3.1.2 | Concept

The concepts of this scoping review encompassed NP competencies. Competencies included, but not limited to, were core competencies of advanced practice such as those defined by Hamric et al. (2014) and practice activities specifically performed by NPs (skills and knowledge). Competencies were examined in countries with either established (clearly defined) or emerging NP roles. This classification was based on the criteria of Maier et al. (2017). We defined competency as comprising the knowledge, skills, abilities and behaviours that contribute to individual performance (Moghabghab et al., 2018; NIH, 2021). 'The term of competencies refers to a broad area of skillful performance'. (Hamric et al., 2014, p. 71).

### 3.1.3 | Context

This scoping review considered studies that were conducted in family practices in rural, urban and suburban regions (global context) where NPs are employed. The focus was on healthcare for adults. We excluded studies that focused on adults in nursing homes, hospital, hospice, home healthcare or children and adolescent care.

### 3.1.4 | Types of sources

This scoping review considered experimental and quasi-experimental study designs, including randomised controlled trials, non-randomised controlled trials, before and after studies and interrupted time-series studies. In addition, analytical observational studies including prospective and retrospective cohort studies, case–control studies and analytical cross-sectional studies were examined. This review also looked at descriptive observational study designs for inclusion, including case series, individual case reports and descriptive cross-sectional studies. Qualitative studies were also considered, including, but not limited to, designs such as phenomenology, grounded theory, ethnography, qualitative description, action research and feminist research. Dissertations, theses, and websites of national NPs organisations which specifically addressed competencies of NPs in family practice settings were examined for inclusion in this scoping review.

## 3.2 | Search strategy

We applied a three-step search strategy for this review in December 2020. In an initial limited search of MEDLINE (PubMed) and CINAHL (EBSCO), we identified articles and analysed the words in the title and abstract, as well as the index terms used to describe the article. During a second search, we considered all identified keywords and index terms found across the complete databases. In a third search, we examined the reference list of all included reports and articles; thus, identifying additional studies. The full search strategy is provided in Appendix S2.

The systematic databases searched included MEDLINE (PubMed), CINAHL (EBSCO), Web of Science (Clarivate) and PsycINFO (Ovid). Sources of unpublished studies and grey literature comprised ProQuest Dissertations and Theses, OpenGrey, and various websites of national NP organisations. The websites were identified through Google. We included articles published in English, German and French from 1965 to the present. 1965 was the year that the first NP programme was developed and implemented by Dr. Loretta Ford and Dr. Henry Silver at the University of Colorado (American Association of Nurse Practitioners [AANP], 2020). The focus was on adult care, which is why we have limited the search to patients 19 years of age and older.

## 3.3 | Study/source of evidence selection

After the search, we collated and uploaded all identified records into EndNote v.X8 (Clarivate Analytics, PA, USA) and removed any duplicates. Two independent reviewers (MCS and SA) screened titles and abstracts for assessment in accordance with the inclusion criteria. They retrieved and assessed the full texts of selected studies while applying the inclusion criteria. After screening and identifying the studies, we investigated the reference lists of all included studies and made forward citations. Any disagreements about the eligibility of a study were resolved by discussion or, if no consensus could be reached, by involving a third experienced researcher (MZS).

## 3.4 | Data extraction

To fulfil the search requirements, two independent reviewers extracted data from publications included in the scoping review using a data extraction tool developed by the authors. The data extracted included the following specific details: author, year, country, goal,

research methods, participants, concept and context. One reviewer (MCS) extracted data while another reviewer (SA) cross-checked the data extraction, making suggestions for additions or edits. Any disagreements between the reviewers were resolved through discussion.

### 3.5 | Data analysis and presentation

First, we carried out a data synthesis of the textual studies data according to the Mayring (2016) content analysis. The analysis was performed in MAXQDA 2020 (VERBI Software, Berlin, Germany). Second, we established a tally for the number of studies using a simple vote counting technique for the competencies. Finally, we summarised information regarding competencies in an overview.

## 4 | RESULTS

### 4.1 | Study inclusion

We identified a total of 2494 records in four databases. We removed a total of 136 duplicates and screened 2358 reports by title and abstract. A total of 528 reports were assessed for eligibility.

We identified 418 additional records through searches across sources of unpublished studies (ProQuest Dissertations and Theses, OpenGrey), websites of national NP organisations and through searching the reference lists of the reports included via database searching. Of these, we excluded 381 reports after title and abstract screening. A total of 37 reports were assessed for eligibility.

Ultimately, we included 23 records for data extraction. A PRISMA flow diagram of the study selection and inclusion process is presented in Figure 1.

### 4.2 | Characteristics of included studies

Reports included in the review were published between 2004 and 2020. Countries of origin comprised Australia (Parker et al., 2013), Canada (Abou Malham et al., 2020; Canadian Nurses Association [CNA], 2017; Housden et al., 2016; Irving, 2015; Roots & MacDonald, 2014), New Zealand (King et al., 2018; Poot et al., 2017), Sweden (Altersved et al., 2011; Bergman et al., 2013; Bjorkman et al., 2018; Eriksson et al., 2018), Switzerland (Gysin et al., 2019; Josi & Bianchi, 2019; Steinbrüchel-Boesch et al., 2017), the UK (Marsden & Street, 2004) and the USA (AANP, 2019; Dick & Frazier, 2006; Hahn & Aronow, 2005; Hendrix & Wojciechowski, 2005; Kraus & DuBois, 2017; Kurtzman, 2016; Riegel et al., 2012).

Qualitative designs were used by 16 of the 23 reports (Altersved et al., 2011; Bergman et al., 2013; Bjorkman et al., 2018; Dick & Frazier, 2006; Gysin et al., 2019; Eriksson et al., 2018; Hahn & Aronow, 2005; Irving, 2015; Josi & Bianchi, 2019; King et al., 2018; Kraus & DuBois, 2017; Marsden & Street, 2004; Parker et al., 2013;

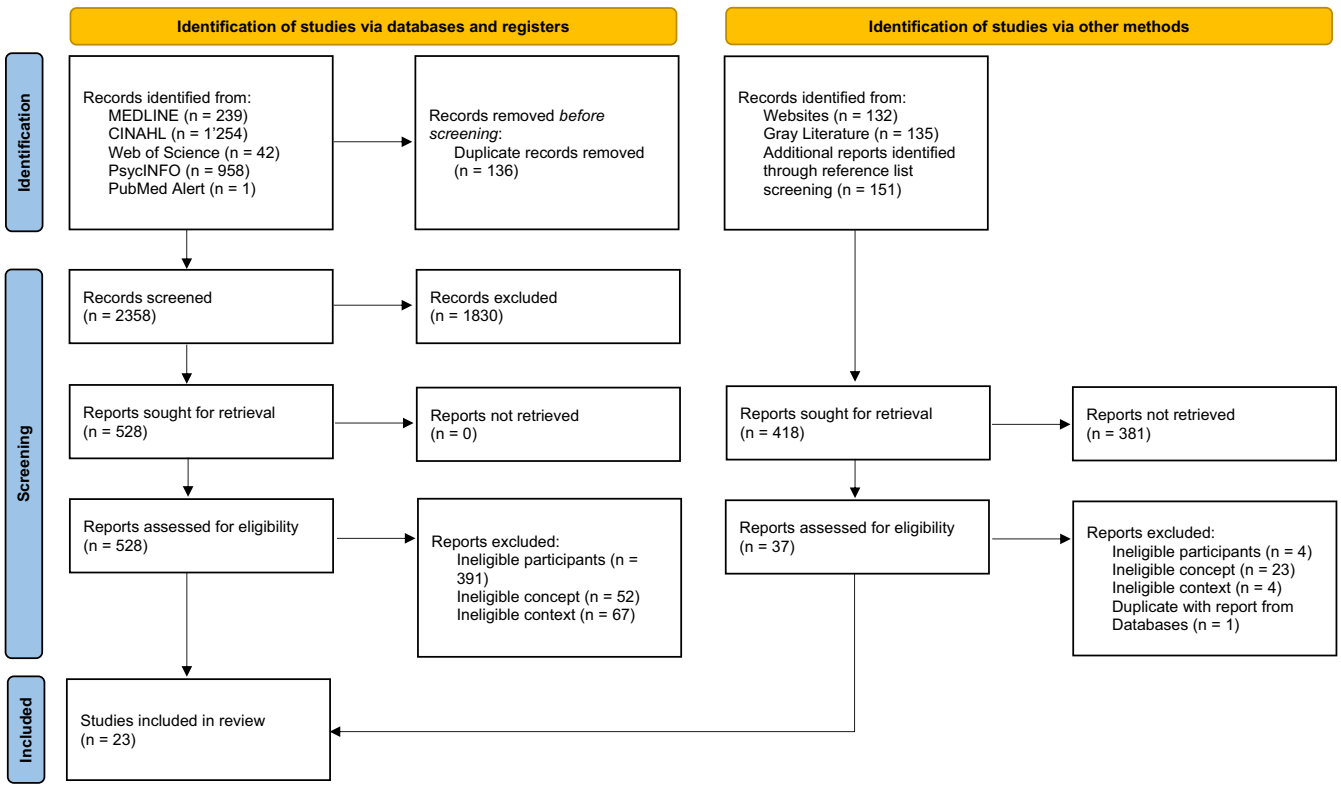


FIGURE 1 PRISMA flowchart of the search [Colour figure can be viewed at wileyonlinelibrary.com]

Steinbrüchel-Boesch et al., 2017). A case study design was used by three authors (Abou Malham et al., 2020; Housden et al., 2016; Roots & MacDonald, 2014). One expert opinion and one case report were found (Hendrix & Wojciechowski, 2005; Riegel et al., 2012). Only two quantitative studies were identified (Kurtzman, 2016; Poot et al., 2017). Finally, two nursing association webpages addressing NPs in family practices were determined (AANP, 2019; CNA, 2017).

Themes such as patient experiences with NPs (Bergman et al., 2013; Eriksson et al., 2018; King et al., 2018; Parker et al., 2013), views of other healthcare professionals regarding the NP role (Gysin et al., 2019; King et al., 2018; Kraus & DuBois, 2017; Marsden & Street, 2004) and/or NP reflections on their own practice (Bjorkman et al., 2018; Gysin et al., 2019; Kraus & DuBois, 2017) were addressed in eight of the reports. The remaining 15 reports aimed at identifying care activities and/or outcomes of NP practice (Dick & Frazier, 2006; Hahn & Aronow, 2005; Housden et al., 2016; Irving, 2015; Josi & Bianchi, 2019; Kurtzman, 2016; Poot et al., 2017), described the NP role (AANP, 2019; CNA, 2017; Hendrix & Wojciechowski, 2005; Riegel et al., 2012), or investigated the collaborative practice between NPs and other healthcare providers (Abou Malham et al., 2020; Altersved et al., 2011; Roots & MacDonald, 2014; Steinbrüchel-Boesch et al., 2017). The detailed characteristics of the included reports are shown in Appendix S3.

## 4.3 | Review findings

Figure 2 displays a concept map of competencies of NPs in adult care in family practices; the frequency in each competency is presented in Figure 3.

### 4.3.1 | Direct clinical practice

We identified in direct clinical practice the following categories: assessment (AANP, 2019; CNA, 2017; Dick & Frazier, 2006; Gysin et al., 2019; Hendrix & Wojciechowski, 2005; Josi & Bianchi, 2019; King et al., 2018), patient-centred care (Bjorkman et al., 2018; Dick & Frazier, 2006; Eriksson et al., 2018; Gysin et al., 2019; Hendrix & Wojciechowski, 2005; Housden et al., 2016; Irving, 2015; King et al., 2018; Kraus & DuBois, 2017; Parker et al., 2013; Roots & MacDonald, 2014; Steinbrüchel-Boesch et al., 2017), diagnosis and prescription (AANP, 2019; Altersved et al., 2011; Bergman et al., 2013; CNA, 2017; Dick & Frazier, 2006; Eriksson et al., 2018; Hahn & Aronow, 2005; Hendrix & Wojciechowski, 2005; Josi & Bianchi, 2019; King et al., 2018; Kraus & DuBois, 2017; Kurtzman, 2016; Marsden & Street, 2004; Poot et al., 2017; Steinbrüchel-Boesch et al., 2017) and emotional support (Bjorkman et al., 2018; Dick & Frazier, 2006; Eriksson et al., 2018; Hendrix & Wojciechowski, 2005; Irving, 2015; King et al., 2018; Marsden & Street, 2004; Parker et al., 2013). When working within these categories, NPs had the competency to deepen clinical and psychosocial assessments. Not only were standardised assessment protocols used, but NPs also made detailed notes of the living situation during home visits. Through the clinical and psychological assessment, NPs gained a holistic understanding of the individual patient's situation and their social environment. By combining the holistic approach with diagnostic skills, NPs were able to select appropriate strategies for treatment, such as the arrangement for aids or illness prevention services when needed. In addition, we identified prescribing, managing and adjusting medications (depending on laws and practice restrictions) as a competency of NPs. Legally defined professional boundaries were state- or country-specific, based on regional or national laws and practice restrictions. In some countries, NPs had the right to prescribe independently, while in others they did not. In addition to the extended competencies, NPs employed elementary skills such as taking time, actively listening, responding to the patient's narratives and offering emotional support.

### 4.3.2 | Collaboration

We identified in collaborations the following categories: exchange with family doctors (Abou Malham et al., 2020; Bjorkman et al., 2018; Dick & Frazier, 2006; Hendrix & Wojciechowski, 2005; Housden et al., 2016; Josi & Bianchi, 2019; King et al., 2018; Kraus & DuBois, 2017; Marsden & Street, 2004; Roots & MacDonald, 2014), varying degrees of supervision (Josi & Bianchi, 2019), connections between family practice and local community (Roots & MacDonald, 2014) and respectful relationships with other health professionals (Dick & Frazier, 2006). NPs maintained continuous and effective exchanges with family doctors with respect to patient situations. In some cases, NPs managed their own patients, seeking assistance when needed, and NPs insisted on some degree of supervision by the family doctors. They visited patients at home or in nursing homes either alone or in collaboration with family doctors. Sometimes, patients would benefit from joint NP and family doctor visits at home. Through the connections with families, NPs facilitated contact between family practices and the local community. Due to the close collaboration between NPs and family doctors, NPs were able to build bridges between the doctors and the staff of the family practices. In addition to the extended competencies, NPs employed elementary skills such as forming respectful relationships with other health professionals, characterised by trust and an open-door policy.

### 4.3.3 | Guidance and coaching

We identified in guidance and coaching the following categories: patient empowerment (AANP, 2019; CNA, 2017; Dick & Frazier, 2006; Hendrix & Wojciechowski, 2005; Irving, 2015; King et al., 2018; Kurtzman, 2016; Marsden & Street, 2004; Roots & MacDonald, 2014), patient participation (Dick & Frazier, 2006;

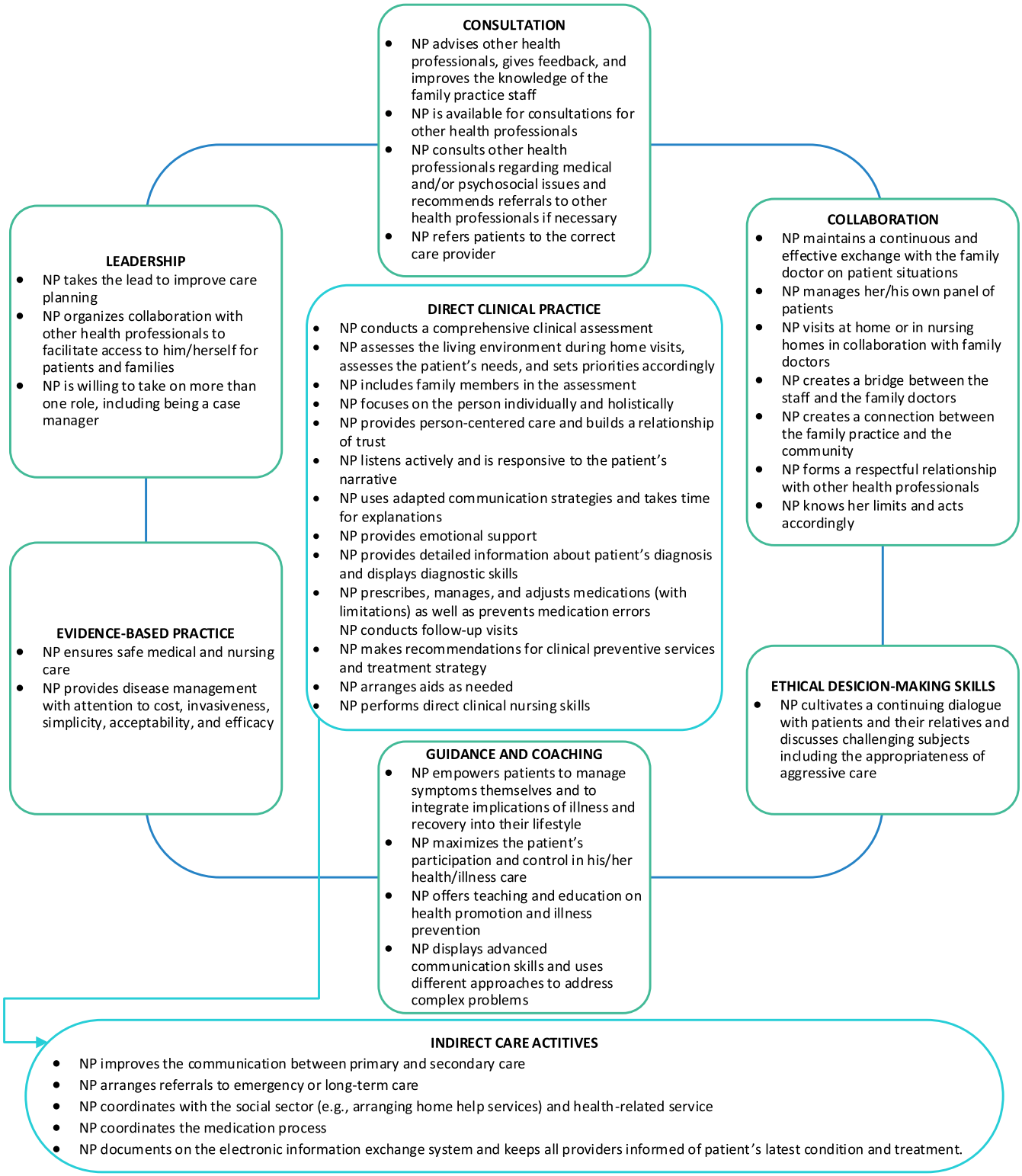


FIGURE 2 Competencies of nurse practitioners in family practices [Colour figure can be viewed at wileyonlinelibrary.com]

Hendrix & Wojciechowski, 2005) and advanced communication skills (Bjorkman et al., 2018; Dick & Frazier, 2006; Hendrix & Wojciechowski, 2005; King et al., 2018; Marsden & Street, 2004). NPs had the competency to empower patients to manage symptoms themselves and to integrate the implications of their diseases and recovery into their lifestyle. By determining the patient's readiness to learn and to change, NPs maximised the patient's participation and control in their own health/illness care. In addition to the extended competencies, NPs employed elementary skills such as teaching and education on health promotion and illness prevention,

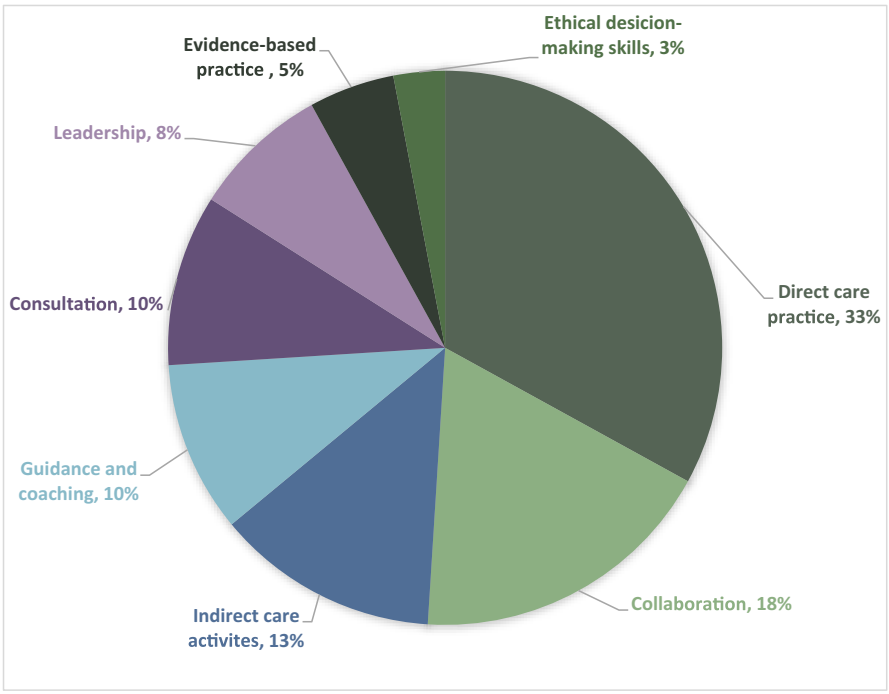


FIGURE 3 Frequency in each competency of nurse practitioners in family practices [Colour figure can be viewed at wileyonlinelibrary.com]

and they displayed advanced communication skills and used different theory-based approaches to address complex health problems.

### 4.3.4 | Consultation

We identified in consultation the following categories: advising other health professionals (Altersved et al., 2011; Dick & Frazier, 2006; Marsden & Street, 2004; Roots & MacDonald, 2014), and referrals to the correct care provider (Bjorkman et al., 2018; Dick & Frazier, 2006; Hahn & Aronow, 2005; Kraus & DuBois, 2017; Marsden & Street, 2004). NPs displayed competency in advising other health professionals, providing constructive feedback and improving the knowledge of the family practice staff. Being aware of their own limits, NPs also consulted other health professionals and made recommendations for referrals when needed. There was little information on extended competencies or elementary skills; thus, no distinctions could be made here.

### 4.3.5 | Leadership, ethical decision-making skills and evidence-based practice

We identified only a few competencies in leadership (Abou Malham et al., 2020; Dick & Frazier, 2006; Marsden & Street, 2004; Roots & MacDonald, 2014), ethical decision-making skills (Dick & Frazier, 2006) and evidence-based practice (Dick & Frazier, 2006). These were, among others, NPs taking the lead to improve care planning and providing disease management with attention to cost, invasiveness, simplicity, acceptability and efficacy. NPs cultivated a continuing dialogue with patients and their relatives to discuss challenging subjects including the appropriateness of aggressive care. There was little information on extended competencies or elementary skills. Thus, no distinctions could be made here.

### 4.3.6 | Indirect care activities

We identified in indirect care activities the following categories: coordination (Altersved et al., 2011; AANP, 2019; Bjorkman et al., 2018; CNA, 2017; Dick & Frazier, 2006; Gysin et al., 2019; Hendrix & Wojciechowski, 2005; King et al., 2018 Parker et al., 2013; Riegel et al., 2012) and documentation (Hendrix & Wojciechowski, 2005). Within these areas, NPs had the competency to coordinate various health-related services such as home help services, adult day care programmes or transportations. They were experts in the coordination and integration of care. NPs also arranged for referrals to either emergency or long-term care. In addition to the extended competencies, NPs employed elementary skills such as keeping an unhindered flow of communication between the different healthcare providers; NPs documented information in the electronic information exchange system and kept everyone involved updated about the patient's most recent condition and treatment.

## 5 | DISCUSSION

Competencies in direct clinical practice and the NPs' holistic approach to treating and caring for patients in family practices were detailed in this review. Less information was found on competencies in leadership, ethical decision-making and evidence-based practice. Not all competencies found in the scoping review belonged to the extended competencies of NPs in family practices. The competencies were found to be clearly delineated in countries where the role

was well-established. Countries where the NP role is emerging demonstrated less clearly defined competencies.

In this scoping review, competencies in direct clinical practice were reported in most publications. Thus, the recommendation by Hamric et al. (2014) is maintained, that is, that NPs are expected to predominantly work directly with patients and their families. Direct clinical practice competencies were mainly related to nursing activities such as patient-centred care or adopting a holistic approach. From the outset, the ICN guidelines on advanced practice nursing maintain that the concept of the NP role was based on holistic care, focusing on prevention, well-being and patient education (Schober et al., 2020). Many NPs care for chronically ill and/or psychosocially complex patients (Dick & Frazier, 2006). Therefore, employing a holistic approach is needed in order to stabilise or improve the patient's condition. Hamric et al. (2014) underline the need for a holistic approach with regard to not only physical health, but also to emotional well-being and cultural aspects of care.

In contrast to the various nursing competencies identified in direct clinical practice, competencies in the medical field were only mentioned in a few reports and included diagnostic skills and prescribing medications. This result is consistent with the ICN guidelines on advanced nursing practice which assign to NPs some activities previously restricted to family doctors (e.g., diagnostic skills), but emphasise that NPs keep the focus on nursing principles (Schober et al., 2020). Essentially, NP practice means providing extended nursing skills in combination with medical tasks, while advanced practice nursing is embedded in the nursing discipline and not a junior discipline of medicine (Hamric et al., 2014). To act within these extended competencies, a clear delineation between the NP's and the family doctor's roles is necessary. Through delineating the roles and clarifying competencies, NPs may practice more to the full extent of their training, role clarity can be fostered, and appropriate referrals from family doctors to NPs can be facilitated.

Indirect care activities were mentioned in several of the included reports. These activities were related, but not limited, to direct clinical practice situations. Generally, these competencies encompassed fostering communication and coordination between healthcare providers (Grant et al., 2017). The current literature highlights a considerable workload in the area of indirect care activities, such as coordination of care, documentation and referrals (Chan et al., 2019; Grant et al., 2017). According to Hamric et al. (2014), indirect care activities are closely related to direct patient care. Although indirect care activities are not performed with the patient directly, they do not 'occur outside the patient-nurse interface' (Hamric et al., 2014, p. 143). In addition, Chan et al. (2019) found in their integrative review on NP practice that the majority of NP activities were related to direct clinical practice practices. However, when comparing these practice activities with the competencies formulated by professional associations in the USA, the authors found that only 14% of the listed competencies focused on activities related to direct clinical practice (Chan et al., 2019). The connection of indirect care activities with direct clinical practice and patient outcomes therefore needs to be explored in more depth. Eventually, it is necessary to determine whether indirect patient care activities should be attributed to the domain of direct patient care or whether a separate domain is warranted.

Information on competencies in leadership as well as ethical decision-making and evidence-based practice was rare. One reason for this gap may be that extended competencies in direct clinical practice have been studied more frequently than other NP skills (Hamric et al., 2014). It should be highlighted that in Hamric et al. (2014) 'evidence-based practice' was newly introduced, thereby replacing the former 'research competencies'. The areas of leadership and ethical decision-making remained unchanged.

Not all competencies could be classified as extended competencies, although only studies that reported NPs with Master's degrees or higher were included. Instead, the competencies were indicative of general nursing and elementary skills were reported (e.g., being able to actively listen or forming respectful relationships with other health professionals). Deciding which level an NP is at based on competencies alone is difficult, and it takes in-depth clinical practice experience, in addition to education, to develop Advanced Practice Nursing (Hamric et al., 2014; Tracy & O'Grady, 2019). However, through a Master's degree, NPs obtained more in-depth knowledge on disease processes or a widened theory basis. Thus, NPs were able to provide care beyond that of a general nurse, not only in practice but also concerning knowledge, judgement, skill and responsibility (Schober et al., 2020). Therefore, by employing advanced competencies while performing general nursing skills, a deeper understanding of the patient situation and their individual needs are gained.

Most of the included studies were conducted in countries where the NP role, according to Maier's definition (Maier et al., 2017) is established, namely the USA, Canada, Australia, New Zealand and the UK. Some of the reviewed studies were conducted in Sweden and in Switzerland; in both of these countries, the NP role is only just emerging in family practices. In such countries, legally defined boundaries are at the centre of discussion as they have yet to be implemented. In addition, many reports provided the perspective of patients or other healthcare professionals on the NP role and new models of care were explored (Altersved et al., 2011; Bergman et al., 2013; Bjorkman et al., 2018; Eriksson et al., 2018; Gysin et al., 2019; Josi & Bianchi, 2019; Steinbrüchel-Boesch et al., 2017). In contrast, studies located in regions with established NP roles focused on case descriptions or specific NP skills and activities, without clarifying legally defined boundaries or the demarcation from other primary care providers (Abou Malham et al., 2020; Dick & Frazier, 2006; Hahn & Aronow, 2005; Hendrix & Wojciechowski, 2005; Housden et al., 2016; Irving, 2015; King et al., 2018; Kraus & DuBois, 2017; Kurtzman, 2016; Marsden & Street, 2004; Parker et al., 2013; Riegel et al., 2012; Roots & MacDonald, 2014). However, most of the studies described the scope of independent practice but there was a lack of information about education, accountability and responsibility. These criteria are essential to define the scope of practice in each country (AANP, 2019).

### 5.1 | Strengths and limitations

This study has several limitations that must be acknowledged. First, given the nature of scoping reviews, we did not analyse the evidence reported in the studies. However, two reviewers independently reviewed all the full-text reports with respect to inclusion criteria. Thus, reliability was strengthened. Following a previously set protocol also allowed a structured and transparent approach in the search process. Second, the focus on the primary care setting incorporating nurse practitioners with a Master's degree was circumscribed. Thus, only a limited number of studies could be included. It is possible that important aspects about the NP role were not obtained. One reason for this gap may be due to the fact that the International Council of Nurses (ICN) only recommended the Master's degree for the NP role in 2020. Therefore, it is possible that other qualifications were allowed for the NP role. However, by focusing on the Master's degree as qualification for the NP role, this review corresponds of the latest ICN recommendations. Third, most of the included studies were conducted in countries with established NP roles. Thus, generalizability of the results may be limited to contexts where NP roles are emerging.

#### 5.1.1 | Modifications to the study protocol

Some modifications were necessary during the review process: (1) we concretised the research question to better highlight the desired setting of family practice, (2) in the process, we decided to focus on competencies as we received insufficient information on the scope of practice of NPs in family practices and (3) the extraction tool had to be adapted due to a lack of information in the publications.

## 6 | CONCLUSIONS

The competencies of NPs in family practices found in this scoping review predominantly encompassed a broad range of nursing, interprofessional and communication skills. NPs demonstrated a holistic, patient-centred approach. However, further work is required to explore indirect care activities more fully, especially the coordination of various health-related services. This could be done through qualitative studies that examine the experiences of NPs and the interprofessional team. To strengthen the evidence concerning the NP competencies of leadership, ethical decision-making skills and evidence-based practice more well-designed studies are needed. Considering the increasingly elderly and multimorbid population with chronic conditions, the competencies of NPs found in this review will address current healthcare needs in a comprehensive and tailored way, when integrating NPs into family practices. However, NP responsibilities differ from country to country, partly due to existing (or non-existing) legal frameworks for advanced nursing practice.

## 7 | RELEVANCE TO CLINICAL PRACTICE

This scoping review has consolidated and provided a comprehensive list of competencies of NP in family practices in adult care. A list of competencies of NP practice may be beneficial to enhance a common understanding of the role and to clarify interprofessional collaboration. Thus, professional boundaries can be delineated more easily, especially in countries where the role is emerging. The results of this review can be used to develop job descriptions in family practices employing NPs. Thus, the role and scope of practice are much clearer. The identified competencies can help family practices to conceptualise professional development programmes for the improvement of NP skills or to evaluate these programmes.

### ACKNOWLEDGEMENTS

Open access funding provided by Berner Fachhochschule.

### CONFLICT OF INTEREST

The authors declare no conflict of interest.

### DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available in the supplementary material of this article. Further details are available from the corresponding author upon reasonable request.

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**How to cite this article:** Schlunegger, M. C., Aeschlimann, S., Palm, R., & Zumstein-Shaha, M. (2023). Competencies of nurse practitioners in family practices: A scoping review. *Journal of Clinical Nursing*, *32*, 2521–2532. https://doi.org/10.1111/jocn.16382