


# The scope of practice of nurses and allied health professionals in primary care in Ontario, Canada: a scoping review

Sisira Sarma <sup>1,2\*</sup>, Tianyue Zhong<sup>1</sup>, Rose Anne Devlin<sup>3</sup>, Jennifer Rayner<sup>1,4,5</sup>

<sup>1</sup>Department of Epidemiology & Biostatistics, Schulich School of Medicine & Dentistry, Western University, London, ON N6G 2M1, Canada

<sup>2</sup>ICES, Toronto, ON M4N 3M5, Canada

<sup>3</sup>Department of Economics, University of Ottawa, Ottawa, ON K1N 6N5, Canada

<sup>4</sup>Department of Family Medicine, Schulich School of Medicine and Dentistry, Centre for Studies in Family Medicine, Western University, London, ON N6A 3K7, Canada

<sup>5</sup>Department of Research and Policy, Alliance for Healthier Communities, Toronto, ON M6A 3B6, Canada

\*Corresponding author. Department of Epidemiology & Biostatistics, Schulich School of Medicine & Dentistry, Western University, 1465 Richmond Street, London, ON N6G 2M1, Canada. E-mail: [ssarma2@uwo.ca](mailto:ssarma2@uwo.ca)

## Abstract

**Background** Primary care is essential for health care systems to promote health, prevent disease, and manage chronic conditions. However, a shortage of primary care physicians challenges the delivery of high-quality primary care services to the population, especially for those living with multimorbidity. To address this challenge, interprofessional primary care teams consisting of primary care physicians, nurses, and allied health professionals (AHPs) have been rolled out in many jurisdictions. This approach allows physicians to focus on complex patient care, where less complex care can be delegated to nurses and AHPs.

**Methods** We conducted a scoping review of the literature on the scope of practice of nurses and AHPs in interprofessional primary care teams in Ontario, Canada.

**Results** Nurse practitioners and registered nurses are heavily involved in providing direct patient care, whereas registered practical nurses are less involved. Pharmacists focus on medication management and patient education, dietitians focus on dietary assessments and nutrition education, and social workers focus on counselling and psychosocial assessments. Pharmacists and nurse practitioners often face challenges in defining their independent roles. Some physicians struggle with teamwork, whereas others appreciate multidisciplinary approaches.

**Conclusions** Effective integration of nurses and AHPs in a primary care setting would enable physicians to delegate several tasks and address primary care physician shortages in various jurisdictions. Clarifying the professional roles of AHPs in primary care would enhance interprofessional team functioning, helping to increase both the quality and quantity of primary care.

**Keywords** primary care, allied health professional, scope of practice, interprofessional team, Ontario, Canada

## Introduction

Primary care is the foundation of health care systems and plays a pivotal role in promoting health, preventing disease, and managing chronic conditions [1]. Better primary care enhances health system efficiency by reducing overall health care costs, improving population health, and strengthening access to patient-centred care [2]. However, the global shortage of primary care physicians means that health care systems face challenges in meeting the demand for high-quality services [3], especially for older individuals

and those with multiple chronic conditions [4]. In Canada, the terms “family physician” and “primary care physician” are often used interchangeably to describe physicians practicing in primary care following necessary training and certification [5].

Task shifting within physician-led interprofessional primary care teams has emerged as a strategy to improve efficiency in the delivery of primary care. Task shifting involves the redistribution of some clinical responsibilities from physicians to nurses and allied health professionals (AHPs) [6]. This approach has been shown to address resource shortages, enabling primary care physicians to

### Key messages

- The scope of practice of nurses and allied health professionals (AHPs) has expanded over time
- In Ontario's primary care, a diverse group of nurses and AHPs practice along with physicians
- Services of nurses and AHPs can substitute for and complement family physician services
- Nurse practitioners and registered nurses provide substantial direct patient care in teams
- Integration of AHPs in primary care improves the provision of comprehensive primary care

focus on more complex patient care [4]. Additionally, AHPs provide complementary services that further improve the comprehensiveness of primary care provision. In Ontario, nursing positions include nurse practitioner (NP), registered nurse (RN), and registered practical nurse (RPN; also known as licensed practical nurse in other provinces and territories) [7]. While the exact definition of included professions may vary, AHPs are regulated health-care providers with specialized education and skills and exclude physicians or nurses [8]. In addition to task shifting, AHPs provide a range of complementary services across the continuum of care [9, 10]. The past two decades have witnessed a global shift towards recognizing the contributions of nurses and AHPs and integrating them into primary care, an approach that is particularly beneficial for managing complex patients, such as older adults and those with multimorbidity [11].

Team-based care, in which primary care providers (physicians and nurses) practice alongside a diverse range of AHPs, is becoming increasingly important [12]. The integration of nurses and AHPs into team-based care was first implemented in Ontario with the establishment of Community Health Centres (CHCs) in the 1970s, geared to serving disadvantaged populations and rolled out for the general population with the introduction of Family Health Teams (FHTs) since 2005. In both CHCs and FHTs, physicians and nurses work alongside AHPs to provide interprofessional care tailored to the needs of the communities they serve [13]. The collective effort ensures that primary care teams can offer comprehensive services and maintain access to care. CHC physicians work as salaried employees, while FHT physicians receive funding from a blended model that includes capitation, fee-for-service, and other elements like incentives for achieving preventive-care targets [14]. FHTs are also eligible to receive special payments to expand their scope of care, such as prenatal care, home visits, and palliative care [15]. Since 2005, some NP-led clinics have emerged to treat patients unattached to a primary care physician, and these, too, rely on interprofessional care teams [16–18].

In Ontario, most health professions are regulated under the Regulated Health Professions Act (1991) and have profession-specific provincial Acts and regulatory colleges outlining their scope of practice. Controlled acts, as outlined in the profession-specific Acts, can be performed only by authorized professions or by others through delegation by authorized professions [19]. In recent years, nurses and AHPs have been granted greater responsibility and autonomy to perform a range of services. For example, since 2011, NPs can prescribe certain medications and set/cast fractures or joint dislocations; [20, 21] since 2012, pharmacists can administer flu vaccines with additional vaccines added in 2016; [22, 23] and since 2023, they can prescribe treatments for 19 common/minor ailments; [24] respiratory therapists are allowed to administer a prescribed substance by inhalation since 2009 [25]. Revisions to the Nursing Act in 2023 enabled RNs to communicate “to a patient or his/her representative a diagnosis made by the member of a team where the

purpose of that communication is for prescribing a drug as authorized...” [21] followed by new powers for prescribing medications [21, 26]. Since 2007, physician assistants (PAs) have been integrated into primary care and work under physician directives [27].

Although their scopes of practice are set out in legislation, augmented by guidance from professional bodies like the College of Nurses of Ontario, what nurses and AHPs do in practice can vary depending on their specific training, expertise, setting, and team dynamics, and are influenced by employer and workplace requirements [28]. In this paper, we describe the scopes of practice of nurses and AHPs as laid out in the legislation in Ontario, and then we conduct a scoping review of the actual activities that nurses and certain AHPs perform in Ontario's primary care teams. Potential gaps hindering their effective integration in teams are identified.

## Methods

An internal protocol with authors, including a decision maker, was followed for this review, guided by the PRISMA scoping review checklist [29]. Data on legislated scopes of practice of nurses and AHPs were obtained from legislation and regulatory bodies. Nurse types included NPs, RNs, and registered practical nurses (RPNs); we focused on registered dietitians (RDs), pharmacists, and/or social workers (SWs) because of the lack of literature available on other AHPs, such as chiropractors and physiotherapists. The most up-to-date legislative scopes of practice of nurses and AHPs by relevant regulatory bodies as of December 2024 are detailed in [Supplementary Table B1](#). This information was used to locate the controlled acts authorized for each profession, and to guide data extraction for comparisons between the legislative scope of practice and what care providers do in real-world practice.

## Search strategy

A scoping review identified the relevant studies on activities performed by nurses and AHPs in primary care, using five databases: EMBASE, Web of Science, Scopus, CINAHL, and MEDLINE. The searches were conducted in September 2024 and updated in June 2025. The full search strategies for each nurse type and AHP are presented in the [Supplementary Tables A1 to A4](#), and searches were performed separately for each professional group. *Covidence* was used to facilitate the screening process.

## Screening and eligibility criteria

Both title/abstract screening and full-text screening were completed by one reviewer; where uncertainty arose, another author was involved to discuss and arrive at a consensus on include/

exclude decisions. Descriptive research articles of all designs published after 1991 (when the Regulated Health Professions Act was passed into law) were included if the practice setting was in primary care, including FHTs, CHCs, and NP-led clinics. Studies conducted in community programs such as residential long-term care or home care, as well as in specialist clinics where nurses and AHPs were part of a specialized program (e.g. memory clinics) outside of primary care, were excluded, as these studies are not specific to the broader primary care setting serving the general population.

## Data extraction and synthesis

The activities of nurses and AHPs in primary care constituted the primary outcome of interest. For each paper included, we extracted the following information: (i) author, journal, year, and country; (ii) study design; (iii) type of nurse and/or AHP of interest; (iv) sample size; (v) outcome(s); (vi) analytical methods; and (vii) results.

## Results

Within team-based primary care, nursing professionals and AHPs play key roles in the provision of comprehensive primary care, as highlighted in the 30 studies identified by our scoping review [30, 31]. Most included studies used either quantitative cross-sectional observational designs (including surveys and other cross-sectional studies;  $n = 13$ ) or qualitative designs (including interviews and ethnographic studies;  $n = 7$ ). The remaining studies employed descriptive single-case or multiple-case designs (including single or multiple case studies, case reports, and programme descriptions;  $n = 6$ ), retrospective observational designs (including retrospective cohort studies and chart reviews;  $n = 2$ ), and mixed-methods designs ( $n = 2$ ). The studies involved health-care providers across various primary care settings in Ontario, including CHCs, FHTs, and NP-led clinics. The results from the included studies are summarized in Table 1.

## Scope of practice of nurses and allied health professionals in Ontario

Each subsection begins with a brief overview of the regulatory scope of practice of the respective profession, followed by evidence on real-world practice from the published literature [30, 31].

### Registered nurses

According to the scope of practice statement in the Nursing Act (1991), nursing professionals shoulder responsibilities for health promotion, disease prevention, and management, along with coordinating care, patient education, direct patient care, and health assessments across the continuum of care. RNs can perform a variety of controlled acts with or without direct order under certain conditions from a physician or NP, including administering by injection or inhalation, dispensing and prescribing medicine (Supplementary Table B1) [21, 32].

Seven studies on the roles of RNs were identified (Supplementary Figure A1, PRISMA flow diagram for NPs, RNs,

and/or RPNs). In a survey that included responses from 32 RNs, Bonilla et al. (2016) found that 38% of RNs reported conducting daily diet assessments, with varying methods [33]. Lukewich et al. (2014) surveyed 218 RNs, in which the majority reported that they practiced within their scope of practice. With respect to chronic disease management, many nurses performed clinical activities, such as taking vital signs, providing wound care, and educating patients [34]. Using a survey completed largely by managerial leads at FHTs, Lukewich et al. (2018) found that RNs most commonly performed patient education (100%), supported medical activities (94.4%), provided lifestyle counselling (83.3%), provided patient follow-up (83.3%), and conducted clinical activities as directed (66.7%) [35]. In a series of case studies, Oandasan et al. (2010) reported that the functional roles of the seven family practice RNs across different practice settings were similar, although some service frequencies depended on the funding structure [36].

In interviews involving RNs ( $n = 37$ ), Lukewich et al. (2024) found that during the COVID-19 pandemic, some of the RNs interviewed felt that their scope of practice was not fully utilized [37]. In a qualitative study of RNs interviewed ( $n = 37$ ), Lyons et al. (2025) identified four key nurse functions related to vaccination: education, vaccine administration, outreach, and advocacy [38]. Yuille et al. (2016) found that, in caring for cancer survivors, the primary responsibilities of the RNs interviewed ( $n = 18$ ) fell into three groups: assisting with care coordination and system navigation, providing emotional support, and facilitating access to community resources. Other contributions included specific nursing tasks (e.g. triage, symptom management, and chronic disease management), health promotion, and patient education [39].

### Nurse practitioners

NPs are RNs with additional education and training and are able to practice independently in NP-led clinics [28]. They have the authority to communicate disease diagnoses, order and interpret certain diagnostic tests, prescribe medications, perform certain medical procedures, and conduct physical and mental health assessments (Supplementary Table B1) [21, 32].

Our review identified 16 relevant studies on the roles of NPs (Supplementary Figure A1). In a survey involving 123 NPs in primary care settings, Sidani et al. (2000) reported that most NPs made medical diagnoses, especially for minor illnesses, ordered laboratory and diagnostic tests, and prescribed medications. Seventeen percent of the NPs reported being assigned on-call activities, whereas approximately two-thirds made home visits [40]. Through information gathered from interviews and public documents, O'Rourke and Higuchi (2016) concluded that NPs played an important role in establishing the first NP-led clinics in Ontario, providing comprehensive primary care [41]. In a survey involving 20 NPs conducted by Bonilla et al. (2016), 70% of the NPs reported conducting daily diet assessments [33]. Focusing on weight management, Aboueid et al. (2018) interviewed 14 NPs and found that they used anthropometric measures to make dietic referrals [42]. In a survey of 354 nurses (including 74 NPs), Lukewich et al. (2014) found that the majority of nurses reported practicing within their scope of practice, but many NPs felt that they exceeded their scope of practice. Compared with RNs and RPNs, NPs tended to be more engaged in chronic disease management-related activities relative [34]. Focusing on

**Table 1** Summary of published studies.

Author (year), Journal, Country	Study design	Type of nurse or AHP (sample size)	Outcome(s) of interest	Analytical methods	Results
<b>Nurse practitioners, registered nurses, and registered practical nurses*</b>					
Aboueid et al. (2018)[42] <i>BMJ Fam Pract</i> Ontario, Canada	<ul style="list-style-type: none"> <li>Qualitative interview study</li> <li>Information was self-reported by providers</li> </ul>	<ul style="list-style-type: none"> <li>Primary care providers (20; 13 NPs and 7 physicians) supporting care for adult patients in multidisciplinary primary care settings</li> </ul>	<ul style="list-style-type: none"> <li>Nutrition-related weight management practices</li> </ul>	<ul style="list-style-type: none"> <li><b>Analysis:</b> qualitative using an integrated approach</li> </ul>	<ul style="list-style-type: none"> <li>Most primary care providers, including NPs, screened patients for nutrition counselling using anthropometric measures like weight, typically raising the topic during physical exams, chronic disease diagnoses, or abnormal lab results. All participants make dietetic referrals, especially when obesity-related comorbidities were present.</li> </ul>
Bailey et al. (2021)[47] <i>Nurs Leadersh</i> Ontario, Canada	<ul style="list-style-type: none"> <li>Cross-sectional survey</li> <li>Self-report questionnaire</li> </ul>	<ul style="list-style-type: none"> <li>45 NPs from a four-site academic health care network, which comprises acute, primary, rehabilitation, and complex and continuing care</li> </ul>	<ul style="list-style-type: none"> <li>NPs' activities and practice patterns</li> </ul>	<ul style="list-style-type: none"> <li><b>Analysis:</b> descriptive, frequency, and percentage statistical tests</li> </ul>	<ul style="list-style-type: none"> <li>On average, of 574 NP activities conducted per shift, 46.5% were direct clinical care activities (<math>n = 267</math>; most frequently involving assessment, treatment plan development and management, and education/counselling for patients/families), 40.8% were indirect clinical activities (<math>n = 234</math>; most frequently involving collaboration and consultation), 10.3% were leadership or administration activities (<math>n = 59</math>; correspondence or committee activities), and 2% were education or research activities (<math>n = 14</math>)</li> <li>49% (<math>n = 22</math>) of all participating NPs reported 25 break time activities</li> </ul>
Bonilla et al. (2016)[33] <i>J Interprof Care</i> Ontario, Canada	<ul style="list-style-type: none"> <li>Mixed methods study</li> <li>Self-reported information in focus-groups and surveys</li> </ul>	<ul style="list-style-type: none"> <li>Primary care providers (50 in 7 focus groups and 191 from 73 FHTs), including 5 and 20 NPs, 9 and 32 RNs, and 1 and 6 RPNs in the focus groups and web-based surveys</li> </ul>	<ul style="list-style-type: none"> <li>Diet assessment practices in FHTs</li> </ul>	<ul style="list-style-type: none"> <li><b>Analysis:</b> descriptive, interpretive thematic methods, bivariate analyses</li> </ul>	<ul style="list-style-type: none"> <li>Focus group: Diet assessment was commonly performed by providers, although the tools used varied by the purpose and type of work; dieticians were seen as important, and as experts in providing nutrition care; non-dieticians may prefer to work with patients first before making dietician referrals, as they may find it easier to discuss their diet with a non-dietician professional</li> <li>Web-based survey: 70% of the NPs and 38% of RNs noted conducting diet assessment every day, although the methods used varied widely</li> </ul>
Dahrouge et al. (2014)[45] <i>Can Fam Physician</i> Ontario, Canada	<ul style="list-style-type: none"> <li>Cross-sectional survey study</li> <li>Survey was completed by an executive director or clinical manager</li> </ul>	<ul style="list-style-type: none"> <li>21 CHCs (contained 41 full-time equivalent NPs)</li> </ul>	<ul style="list-style-type: none"> <li>NPs' model of practice</li> </ul>	<ul style="list-style-type: none"> <li><b>Analysis:</b> descriptive</li> </ul>	<ul style="list-style-type: none"> <li>At most sites, NPs had their own patient panels. There were no significant differences in care delivery patterns between rural and urban CHCs, or between main and satellite CHCs</li> <li>NPs and family physicians both spent most of their time in direct patient care. In terms of face-to-face encounters outside of the clinic, 27% were walk-in encounters, 20% were same-day or urgent visits, and 7% were outreach visits. Rural NPs average 2.8 on-call hours, while urban CHCs reported that NPs did not provide on-call services</li> </ul>
Heale et al. (2018) [46] <i>Policy Politics Nurs</i>	<ul style="list-style-type: none"> <li>Retrospective cohort study</li> </ul>	<ul style="list-style-type: none"> <li>NP (34 FHTs with a total of 80 NPs)</li> </ul>	<ul style="list-style-type: none"> <li>NP service and diagnostic coded encounters</li> </ul>	<ul style="list-style-type: none"> <li><b>Analysis:</b> descriptive</li> </ul>	<ul style="list-style-type: none"> <li>NPs provided care to patients of all ages, managing both acute and chronic conditions with one or more</li> </ul>

(continued)

**Table 1** Continued

Author (year), Journal, Country	Study design	Type of nurse or AHP (sample size)	Outcome(s) of interest	Analytical methods	Results
Koren et al. (2010) <i>Can J Nurs Res</i> Ontario, Canada	<ul style="list-style-type: none"> <li>• NPAR data, with service coding for NPs</li> <li>• Cross-sectional survey study</li> <li>• Self-report questionnaire</li> </ul>	<ul style="list-style-type: none"> <li>• Primary health care NPs (378 respondents)</li> </ul>	<ul style="list-style-type: none"> <li>• NP roles in primary care</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Analysis:</b> descriptive, contingency tables and chi-square statistics, one-way analysis of variance with tests for multiple comparisons</li> </ul>	<p>issues addressed per visit. On average, they had 10.8 encounters (standard deviation = 3.7) daily, with 46% of NPs having less than 10 daily encounters</p> <ul style="list-style-type: none"> <li>• Across 223 696 NP-patient encounters, the “... most commonly used service code was Assessment (42.4%), most of which were intermediate (57%) or minor (27%). Counselling was the second most commonly reported activity (21.3%). NPs recorded preventative care for 11.3% of encounters. They recorded Diagnostic and therapeutic procedures for 9.2% of visits, which included immunization and urinalysis. Consultation and coverage (8.1%) consisted primarily of referrals.” (p. 76)</li> <li>• Of all responding NPs in primary care, 32% worked in CHCs, 23% worked in physician offices, 15% worked in FHTs, 12% worked in hospitals, 3% worked in NP-led clinics, and 15% worked in other settings (e.g. mental health clinics, Aboriginal health access centres, etc.)</li> <li>• Compared to other settings (71%), NPs in FHTs dedicated more time to direct patient care (81%). NPs in NP-led clinics spent significantly more time on administrative tasks (e.g. budgeting, hiring, etc.) than NPs in other settings</li> <li>• NPs treat minor illnesses (about one-third), manage chronic diseases (25%), and provide health promotion or disease prevention (22%). NPs in CHCs, FHTs, and NP-led clinics spent more time on health promotion or disease prevention activities than those working in hospitals (24–26% vs. 16%). NPs in CHCs also spent more time on counselling as compared to NPs in hospitals (17% vs. 10%). NPs reported facing restrictions in prescribing and test ordering, with NPs (41%) in hospitals and physician offices (39%) reporting the highest limitations in ordering needed medications</li> <li>• More NPs in NP-led clinics worked at multiple sites as compared to NPs in other settings (83% vs. 15–42%).</li> <li>• Compared to NPs in other settings, NPs in NP-led clinics also spent more time on administration</li> <li>• 13% of all NPs had on-call responsibilities, and 43% of all NPs made home visits, although these proportions were significantly different across practice settings</li> <li>• NPs in primary care mostly independently manage care for 80% of their patients</li> <li>• Most nurses reported having clear role descriptions, working within their scope of practice, and feeling</li> </ul>
Lukewich et al. (2014) [34]	<ul style="list-style-type: none"> <li>• Cross-sectional survey study</li> </ul>	<ul style="list-style-type: none"> <li>• Primary care nurses (354)</li> </ul>	<ul style="list-style-type: none"> <li>• Roles of nurses working in primary care settings and comparative</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Analysis:</b> descriptive and comparative</li> </ul>	<p>(continued)</p>

Table 1 Continued

Author (year), Journal, Country	Study design	Type of nurse or AHP (sample size)	Outcome(s) of interest	Analytical methods	Results
<i>J Nurs Adm</i> Ontario, Canada	<ul style="list-style-type: none"> <li>Self-report questionnaire</li> </ul>	nurses; 74 NPs, 218 RNs, 58 RPNs)	the extent to which chronic disease management strategies have been implemented	<ul style="list-style-type: none"> <li>statistics (1-way analyses of variance, chi-squared analyses)</li> </ul>	<p>positive about the future of their roles in primary care. While perceptions were generally consistent across groups, more NPs felt that they were practicing beyond their scope of practice, as compared to RNs and RPNs</p> <ul style="list-style-type: none"> <li>Nurses commonly performed tasks such as taking vital signs, wound care, and administering immunizations for chronic disease management. Compared to RNs and RPNs, NPs were more frequently engaged in chronic disease management-related activities. RNs and RPNs reported similar levels of engagement in most chronic disease management-related activities</li> <li>NPs performed several independent activities, including making referrals, ordering tests, and prescribing medications</li> <li>NPs performed: patient education (reportedly performed with 100% of NPs at FHT locations with NPs, compared with 100% for RNs and 33.3% for RPNs), counselling on sexually transmitted or blood borne infections (100%, compared with 38.9% for RNs and 22.2% for RPNs), ordering diagnostic examinations (100%, compared with 11.1% for RNs and 11.1% for RPNs), prescribing medications (100%, compared with 16.7% for RNs and 0% for RPNs), supporting medical activities (92.9%, compared with 94.4% for RNs and 66.7% for RPNs), participating in clinical decisions (92.9%, compared with 72.2% for RNs and 44.4% for RPNs), counselling on tobacco use, diet, and physical activity (85.7%, compared with 83.3% for RNs and 22.2% for RPNs), following up with specific patient groups (85.7%, compared with 83.3% for RNs and 44.4% for RPNs), conducting clinical activities as part of medical directive (85.7%, compared with 66.7% for RNs and 44.4% for RPNs), and liaison with long-term care, hospitals and other facilities (71.4%, compared with 61.1% for RNs and 55.6% for RPNs)</li> <li>Scope of practice concerns varied across nurse designations and redeployment settings, with three sub-themes emerging: utilization, impact on professional licenses, and mitigating uncertainty</li> <li>Some NPs and RNs felt their skills were underutilized during redeployment, sometimes taking on tasks below their training or having their responsibilities reassigned. Responsibilities of RNs and RPNs who were redeployed would sometimes shift to NPs who were not</li> </ul>
Lukewich et al. (2018) <sup>[35]</sup> <i>Prim Health Care Res Dev</i> Ontario, Canada	<ul style="list-style-type: none"> <li>Cross-sectional survey study</li> <li>Questionnaire most commonly completed by a manager or administrative lead (i.e. information collected indirectly)</li> </ul>	<ul style="list-style-type: none"> <li>NP, RN, and RPN (21 FHTs)</li> </ul>	<ul style="list-style-type: none"> <li>Nursing roles</li> </ul>	<ul style="list-style-type: none"> <li><b>Analysis:</b> descriptive</li> </ul>	
Lukewich et al. (2024) <sup>[37]</sup> <i>SAGE Open Nurs</i> Regions in four provinces in Canada (Ontario, British Columbia, Nova Scotia, Newfoundland and Labrador)	<ul style="list-style-type: none"> <li>Qualitative interview study</li> <li>Self-reported information</li> </ul>	<ul style="list-style-type: none"> <li>76 primary care nurses across four study regions (24 NPs; 37 RNs; 15 RPNs)</li> </ul>	<ul style="list-style-type: none"> <li>Examine the nature (e.g. settings, activities) of redeployment by primary care nurses during the COVID-19 pandemic</li> </ul>	<ul style="list-style-type: none"> <li><b>Analysis:</b> qualitative</li> </ul>	

(continued)

**Table 1** Continued

Author (year), Journal, Country	Study design	Type of nurse or AHP (sample size)	Outcome(s) of interest	Analytical methods	Results
Lyons et al. (2024) <sup>[38]</sup> <i>J Adv Nurs</i> Four provinces in Canada (Ontario, British Columbia, Nova Scotia, Newfoundland and Labrador)	<ul style="list-style-type: none"> <li>Qualitative interview study</li> <li>Self-reported information</li> </ul>	<ul style="list-style-type: none"> <li>76 nurses (24 NPs; 37 RNs; 15 RPNs)</li> </ul>	<ul style="list-style-type: none"> <li>Primary care nurse roles during various stages of the COVID-19 pandemic</li> </ul>	<ul style="list-style-type: none"> <li><b>Analysis:</b> thematic analysis</li> </ul>	<p>redeployed. In contrast, most RPNs reported appropriate use of their scope of practice, though some were assigned clerical duties. Redeployment to unfamiliar settings led to confusion about what activities fell within their legal and professional scope of practice, raising concerns about the potential risk of losing license. To navigate the uncertainty, nurses relied on a range of internal and external resources</p> <ul style="list-style-type: none"> <li>In COVID-19 vaccination, four key functions of primary care nurses were identified: patient education; vaccine administration to patients (including preparation, injection, monitoring, and documentation); organizing and staffing outreach programs; and advocacy for patients (e.g. promoting accessibility for vulnerable groups)</li> </ul>
Oandasan et al. (2010) <sup>[36]</sup> <i>Can Fam Physician</i> Ontario, Canada	<ul style="list-style-type: none"> <li>Case-study using interviews and focus groups</li> <li>Self-reported information during interviews, additional information from colleagues in focus-groups</li> </ul>	<ul style="list-style-type: none"> <li>7 family practice RNs and their colleagues</li> </ul>	<ul style="list-style-type: none"> <li>Role of family practice RNs</li> </ul>	<ul style="list-style-type: none"> <li><b>Analysis:</b> narratives were analysed iteratively</li> </ul>	<p>The overall roles of the family practice RNs were functionally similar. A key difference was how funding models influenced their responsibilities; for example, nurses in fee-for-service clinics provided less health education, as it wasn't billable. RNs also played an important role in collecting patient information</p>
O'Rourke & Higuchi (2016) <sup>[41]</sup> <i>Nurs Leadersh</i> Ontario, Canada	<ul style="list-style-type: none"> <li>Descriptive study (interviews and public documents)</li> <li>Self-reported information from NP leaders, additional information from project members, and external stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>16 participants (6 health care providers including 2 NP leaders, 3 managers, 7 health policy advisors)</li> </ul>	<ul style="list-style-type: none"> <li>Activities and attributes of the 2 NP leaders during the introduction of the first NP-led clinic in Ontario</li> </ul>	<ul style="list-style-type: none"> <li><b>Analysis:</b> qualitative content analysis</li> </ul>	<p>NP leadership, defined as the ability to influence collective action to turn a shared vision into reality, was identified as a key factor for supporting the NP-led clinic. Participants emphasized that successful system change required specific qualities in NP leaders, highlighting perseverance, risk-taking, and effective communication as important traits</p>
Rayner et al. (2020) <sup>[50]</sup> <i>Nurs Leadersh</i> Ontario, Canada	<ul style="list-style-type: none"> <li>Mixed-methods study</li> <li>NPAR information, self-reported and external information from focus-groups, observed information from time and motion tool</li> </ul>	<ul style="list-style-type: none"> <li>NPAP data from 101 NPs (from 34 FHTs); 21 participants from 15 FHTs participated in the focus groups (16 NPs and 5 executive directors); 4 NPs (from 2 FHTs) for time and motion data gathering</li> </ul>	<ul style="list-style-type: none"> <li>NP activities</li> </ul>	<ul style="list-style-type: none"> <li>Used NPAR system data, focus groups, and time and motion data</li> <li><b>Analysis:</b> descriptive statistics, thematic analysis</li> </ul>	<p>"All data sources indicated that NPs spent the majority of their time on direct patient care." (p. 68)</p> <ul style="list-style-type: none"> <li>NPAP data results             <ul style="list-style-type: none"> <li>Across rural and urban FHTs, NPs reported similar patterns of activities over time, with most of their time spent on assessments and counselling. They addressed a wide range of health issues, including chronic disease management, mental health, episodic care, and preventive care</li> </ul> </li> <li>Focus group results             <ul style="list-style-type: none"> <li>The three themes identified from the focus group analysis indicated that NPAR data did not reflect the full scope of NP activities, were not being used for</li> </ul> </li> </ul>

(continued)

Table 1 Continued

Author (year), Journal, Country	Study design	Type of nurse or AHP (sample size)	Outcome(s) of interest	Analytical methods	Results
Sidani et al. (2000) [40] <i>Can J Nurs Leadersh</i> Ontario, Canada	<ul style="list-style-type: none"> <li>• Descriptive survey study</li> <li>• Self-report survey</li> </ul>	<ul style="list-style-type: none"> <li>• 123 NPs in primary health care settings</li> </ul>	<ul style="list-style-type: none"> <li>• To examine the implementation of the NP role in primary care settings</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Analysis:</b> descriptive</li> </ul>	<p>planning or improvement and did not reflect the unique role of NPs." (p. 74)</p> <ul style="list-style-type: none"> <li>◦ Participants reported that NPs saw 10–15 patients daily. Approximately 80% of their time was spent on direct patient care. The remaining time was spent on indirect care, such as documentation, care coordination, and administrative tasks. They were also involved in quality improvement, teaching, and program development and evaluation</li> <li>• Time and motion results <ul style="list-style-type: none"> <li>◦ Ten main activities accounted for nearly 70% of an NP's work time (documentation, physical exam, therapeutic relation with patient, order/interpret lab tests, personal time, patient education, collaborate/consult with other health care professionals, monitor/prescribe medication, administrative meetings, and care coordination)</li> <li>• Most NPs felt their roles were well formalized, with over 70% indicating a clear scope of practice and defined responsibilities. NPs reported a high level of independence in decision-making, with nearly all diagnosing (common diagnoses included infections, hypertension, and diabetes, among others), ordering tests, and prescribing medications</li> <li>• Patients were commonly assigned through patient self-referral, internal or external referrals from practices, and triage. Less than half used standardized protocols to plan and provide care. 17% of NPs had on-call activities, while about two-thirds conducted home visits, averaging six home visits per month</li> <li>• Primary health care NPs work throughout the health care system, with 37% employed by CHCs, 13.5% in hospital outpatient clinics or emergency departments, and others in physician offices, public health clinics, long-term care, and other agencies</li> <li>• NPs spent 74% of their time on direct patient care, with the remaining on administration (12%), teaching (6.9%), and other activities, focusing on health promotion, minor illness treatment, chronic disease management, and complex patient care</li> <li>• Most NPs worked collaboratively with physicians, either co-located (66%) or not co-located (23%), and typically saw patients through direct booking. "Approximately 41% of the respondents reported to both nursing and</li> </ul> </li></ul>
van Soeren et al. (2009)[48] <i>Nurs Leadersh</i> Ontario, Canada	<ul style="list-style-type: none"> <li>• Descriptive survey study</li> <li>• Self-report survey</li> </ul>	<ul style="list-style-type: none"> <li>• 367 primary health care NPs (inclusion criterion was RNs in the Extended Class category)</li> </ul>	<ul style="list-style-type: none"> <li>• The role of primary health care NPs</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Analysis:</b> descriptive, content analysis</li> </ul>	<p>(continued)</p>

**Table 1** Continued

Author (year), Journal, Study design, Country	Type of nurse or AHP (sample size)	Outcome(s) of interest	Analytical methods	Results
Way et al. (2001) [44] <i>CMAJ</i> Ontario, Canada	<ul style="list-style-type: none"> <li>• Cross-sectional</li> <li>• Information from patient encounter form and patient interviews</li> </ul>	<ul style="list-style-type: none"> <li>• 122 encounters involving NPs and 278 involving family physicians</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Analysis:</b> descriptive, chi-squared statistic, one-way analysis of variance</li> </ul>	<p>medical leaders. 24% of NPs reported to an administrative leader, worked within a team or in research, while 19% reported exclusively to a nursing leader and 9% to a physician leader.<sup>27</sup> (p. 65)</p> <ul style="list-style-type: none"> <li>• A major challenge reported by NPs is the inability to practice their full scope of practice, citing limitations such as restrictions due to their practice settings</li> <li>• NPs provided periodic health exams (27% of visits), delivered 11.3 instances of health promotion services per FTE, 18.8 instances of curative services per FTE, 15 instances of rehabilitative services per FTE, 78.8 instances of disease-prevention services per FTE, and 43.8 instances of supportive services per FTE. NPs more often referred to NPs for follow-up (59%) than to physicians (16%)</li> <li>• Participating RNs identified three main roles in caring for cancer survivors: coordinating care and assisting with healthcare system navigation; offering emotional support; and connecting patients with community resources. Less frequently mentioned were specific nursing tasks (e.g. triage, symptom management, managing other chronic conditions, etc.), health promotion (e.g. coordinating and/or conducting basic cancer screening, patient education, etc.) and helping patients develop self-management skills (e.g. goal setting, healthy lifestyle choices, etc.)</li> <li>• Many emphasized their key role in coordinating diagnostic tests, follow-up care, and assisting with transitions between different health care services and settings</li> <li>• Physicians and NPs were reported as the main providers of primary care for transgender patients, most commonly offering services such as episodic care and assessments, counselling, hormone therapy, specialist referrals for surgery, preventive care, and chronic disease management</li> </ul>
Yuille et al. (2016) [39] <i>Nurs Leaders</i> Ontario, Canada	<ul style="list-style-type: none"> <li>• Qualitative interview study</li> <li>• Self-reported information</li> </ul>	<ul style="list-style-type: none"> <li>• 18 RNs working in primary care settings (2 from FHGs, 2 from FHOs, 3 from CHCs, 9 from FHTs, 2 from solo-family physician practices)</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Analysis:</b> content analysis</li> </ul>	<ul style="list-style-type: none"> <li>• To examine the role of nurses in primary care settings in providing cancer survivorship care</li> </ul>
Ziegler et al. (2020) [43] <i>Transgend Health</i> Ontario, Canada	<ul style="list-style-type: none"> <li>• Multiple case study</li> <li>• Self-reported and external information from interviews, investigator field notes</li> </ul>	<ul style="list-style-type: none"> <li>• Primary care practitioners, key informants and support staff in three practice settings: a solo practice fee-for-service, CHC, and FHT</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Analysis:</b> qualitative content analysis, cross-case synthesis</li> </ul>	<ul style="list-style-type: none"> <li>• The role primary care team members enact in transgender care delivery</li> </ul>

**\*Given that many of the papers reported on more than one nursing designation (i.e. NP, RN, and/or RPN), we combined these results in the data extraction table**

**Registered dietitians**

Bonilla et al. (2016) [33] <i>J Interprof</i>	<ul style="list-style-type: none"> <li>• Mixed methods study in 7 focus groups and 191 FHTs</li> <li>• Self-reported information, including from 73 FHTs), including</li> </ul>	<ul style="list-style-type: none"> <li>• Diet assessment practices in interpretive thematic</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Analysis:</b> descriptive, interpretive thematic</li> </ul>	<ul style="list-style-type: none"> <li>• Focus group: Diet assessment was commonly performed by providers, although the tools used varied by the purpose and type of work done; dietitians were seen as important, and as</li> </ul>
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(continued)

Table 1 Continued

\* Given that many of the papers reported on more than one nursing designation (i.e. NP, RN, and/or RPN), we combined these results in the data extraction table

Registered dietitians	Registered dietitians	Registered dietitians	Registered dietitians
<p>Care Ontario, Canada</p> <p>focus-groups and surveys</p> <ul style="list-style-type: none"> <li>12 and 74 dietitians in the focus groups and web-based surveys, respectively</li> </ul>	<p>methods, bivariate analyses</p> <p>experts in providing nutrition care; non-dietitians may prefer to work with patients first before making dietitian referrals, as they may find it easier to discuss their diet with a non-dietitian professional</p> <ul style="list-style-type: none"> <li>Web-based survey: 65% of primary care providers who responded conducted diet assessments ... almost daily, while 13% of non-dietitians reported using no diet assessment methods since their team has a dietitian to do it. 90% of responding dietitians conduct diet assessments every day. Dietitians "...were more likely to assess usual intake and to use formal ... [dietician assessment] ...methods (e.g. food record, diet history)." (p. 80)</li> <li>The central management team recruited dietitians and allocated resources, as well as coordinated dietitian activities. Referrals to the dietitians were mostly made by physicians.</li> <li>74% of the dietitian's working time was spent on clinical activities (assessment, developing and monitoring care plans, patient/family education), documenting in the same medical chart as the physician. Their remaining time is dedicated to professional development, administrative tasks, and research</li> </ul>	<p>Gamblen et al. (2007)<sup>[52]</sup> <i>Can J Diet Pract Res</i> Hamilton, Ontario, Canada</p> <ul style="list-style-type: none"> <li>Programme description</li> <li>Information gathered as part of the nutrition program</li> <li>Dietician (9 dietitians)</li> <li>The dietitian's role when integrated into the primary care setting in Hamilton</li> <li><b>Analysis:</b> descriptive</li> </ul>	<p><b>Pharmacists</b></p> <p>Ashcroft et al. (2024)<sup>[60]</sup> <i>Int J Pharm Pract</i> Ontario, Canada</p> <ul style="list-style-type: none"> <li>Cross-sectional survey study</li> <li>Self-report survey</li> <li>Pharmacists (51 pharmacists)</li> <li>How the COVID-19 impacted pharmacists' role in mental health care within primary care teams</li> <li><b>Analysis:</b> descriptive, thematic analysis</li> <li>During the pandemic, participants highlighted a greater emphasis addressing on urgent patient care needs, service demand and referral fluctuations, and role expansions that included providing supportive counselling. Pharmacists also took on new responsibilities, such as increased collaboration surrounding mental health care and a greater reliance on virtual care. Five themes emerged surrounding mental health care-related activities: medication education and management; non-pharmacologic support; identifying care-related resources and providing referrals; wellness check-ins; and providing consultations to physicians</li> <li>Growing demand for mental health services was associated with a rise in referrals to pharmacists, and collaborative efforts to support mental health care primarily involved partnerships with other members of their team</li> <li>Since the pandemic, 82% of respondents reported increased mental health-related consultations with patients, 71% reported</li> </ul>

(continued)

**Table 1** Continued

Pharmacists	
<p>Bonilla et al. (2016)[33] <i>J Interprof Care</i> Ontario, Canada</p> <ul style="list-style-type: none"> <li>Mixed methods study</li> <li>Self-reported information in focus-groups and surveys</li> </ul>	<p>Primary care providers (50 in 7 focus groups and 191 from 73 FHTs), including 6 and 11 pharmacists in the focus groups and web-based surveys, respectively</p> <p>Diet assessment practices in FHTs</p> <p><b>Analysis:</b> descriptive, interpretive thematic methods, bivariate analyses</p> <p>Diet assessment was commonly performed by providers, although the tools used varied by the purpose and type of work done; dieticians were seen as important, and as experts in providing nutrition care; non-dieticians may prefer to work with patients first before making dietician referrals, as they may find it easier to discuss their diet with a non-dietician professional</p> <ul style="list-style-type: none"> <li>Web-based survey: 27% of responding pharmacists reported conducting diet assessments everyday, although diet assessment methods varied</li> <li>Pharmacists were generally either physician oriented (mainly respond to physician requests), or operated across multiple levels of interaction (patient-centred care, educating providers, and driving changes to improve medication management). Pharmacists' day-to-day practices and self-perceived roles varied across teams; these differences appear to stem from factors such as variations in education, personal practice preferences, and leadership dynamics and communication</li> <li>All participants expressed commitment to evidence-based care and acknowledged a need to strengthen their skills in evaluating relevant clinical literature, as well as in patient assessment</li> <li>A common challenge was limited space within their practices, although this issue was addressed in different ways</li> <li>Pharmacist roles differed between community pharmacy and the FHT setting: in community pharmacies, pharmacists commonly make unsolicited recommendations, whereas in the FHT, other members of the team refer patients to receive a pharmaceutical opinion</li> <li>Most pharmacists were Certified Diabetes Educators</li> <li>Pharmacists participated in four activity areas</li> </ul>
<p>Farrell et al. (2013) [53] <i>Res Social Adm Pharm</i> Ontario, Canada</p> <ul style="list-style-type: none"> <li>Ethnographic study</li> <li>External observations made by researchers; self-reported and external information from interviews with providers, staff and patients</li> </ul>	<p>Pharmacist (unclear; 6 FHTs)</p> <p>Pharmacist roles</p> <p><b>Analysis:</b> descriptive</p>
<p>Gagnon et al. (2017)[55] <i>Can J Diabetes</i> Hamilton, Ontario, Canada</p> <ul style="list-style-type: none"> <li>Case study</li> <li>Information collected through the programme, external information from interviews with providers, staff and patients</li> </ul>	<p>Pharmacists (14 pharmacists at 1 FHT)</p> <p>Pharmacist activities at the Hamilton FHT</p> <p><b>Analysis:</b> descriptive</p>

(continued)

Table 1 Continued

Pharmacists	
<p>Gillespie et al. (2017) [54] <i>Can Pharm J</i> Ontario, Canada</p>	<p>primarily: providing medication recommendations; pharmaceutical education; answering drug-related questions; and participating in quality improvements</p> <ul style="list-style-type: none"> <li>• All pharmacists reported being involved in direct patient care: 96% addressed specific therapeutic concerns, 70% conducted general medication reviews, 63% performed medication reconciliation following hospital discharge. 83% provided education and drug information, 26% participated in direct patient care unrelated to medication, while 17% handled prescription refills and extensions</li> </ul> <p>• <b>Analysis:</b> descriptive and content analysis</p> <ul style="list-style-type: none"> <li>• Pharmacist activities</li> </ul>
<p>Rezahi et al. (2021) [56] <i>Int J Pharm Pract</i> Ontario, Canada</p>	<p>Pharmacist (70 pharmacists)</p> <ul style="list-style-type: none"> <li>• Pharmacist (13 pharmacists in 16 FHT sites)</li> </ul> <p>• Qualitative study with retrospective chart review data</p> <ul style="list-style-type: none"> <li>• Self-reported information to one one-ended question</li> </ul> <p>• <b>Analysis:</b> content analysis</p> <ul style="list-style-type: none"> <li>• Pharmacist activities</li> </ul> <p>“Pharmacists reported that their most significant contribution fell into the categories of drug manipulation (70.1%), counselling and education (15.5%), disease monitoring and optimization (11.3%) and administration (3.1%). Within the most common theme of drug manipulation, significant contributions by the pharmacist included recommending the addition of therapy (16.5%), dose adjustment (13.6%), switching one medication for a more suitable option (8.9%), discontinuing ineffective therapy (8.4%) and tapering off therapy (5.5%).” (p. 386)</p> <ul style="list-style-type: none"> <li>• Of all responses that were linked to specific medical conditions, the most frequently addressed condition was diabetes (39%), followed by cardiovascular issues (22%), pain management (17%), and mental health and central nervous system medication management (11%)</li> </ul>
<p>Riva et al. (2011) [57] <i>Can Pharm J</i> Ontario, Canada</p>	<p>Pharmacist</p> <ul style="list-style-type: none"> <li>• Pharmacist activities with patient with pregnancy-related low back pain, who was referred to chiropractor by their family physician in a FHT</li> </ul> <p>• Descriptive</p>
<p>Tabefar et al. (2020) [59] <i>Can J Pain</i></p>	<p>Community pharmacist (12 pharmacists: 1 from a FHT, 2 with FHT and community pharmacy</p> <ul style="list-style-type: none"> <li>• Qualitative interview study</li> <li>• Self-reported information</li> </ul> <p>• <b>Analysis:</b> thematic analysis</p> <ul style="list-style-type: none"> <li>• Pharmacist experiences with chronic pain care</li> </ul> <p>• <b>Analysis:</b> thematic analysis</p> <p>With relation to chronic pain, pharmacists were involved in pain assessment and management, especially with recommending prescription or non-prescription medications. They saw</p>

(continued)

**Table 1** Continued

Pharmacists	combined, and the rest were community pharmacists)	<p>themselves as part of a multidisciplinary approach to pain management, collaborating with other health care professionals.</p> <ul style="list-style-type: none"> <li>Pharmacists also saw themselves as key educators in pain management, both in pharmacological treatments and in nonpharmacological strategies (e.g. lifestyle modifications, accessing additional resources, etc.) and refer to family physicians when needed</li> </ul>
<p>Truong et al. (2020)<sup>[58]</sup>  <i>Can J Pain</i>                  North York, Ontario, Canada</p>	<ul style="list-style-type: none"> <li>Pharmacists (3 pharmacists in the North York FHT)</li> </ul>	<ul style="list-style-type: none"> <li>Pharmacist services at the North York FHT encompass a wide range of activities, including but not limited to providing drug information, offering pharmacotherapy consults, conducting medication reviews, supporting various FHT-wide chronic disease management programs, participating in quality improvement initiatives, assisting with data standardization, and conducting practice-based research. The pharmacists are also involved in teaching and precepting medical and pharmacy learners at various levels of education. . . .” (p. 270)</li> <li>After the creation of the hybrid model of pharmacy services, where pharmacists provided services at the central site but also worked in physician offices weekly, pharmacist consultations and referrals increased significantly</li> <li>Centralized pharmacist services (highlights): diabetes education program; chronic insomnia program; smoking cessation program and lung health program. At the central site, pharmacists provide services to those who they do not directly visit. Pharmacists frequently provide pharmacotherapy consultations and drug information, addressing issues such as side effects, dosing adjustments, drug coverage, and access challenges. Consults are triaged through a virtual mailbox, and at least one pharmacist is always available on-site for drop-in questions from other health care professionals or patients</li> <li>Decentralized pharmacist services (highlights): individual practice sites vary widely in size and patient focus (e.g. obstetrics and newborn care, older adults with more complex care needs, etc.). Having pharmacists on-site enables</li> </ul>

(continued)

**Table 1** Continued

Pharmacists	real-time support for patients, health care professionals, and medical students and residents in activities such as medication counselling and hospital discharge reconciliation			
<b>Social workers</b>				
Ashcroft et al. (2018) <sup>[62]</sup> <i>Health Soc Work</i> Ontario, Canada	<ul style="list-style-type: none"> <li>• Cross-sectional survey study</li> <li>• Self-report survey</li> </ul>	<ul style="list-style-type: none"> <li>• SW (128 SWs from FHTs)</li> <li>• SW roles</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Analysis:</b> descriptive and content analysis</li> </ul>	<ul style="list-style-type: none"> <li>• The majority of respondents (73%) carried the job title of SW or some specialized form of it (e.g. clinical SW, mental health SW, etc.), while 23% held titles such as “... mental health counsellor,” “mental health therapist,” or “mental health worker.” (p. 111–112)</li> <li>• On a daily or weekly basis, respondents reported performing documentation (100%), counselling/therapy work (99%), psychosocial assessments (89%), community service referrals (84%), psychosocial consultations with other health care professionals (70%), case management (44%), and community organization activities (12%). 48% rarely and 17% never engaged in educating and training other health care providers, respectively, while 25% rarely and 44% never educated or trained students, respectively</li> <li>• 76% reported working within their full scope of practices, while “...the most common areas of practice they described as absent included family therapy, group work, long-term counselling, community development and community collaboration activities, case management, and specialized therapeutic modalities” for the 24% who did not (p. 112). 24% also reported being asked to perform activities outside of their scope of practicelike dispensing medication and communicating medical information and specialized therapies without adequate training</li> <li>• Key barriers to integrating social work into FHTs included challenges associated with practicing in a clinical environment, lack of role clarity, and organizational barriers. Factors that supported integration included appropriate education, collaborative engagement, and supportive organizational frameworks</li> </ul>
Ashcroft et al. (2023) <sup>[64]</sup> <i>Health Manage Forum</i> Ontario, Canada	<ul style="list-style-type: none"> <li>• Cross-sectional survey study</li> <li>• Self-report survey</li> </ul>	<ul style="list-style-type: none"> <li>• Primary care SWs (159 SWs)</li> <li>• How SWs engaged in leadership roles in primary care during the COVID-19 pandemic</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Analysis:</b> descriptive</li> </ul>	<ul style="list-style-type: none"> <li>• Leadership in practice: 84% of respondents reported facilitating team dynamics and providing direct consultation to other team members for patient care. About one-third indicated that they formally organized or led team meetings, while 43% reported serving as mentors or supervisors to other team members. Two-thirds participated in program development and evaluation, and 56% reported leadership in influencing</li> </ul>

(continued)

**Table 1** Continued

Social workers	
<p>Tadic et al. (2020)<sup>[63]</sup>  <i>Healthcare Policy</i>                      Ontario, Canada</p>	<p>• Cross-sectional survey study                      • Information collected through surveying non-social workers (mostly managers or executive directors, also physicians, managers, administrative staff)</p> <p>• SWs (in 43 CHCs and 58 FHTs)</p> <p>• Types of services provided by SWs</p> <p>• <b>Analysis:</b> descriptive</p>
	<p>decision-making processes. 13% reported representing local stakeholder groups</p> <ul style="list-style-type: none"> <li>Leadership during COVID-19: 76% of respondents reported assisting with improving patient access, with 53% involved in planning and implementing virtual care. 78% of formal leaders and 49% of informal leaders participated in transitioning to virtual care. 38% of respondents introduced care innovations, while 47% engaged in activities aimed at supporting the well-being of their team. 28% reported involvement in formal COVID-19 responses and planning, while 26% assisted in delivering vaccination clinics</li> <li>Across CHCs and FHTs, SWs provided a spectrum of services, ranging from psychosocial and mental health support to patient education, as well as, less commonly, end-of-life care</li> <li>Overall, SWs/mental health workers in practices with SWs/mental health workers offered the following services during individual appointments: psychosocial services (95%), primary mental healthcare services (90.1%), health promotion and disease prevention (76.2%), facilitating communication with other care organizations (64.4%), home visits (39.6%), lifestyle counselling (35.6%), and end-of-life care (16.8%). During group appointments, the following services were offered: lifestyle counselling (43.6%), self-management planning (33.7%), and chronic disease management (31.7%). 93.1% also offered practice-level initiatives/programs for patients with mental disorders.</li> <li>In FHTs/CHCs without other mental health workers or psychologists, the percentage of practices with SWs/mental health workers that offered the following services for individual patient appointments were: psychosocial services (92.6%), primary mental health care services (85.3%), prevention and health promotion (72.1%), liaison with other health care organizations (69.1%), home visits (35.3%), lifestyle counselling (36.8%), end-of-life/palliative care (16.2%). For group appointments, the most commonly offered services were: lifestyle and healthy living (41.2%), patient self-management plans (32.4%), and chronic disease management (26.6%). 89.7% offered practice-level initiatives/programs for patients with mental disorders</li> </ul>

AHP: allied health professional; CHC: community health centre; FHG: family health group; FHO: family health organization; FHT: family health team; FTE: full-time equivalent; NP: nurse practitioner; NPAR: Nurse Practitioner Access Reporting; PCP: primary care provider; RPN: registered nurse; RN: registered practical nurse; SW: social worker

(continued)

the provision of transgender care in primary care, Ziegler et al. (2020) gathered self-reported and external information and found that the most commonly performed NP activities were patient assessments, counselling, providing transgender hormone therapy, and making specialist referrals [43].

Way et al. (2001) reported that among 122 clinical encounters involving NPs in collaborative practices with family physicians, the most common reason for the visit was a periodic health examination. The NPs (per full-time equivalent) delivered an average of 11.3 health promotion services, 18.8 curative services, 15 rehabilitation services, 78.8 disease prevention-related services, and 43.8 supportive services [44]. Among 21 CHCs, Dahrouge et al. (2014) surveyed 41 full-time equivalent NPs and found that they were likely to have their own patient panels and spent the majority of their time providing direct patient care. Outside the clinic, outreach visits accounted for 7% of face-to-face encounters, whereas walk-in visits and same-day or urgent care visits accounted for 27% and 20%, respectively [45]. Using NP Access Reporting (NPAR) data from 80 NPs from 34 FHTs, Heale et al. (2018) found that NP-patient encounters most commonly involved assessment (42.4%), counselling (21.3%), and preventative care (11.3%) [46]. In their 2018 cross-sectional survey of 21 FHT locations, Lukewich et al. (2018) found that NPs and RNs performed some overlapping tasks, as reported by administrative leads/managers at FHTs [35]. Specifically, the NPs and RNs shared many responsibilities, whereas the RPNs were less involved. All the NPs and RNs participated in patient education, but only 33.3% of the RPNs did. NPs consistently led in prescribing medications, ordering diagnostics, and counselling on infections. Support for medical activities (92.9%), clinical decision-making (92.9%), health counselling (85.7%), and patient follow-up (85.7%) were also common activities for NPs [35].

Finally, some studies have reported on the provision of NP care in multiple practice settings. In a survey of 45 NPs working in an academic health care network, Bailey et al. (2021) reported that most activities performed per shift involved direct clinical care (46.5%; including assessment, development, and monitoring of treatment plans) and indirect clinical care (40.8%; including collaboration and consultation for patient needs). Fewer activities were performed for the purposes of leadership or administration (10.3%) and education or research (2%) [47]. In a survey of 367 primary health care NPs, van Soeren et al. (2009) found that 37% identified work settings as CHCs. NPs reported spending most of their time in direct patient care (74%) and administration (12%). Ninety-two percent provided health promotion/disease prevention, whereas almost 90% reported treating minor illnesses and monitoring or managing chronic illnesses. Most surveyed NPs worked in a collaborative practice with a physician (66% co-located, 23% non-co-located) [48]. Similarly, Koren et al. (2010) found that 32% of the 378 survey-responding NPs worked in CHCs, 23% in physicians' offices, 15% in FHTs, and 12% in hospitals. Like others, they found that NPs in FHTs spent more time on direct patient care, with care independently or mostly independently managed for 80% of patients. Compared with NPs in other practice settings, those working in NP-led clinics spent significantly more time on nursing administration. Overall, approximately one-third of the NP time was spent treating minor illnesses, 25% was spent managing chronic diseases, and 22% was spent on health promotion and/or disease prevention. Compared with those in hospitals, those in CHCs, FHTs, and NP-led clinics spend more time on health promotion/disease

prevention activities (16% vs. 24–26%) [49]. Rayner et al. (2020) conducted a mixed-methods study using multiple sources of information, and found that NPs and executive directors of FHTs that NPs spent approximately 80% of their time on direct patient care [50]. When primary care nurses redeployed during the COVID-19 pandemic, Lukewich et al. (2024) found that NPs felt that their professional scope of practice was not fully utilized, and the responsibilities of redeployed RNs and RPNs would occasionally shift to non-redeployed NPs [37]. In a survey of nurses (including NPs, RNs, and RPNs), Lyons et al. (2025) reported four key functions related to vaccination during the COVID-19 pandemic: education, vaccine administration, outreach, and advocacy [38].

### Registered practical nurses

RPNs typically study for less time than RNs but can perform most of the controlled acts that RNs can perform, under similar requirements [20]. Four studies on the roles of RPNs were included (Supplementary Figure A1). In a survey of nurses that included 58 RPNs (Lukewich et al., 2014), the majority reported that they practiced within their scope of practice, whereas RNs and RPNs conducted similar levels of chronic disease management activities [34]. In their 2018 cross-sectional survey of 21 FHT locations, Lukewich et al. (2018) found that RPNs most commonly performed supporting medical activities (66.7%), liaison with other healthcare organizations (55.6%), patient follow-up (44.4%), clinical activities as directed (44.4%), and clinical decisions (44.4%) [35]. In their 2024 study, Lukewich et al. interviewed 15 RPNs and found that during the COVID-19 pandemic, most RPNs felt that their scope of practice was appropriate, although they sometimes performed administrative tasks [37]. In their survey of nurses (including NPs, RNs, and RPNs), Lyons et al. (2025) found that respondents reported four key COVID-19 vaccination activities performed by nurses: education, vaccine administration, outreach, and advocacy [38].

### Registered dieticians

RDs enhance patient care through nutritional expertise, assessments and through the provision of tailored counselling to manage nutrition-related conditions. They are authorized to collect blood by skin pricking to assess capillary blood (Supplementary Table B1) [32, 51]. We found two relevant studies on RDs (Supplementary Figure A2, PRISMA flow diagram for RDs). In primary care teams with dieticians in Hamilton, Gamblen et al. (2007) reported that 74% of the dietician's time was spent performing clinical activities (e.g. accessing, developing, and monitoring care plans, and providing family education), with the remainder being spent in professional development, performing administrative tasks, and research involvement [52]. In their mixed methods study focusing on the diet assessment practices of primary care providers in FHTs, Bonilla et al. (2016) found that dieticians were seen as experts in providing nutritional care by other care providers, whereas 90% of survey respondents who were RDs reported conducting diet assessments daily [33].

### Pharmacists

The scope of practice of pharmacists includes managing medication therapy, patient education, and medication dispensing and

prescription. The controlled acts authorized to pharmacists include medication management, administration, and certain prescriptions, and the performance of certain procedures under the skin [22, 32]. More recently, pharmacists have been able to prescribe treatments for 19 common ailments (Supplementary Table B1) [24, 30].

Nine studies reported on the roles and activities performed by pharmacists (Supplementary Figure A3, PRISMA flow diagram for pharmacists). In accordance with their employment settings, pharmacists perform different tasks. Farrell et al. (2013) conducted an ethnographic study involving six FHTs approximately three years after their establishment and characterized the practice of pharmacists in FHTs into two categories: (i) pharmacists who are predominantly physician oriented, often aligning their activities with physician requests for drug-related information and related projects, and (ii) pharmacists who operate on multiple levels of interaction, actively engaging in providing patient-centred care, delivering education and information, and even initiating system-level interventions aimed at enhancing drug therapy. This variance in roles is influenced not only by the individual pharmacist's educational background and practice philosophy but also by the dynamics and leadership within FHTs [53]. In 2017, Gillespie et al. (2017) surveyed 155 FHT pharmacists and found that all the responding pharmacists indicated some involvement in direct patient care, and the majority (83%) indicated providing some form of patient education and drug-related information. For example, the majority reported overseeing individual therapeutic concerns (96%), performing comprehensive medication reviews (70%), and conducting medication reconciliation posthospitalization (63%), but some pharmacists reported participating in direct patient care not associated with medication (26%) or refilling/extending prescriptions (17%) [54]. Bonilla et al. (2016) reported that 27% of 11 FHT pharmacists surveyed conducted diet assessments every day [33]. One case study by Gagnon et al. (2017) described the activities of 14 pharmacists at the Hamilton FHT, who were mostly certified diabetes educators and commonly engaged in four main functions: pharmaceutical recommendations; education; answering drug information questions; and quality improvement initiatives [55]. In another study based on 382 responses from 13 FHT pharmacists, Rezahi et al. (2021) assessed the perceptions of FHT pharmacists regarding their primary contributions. The analysis revealed that medication management was the lead (70.2%), followed by counselling and education (15.5%), monitoring and optimization (11.3%), and medication administration (3.1%). FHT pharmacists were actively engaged in chronic disease management, with a focus on diabetes (39.0%), cardiovascular issues (22.0%), pain management (17.0%), and mental health (11.0%) [56]. In a case report by Riva et al. (2011), a pharmacist worked with a chiropractor and physician at an FHT by reviewing the clinical safety of a treatment product for pregnancy-related low back pain, highlighting the unique collaborations that occur between AHPs in team-based settings [57]. Finally, Truong et al. (2020) reported on a hybrid work model of three pharmacists at an FHT, focusing on the similarities and differences between centralized and decentralized services provided by pharmacists at the central site and individual practice sites. While pharmacists predominantly provide pharmacotherapy consultations and drug information at central sites, operating at individual practice

sites allows for the provision of on-demand medication counselling and working with medical students in practice [58].

The role of the pharmacist has also been studied in the context of providing care for specific populations. For example, Tabeebar et al. (2020) interviewed 12 community and/or FHT pharmacists on their experiences with providing chronic pain care. Pharmacists reported that their role included the assessment and management of pain, collaboration with prescribers and other AHPs, and providing patient education beyond pharmacological measures [59]. During the COVID-19 pandemic, Ashcroft et al. (2024) reported that most surveyed pharmacists on primary care teams noted worsening mental health among patients. Many pharmacists (71%) also noted increases in referrals for mental health-related reasons and in prescribing medication for mental health (69%). These findings highlight the multifaceted roles of pharmacists in primary care, extending well beyond dispensing medications [60].

### Social workers

SWs assess and treat social issues that may affect individual and community health [32, 61]. Registered SWs are authorized to perform psychotherapy with the appropriate qualifications (Supplementary Table B1) [61].

We identified three studies on SWs (Supplementary Figure A4, PRISMA flow diagram for SWs). SWs often perform specialized tasks depending on the practice settings in which they are employed. In a survey of 128 SWs in FHTs, Ashcroft (2018) found that the vast majority (73%) carried the title of SW or clinical SW or mental health SW. Twenty-three percent of the respondents held job titles such as “mental health counsellors,” “mental health therapists,” or “mental health workers.” Daily or weekly practice activities included documentation (100%), counselling or therapy (99%), psychosocial assessments (89%), referrals to community services (84%), and consultations with other colleagues about psychosocial matters (70%) [62]. A smaller percentage engaged in case management (44%), whereas only 12% participated in community organization activities. Furthermore, 48% rarely and 17% never engaged in educating and training other health care providers. While 76% of the respondents indicated that they were able to practice their full scope, the remaining 24% reported constraints, primarily citing the absence of practice areas to facilitate family therapy, group work, long-term counselling, community development, and specialized therapeutic modalities. Twenty-four percent of SWs indicated being asked to perform duties beyond their scope of practice, including medical tasks, population-specific responsibilities beyond their expertise, and the delivery of specialized therapeutic modalities without adequate training [62]. In their 2020 study, Tadic and colleagues conducted a survey answered by non-SWs in CHCs and FHTs and found that in a setting where SWs were present along with individuals designated as mental health care providers, non-SWs reported that SWs (93.1%) actively participated in practice-level initiatives/programs for patients with mental health disorders. Among FHT and CHC practices without other mental health workers or psychologists, the types of individual appointment services offered by SWs included psychosocial services (92.6%), primary mental health care services (85.3%), prevention and health promotion (72.1%), liaison with other health care organizations (69.1%), home visits (35.3%),

lifestyle counselling (36.8%), and end-of-life care (16.2%). With respect to group appointments, the services offered included lifestyle and healthy living (41.2%), patient self-management plans (32.4%), and chronic disease management (26.5%). A total of 89.7% offered practice-level initiatives/programmes for patients with mental disorders [63]. Ashcroft et al. (2023) surveyed 159 primary care SWs and found that, during the COVID-19 pandemic, 74% reported facilitating health care access and helping patients navigate virtual care, whereas 47% of the respondents engaged in the well-being of teams [64].

## Discussion and conclusions

Nurses and AHPs play diverse roles in Ontario's primary care system. Family physicians are historically the main providers of primary care; now, one-third of them work alongside a broader group of professionals who take considerable responsibility in the care provision for patients. A key strength of this scoping review is the inclusion of studies from various primary care settings where nurses and AHPs practice in Ontario to gain a more comprehensive understanding of the legislative scope of practice of each profession and real-world practice patterns in primary care.

We found that the activities performed by nurses and AHPs in primary care were largely consistent with their respective legislative scopes of practice. Pharmacists on primary care teams predominantly provide medication-related services, including medication management and patient education on drug information, in accordance with their legislative scope of practice. SWs most commonly perform counselling and psychosocial services, mental health care, and referrals to community services, including health care system navigation.

A few studies in this review investigated whether providers felt that they were practicing within their scopes of practice in primary care. In a 2009 study by van Soeren and colleagues, some NPs reported not being able to practice to their full scope because of limitations such as practice restrictions [48]. On the other hand, in a survey involving all nursing designations (NPs, RNs, and RPNs), Lukewich et al. (2014) reported that more NPs thought that they were practicing beyond their scope when compared to RNs and RPNs [34]. Another factor that impacts the full scope of practice appears to be redeployment. For nursing professions, most primary care RPNs reported appropriately practicing within their scope of practice during the COVID-19 pandemic, although some performed administrative tasks. In contrast, some NPs and RNs who were redeployed felt that their capabilities were underutilized [37].

The primary care setting in which the providers practiced may influence the frequency and types of services provided. Consistent with previous recommendations, team-based primary care practices can utilize tools to systematically document the types of services provided by nurses and AHPs [65]. This information may help clarify role definitions and can improve the optimization of the full scope of practice for each team member. For example, the Registered Nurses' Association of Ontario offers a "Gap Analysis" tool designed to help managers identify potential discrepancies between how RNs and RPNs currently function in practice compared with the expectations of their full scope of practice [66]. Whether certain activities were delegated should also be recorded for assessments of care quality and

appropriateness and for consideration of the future scope of practice changes. Furthermore, the reported services were determined by the type of data collected/available. In contrast to time and motion data or focus group interviews, NPAR data were unable to capture the full scope of NP activities, particularly those related to the social determinants of health or care for multimorbidity [50].

Previous reviews of the role of nurses and allied health professionals (AHPs) in primary care have generally reported positive system- and patient-level outcomes, suggesting that the expanded scopes of practice for nurses and AHPs and their integration into primary care can improve access to comprehensive care that is timely and more convenient for patients with multimorbidities [67–73]. However, this expansion also presents challenges, such as the need for additional training, potential role overlap, and the risk of overextending practitioners [74, 75]. Given that the degree of autonomy granted to different AHPs varies, establishing clear guidelines and protocols is essential to ensure high standards of care, ensuring patient safety, and fostering accountability.

Many family physicians have noted that adapting to team-based primary care, like FHTs, requires a new way of working. While some struggle with teamwork and collaboration, others value contributions from other disciplines. Pharmacists and NPs have described challenges in defining their roles and educating colleagues about their expertise, highlighting the need for further role clarification, interprofessional education, and the development of supportive policies when traditional roles are expanded in collaborative settings [76]. To this end, Team Primary Care, an initiative driving change in training primary care practitioners to collaborate in teams, has resulted in the development of a range of resources for physicians, nurses, and AHPs [77]. These included an online programme to help SWs and students better understand the provision of social work in primary care and a pharmacist training programme delivered between October 2023 and February 2024 that involved various learning activities, among other projects [78]. In addition to the use of available resources, practices should facilitate communication between providers to discuss the expectations and skills of each member on the team, as teams likely differ because of the differences in the populations they serve [65].

Several Canadian organizations have published reports identifying barriers and enablers to optimizing scopes of practice in collaborative, team-based care. An expert panel of the Canadian Academy of Health Sciences (2014) identified structural, institutional, and practice-level enablers, including supportive funding models, flexible regulations, interoperable electronic medical records, clear standards for overlapping scopes of practice, and strong interprofessional communication and education [79]. The Associations of Family Health Teams of Ontario (2023) similarly emphasized the importance of role clarity, understanding providers' unique contributions, and access to professional standards and resources [80]. Consistent with these reports, studies included in our review, and international evidence from countries such as Australia and the United Kingdom, highlight clear role definitions, shared vision and space, and supportive funding models as key enablers of full scope of practice utilization and effective team collaboration [81–85].

Our review has some limitations. First, only peer-reviewed studies were included. The exclusion of unpublished/grey

literature may have resulted in the omission of relevant evidence. Second, many of the included studies conducted interviews and/or surveys with the professionals of interest, based on self-reported information. This introduces the possibility of response bias and may reduce the reliability of the study findings. Third, the focus on primary care settings in Ontario provides important insights but may limit the generalizability of the findings to other jurisdictions, where healthcare policies, legislative scopes of practice, and provider roles may differ. Fourth, this review did not include a quality appraisal of the included studies; thus, methodological rigour across sources was not assessed. Finally, scoping reviews for the roles of other AHPs, such as chiropractors, occupational therapists, or respiratory therapists, were not possible due to the lack of literature. Despite these limitations, this study represents the current evidence from a large jurisdiction in which team-based primary care has been operational for well over a decade. As more quantitative and qualitative evidence on the activities of nurses and AHPs in primary care settings is available, future research on this topic would help to optimize the scope of practice that ensures the right care to the right patient in a cost-effective manner.

Within team-based primary care settings, policymakers need to prioritize initiatives that promote interprofessional collaboration and define clear roles in terms of a designated basket of services that can be performed by nurses and AHPs, consistent with their respective training and specializations within the regulated structures. Systematic reporting of the services provided by these health-care professionals would be invaluable for internal assessments, the evaluations of scopes of practices, and for future research on the effectiveness of interdisciplinary primary health care teams.

Educational and communication opportunities that emphasize collaboration and clarify provider roles within each team are essential. Regulatory frameworks that support the autonomy of AHPs within their specialized roles while ensuring the implementation of oversight mechanisms that safeguard patient health for the delegated tasks would further bolster the effectiveness of team practices. Finally, to facilitate more efficient health care delivery and better meet the diverse health care needs of the population in team-based primary care, more research on the roles of various professionals, team composition, and collaborative opportunities would be welcome.

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## Supplementary material

Supplementary material is available at *Family Practice* online.

## Conflict of interest

The authors declare that they have no conflict of interest

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## Data availability

The data used in this study are available in the published literature. Table 1 and Appendices contain the details of the data and the sources from which this manuscript was written.

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