Exploring the Role and Potential of a Primary Care Physician Assistant (PA) Focusing on Women's Health: A Canadian-Based Practice Reflection

Gillian Boychuk, MPAS candidate, PA-S2, B.Sc.
7853084
boychukg@myumanitoba.ca

Mentor: Gabrielle Derraugh, CCPA, MPAS, MSc

A Capstone project submitted to the Faculty of Graduate Studies of The University of Manitoba
in partial fulfillment of the requirements for the degree of
MASTER OF PHYSICIAN ASSISTANT STUDIES

Master of Physician Assistant Studies (MPAS)
Max Rady College of Medicine and Faculty of Graduate Studies
University of Manitoba
Winnipeg, Manitoba, Canada
May 15, 2025

Table of Contents

Abstract

Introduction: Physician assistants (PAs) are highly educated medical generalists who extend physician services to help provide preventative, reproductive, obstetrical/gynecological, and acute/chronic care across the lifespan within a family medicine setting. Canadian literature is currently lacking studies highlighting the utility, practice scope, and overall efficiency of primary care PAs focusing on women's healthcare. Established PAs in women's healthcare in the Netherlands and United States (US) can serve as a model for women's health advancement in Canada.
Objectives: The primary aim was to determine and observe the utilization, practice scope, and efficiency of a single primary care PA concentrating on women's healthcare in an urban family medicine setting. Our analysis involved determining type, length and number of services, follow-up plans, number and type of referrals, and total appointment time including education. The secondary aim was to compare Dutch and American women's health PAs with Canadian PAs, specifically in terms of utility, scope, and capacity.
Methods: In this observational reflective analysis, the PA collected non-demographic, non-identifying patient information about women's health visits over 80 days to define daily clinical duties through quantitative measures. Data was collected on Excel by the PA and stored on a locked computer in the clinic.
Results: The PA extended physician capacity by providing 350 additional services across diverse categories to 306 unique patients over 80 days. Preventative care services comprised the most significant volume of services provided (22.6%), followed by acute care (22.0%), reproductive care (21.4%), chronic care (19.1%), and other care (14.9%). Fertility, menopause, breast health, and breastfeeding were low-volume services. Dutch and American PAs have greater autonomy and utility in women's health compared to our Canadian PA.
Conclusion: This study explored the utilization, practice scope, and efficiency of a primary care PA concentrating on women's health by tracking patient volume, services (preventative, acute, reproductive, chronic, and other care), education time, and referrals over 80 days. Women's health PAs are essential for optimizing access to care due to their diverse practice scope and unique roles. Adopting international women's health PA models for practice in Canada would be invaluable to women's healthcare access.

Introduction

2.1 Landscape of Healthcare Needs in Canada

Across the lifespan, it is crucial to ensure sufficient access to quality sexual reproductive and preventative women's healthcare services to foster comprehensive female care (1,2). With an aging population in Canada, there is evolving demand for healthcare systems to change to meet the population needs. In Canada, primary care provides the backbone of the healthcare system (3), acting as a gateway for accessing specialists and subspecialists; this may include obstetrician-gynecologists (OB/GYNs) who provide quality women's healthcare. Primary care is defined by the World Health Organization as equitable, long-term, comprehensive, collaborative, and patient-centered care, which connects patients between different levels of care (4). Access to quality women's services in Canada has been challenging due to several factors, including limited access to a primary care provider, long wait times for care, geographic constraints, and region-specific specialist shortages (such as OB/GYNs) (2,5).

2.2 Physician Assistants as Healthcare Providers

To begin addressing some of these challenges in Canada, advanced practice providers, like primary care Physician Assistants (PAs) (3) trained in women's health, can help address critical shortages in accessible women's healthcare services. PAs are trained under the medical model as generalists to become licensed clinicians who act as physician extenders (3,6). In conjunction with licensed physicians, PAs can practice medicine in varying medical settings or specialties (3,6). The role of a PA includes performing patient assessments, ordering/interpreting tests such as imaging and labs, diagnosing, prescribing medications, performing procedures/interventions, formulating treatment plans, and first assisting in surgery, which ultimately decreases wait times to make healthcare more accessible for all Canadians (6). The broad scope of PA practice and adaptability allows for concentrating on women's healthcare.

This may include family planning, contraception education, preventative screening, prenatal services, lactation services, reproductive care, menstrual disorders, menopause, and chronic conditions all within a family medicine setting.

2.3 Primary Care Physician Assistants Focusing on Women's Health

Since the introduction of PAs in Canada, their specific practice scope, utility, and overall efficiency within a family medicine setting for women's healthcare services, has not been clearly outlined in the literature (3,7,8). This leads to an inability to understand the contribution and full potential of primary care PAs who provide advanced women's healthcare services. The lack of literature could be attributed to the brief history of the PA profession in Canada (9), and few PA training opportunities in women's health (10). Additionally, a lack of opportunities for PAs to report their contributions in women's healthcare in a primary care setting (7,8), physician's perspectives on focused PA roles in a generalist setting (10), and a general lack of medical research geared towards women's health may all contribute to sparse literature (11). In Canada, civilian PAs began practice in the 2000s (9), therefore compared to the United States (US) and the Netherlands, less Canada-specific literature exists regarding their role in women's health (12,13). In these countries, PAs play more prominent roles in women's health in multiple different settings (12,13). Dutch and American literature can serve as a baseline for optimizing the use of PAs to meet unique Canadian population needs in women's healthcare.

2.4.Landscape of OB/GYN PAs in the United States of America

In the US, there has been a shift towards team-based care and enhancement of provider diversity in terms of training, ethnicity/culture, and capacity to alleviate demands for women's healthcare services (14). American Academy of Physician Associates (AAPA) census data discovered that 88% of OB/GYN PAs work in outpatient obstetrics and gynecology to perform

examinations and manage common conditions (15), however in 2021, only approximately 1.2% of the clinically active US PA population worked in OB/GYN (12). PAs are routinely involved with managing screening, prenatal care, sexually transmitted infections, sexual dysfunction, menopause, breast health, urologic concerns, and numerous gynecological procedures (12). PA OB/GYN residencies also exist to further advance procedural skills (14).

2.5 Landscape of OB/GYN PAs in the Netherlands

The Netherlands has significantly more PAs working in OB/GYN compared to the US (13). Several contributing factors include education training models, the Dutch healthcare system's structure and implementation of task-sharing (13,16), and differences in healthcare provider diversity compared to North America (14). According to a 2018 survey by van Doorn-Klomberg et al., the proportion of OB/GYN PAs working in a hospital setting was 10.86%; it is expected that this number has increased with the growing PA demand and number of PA graduates in the Netherlands (13). There is no existing literature to depict the split between inpatient and outpatient OB/GYN PAs in the Netherlands, however they have prominent roles in hospital settings among the specialists in the field (13). The scope of practice of an OB/GYN PA in the Netherlands is likely very similar to that of the US, and literature suggests Dutch PA practice scope is based on Dutch population needs (13). However, no literature reports exact Dutch women's health PA duties.

Purpose of the Study

The primary objective of this study was to investigate the utilization of a women's health PA within an urban family medicine clinic by tracking numerical measures, such as time spent with patients, time educating patients for quality-of-care measures, and typical women's health services offered. The investigation of PA utilization in this context would allow for precisely

defining the PAs practice scope, in addition to observing their clinical efficiency. Understanding the role and potential of primary care PAs focusing on women's health allows for specific community and population needs to be met.

A secondary objective of this study was to conduct a cross-sectional analysis between Canada, the US, and the Netherlands to determine the current landscape of how women's health PAs are being utilized, define their practice scope, and better understand their overall capacities, with the intention of applying these themes to practice in Canada. It was predicted that a Canadian PA practicing women's healthcare would have a narrower practice scope than a PA in the US, or the Netherlands due to further advancements of PAs in this field, as suggested by literature (12,13).

Since the primary care PA women's health role has yet to be fully explored in Canada, this study will provide benefits on several levels. Firstly, data from this study may be applied to the PA's clinic for quality improvement purposes, which will also directly benefit the clinic's patient population. Secondly, by highlighting practice-specific data, this study can help guide PA education related to women's health, which can address critical service shortages within medicine. Ultimately, this additional women's health education will benefit the Canadian PA profession as a whole. Lastly, the knowledge from this study will serve as a foundation for further research related to PAs and women's health from a primary care perspective in Canada.

Methodology

4.1 Study Design and Setting

This descriptive observational study took place at LifeSmart Medical Osborne in Winnipeg, Manitoba, Canada. A single primary care PA documented women's health-related

appointments on an Excel sheet to provide a descriptive analysis of their scope of practice for this study. Data was collected for a total of 80 days non-continuously.

Services were prospectively categorized as follows: contraception, breastfeeding medicine, prenatal visits, breast health, sexually transmitted infection (STI) screening, family planning/fertility, gynecology-focused (intrauterine device (IUD) or Nexplanon insertions), pelvic pain, abnormal uterine bleeding (AUB), vaginal infections (yeast, bacterial vaginosis, trichomonas), menopause-related issues, urinary tract infections (UTIs), preventative screenings (such as Pap tests), and a category for "other."

The "other" category included a mix of visits for acute, chronic, and general gynecology/pregnancy-related conditions; these were not prospectively classified as fitting into a predefined service type. The "other" category included vulvar pathologies such as Bartholin cysts, lesions, and dermatitis; sexual health including low libido, general sexual health, STI treatment; pregnancy care including pregnancy confirmation, general questions, miscarriage, spotting, and postpartum care; as well as pelvic prolapse and overactive bladder (OAB) management.

4.2 Research Ethics

Based on consultation, ethics approval from the University of Manitoba Health Research Ethics Board was not required for conducting this study. There was no collection or use of any patient identifying information in this study. Under ethics guidance and due to study type, patients were not required to be informed of de-identified data collection. Data was collected anonymously by the primary care PA within the clinic, and held in an Excel file on a password-locked computer located within the clinic.

4.3 Data Collection

Data collection occurred for approximately 4.5 months between Monday to Friday clinic hours (8am-5pm). Data was only collected by one PA whose work was used for the analysis. To be included in the analysis, the only requirement was to be seen by the primary care PA for a women's health related issue; no demographics were collected. The period of data collection includes appointments between Wednesday October 16th, 2024 to Thursday March 6th, 2025, excluding the PA's personal absence days, weekends, and clinic closures for holidays (where no women's health appointments were seen). Data was collected for the following things: type of service provided (acute, chronic, preventative, reproductive, "other"), number of single or multi-service visits, amount of time spent on each issue in a multi-service visit, number of walk-in and follow up appointments, average time per appointment, amount of time spent on education, if there was planned follow-up, and if referral(s) were made.

Results

Over the course of 80 days, a total of 306 patients were seen by the PA for women's health related appointments.

5.1 Volume of Patients Served

The number of patients seen per day during an 80-day non-continuous timeline to display overall patient distribution and identify volume patterns is summarized in **Figure 1.**

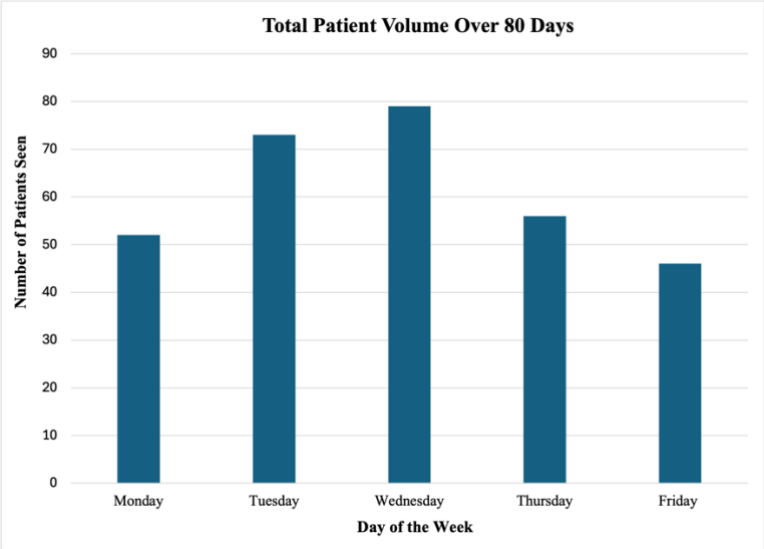

Figure 1. Total patient volume highlighting patient distribution by day of the week over 80 days (n=306).

A total of 306 patients were recorded over a 21-week continuous period (80 days non-continuous). Women's health appointments peaked on Wednesdays (n=79, 25.8%), whereas Fridays had the lowest number of patients for women's health appointments (n=46, 15.0%). The second highest volume day was Tuesday (n=73, 23.9%), followed by Thursday (n=56, 18.3%) and Monday (n=52, 17.0%).

5.2 Types of Services Provided

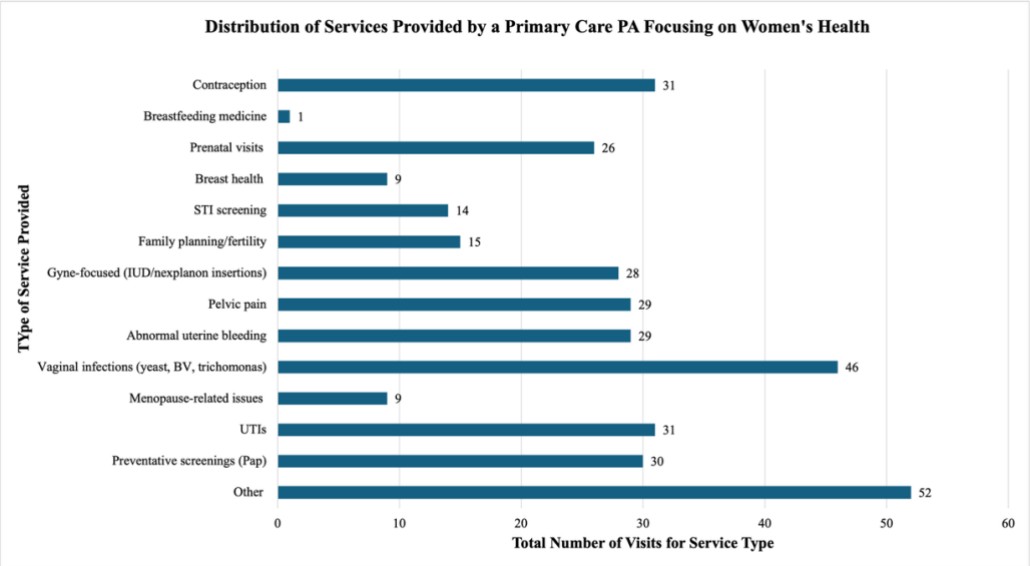

Figure 2. Illustration of the distribution of services by prospective categories over 80 days. A total of 350 services were provided across 306 patient visits due to 44 multiple service appointments. The distribution includes both single and multi-service visit service types.

Overall, there was broad variation in services provided. Some services were provided in high volume with more demand compared to other services. The highest demand service fell under the "other" category (n=52, 14.9%). High volumes were observed with vaginal infections (n=46, 13.1%), UTIs and contraception visits (n=31, 8.9% each), preventative screenings (Pap) (n=30, 8.6%), AUB and pelvic pain (n=29, 8.3% each), gynecology-focused visits (n=28, 8.0%), and prenatal visits (n=26, 7.4%). Low volume services with fifteen visits or less from most to least included family planning/fertility (n=15, 4.3%), STI screening (n=14, 4.0%), menopause-related issues and breast health (n=9, 2.6% each), and breastfeeding medicine (n=1, 0.29%).

Visits were categorized into five major categories: preventative care, acute care, chronic care, reproductive health services, or "other" (**Table 1**). Out of 306 appointments, there were 79 preventative care visits (22.6%, n=79), 77 acute care visits (22.0%, n=77), 75 reproductive

healthcare visits (21.4%, n=75), 67 chronic care visits (19.1%, n=67), and 52 "other" category visits (14.9%, n=52).

Preventative Care Services	Preventative screenings (Paps, STI screening), breast health, and prenatal care.
Acute Care Services	UTIs and vaginal infections.
Chronic Care Services	Menopause-related issues, pelvic pain, and AUB.
Reproductive Healthcare Services	Contraception, family planning/fertility, breastfeeding medicine and gynecology-focused care.
Other Services	Bartholin cysts, vulvar lesions, vulvar dermatitis; sexual health including low libido, general sexual health, STI treatment; pregnancy care including confirmation of a pregnancy, pregnancy questions, miscarriage, spotting, and postpartum care; as well as pelvic prolapse and overactive bladder (OAB).

Table 1. Prospective classification of major services provided. STI screening involves chlamydia, gonorrhea, syphilis, human immunodeficiency virus (HIV), and human papillomavirus (HPV).

Table 1 demonstrates the diversity of services a primary care PA can focus on in a women's health practice. The category for "other" contains types of visits which may fit into multiple categories. For example, STI treatment may fit under both acute and reproductive healthcare, while pelvic prolapse may be categorized under "other" or fit into a chronic care service categorization. Results are presented in this way for transparency regarding how data was collected and classified prospectively.

5.3 Visits Resulting in Multiple Services Provided

While 262 (85.6%) of all unique visits resulted in only one service being provided, 44 visits (14.4%) involved two services provided (n=306). The highest volume services in a multi-service visit were contraception (n=8,18.2%), followed by pelvic pain, preventative screening for cervical cancer, STI screening, and vaginal infections (n=6, 13.6% each). AUB, menopause-

related issues, and follow-up with test results contributed (n=3, 6.8% each). The lowest volume services provided in a multi-service visit were family planning/fertility, gynecology-focused services, and UTI treatment (n=1, 2.3% each). There were no multiple-service visits recorded for breastfeeding medicine, prenatal visits, and breast health.

5.4 Walk-in versus Follow-up Appointments Related to Women's Health Visits

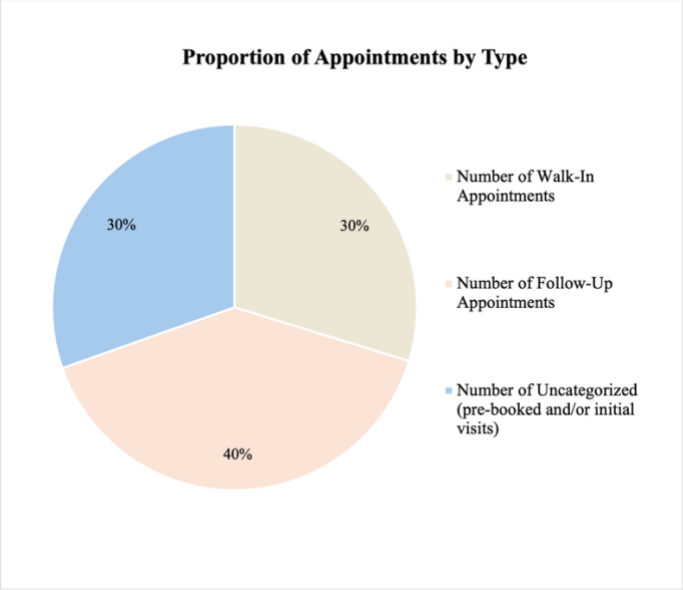

Figure 3. Proportion of appointments by type classified either as walk-in or follow-up visits based on total visits (n=306).

Figure 3 demonstrates 91 walk-in appointments (29.7%) and 122 follow-up visits (39.9%) out of a total of 306 women's health visits. Out of 213 unique visits, follow-ups were most common. The other 93 appointments (30.4%) were not categorized as walk-ins or follow-ups, but as pre-booked and/or initial visits. Although not shown in **Figure 3,** there was an equal number of walk-in and follow-up multi-service visits.

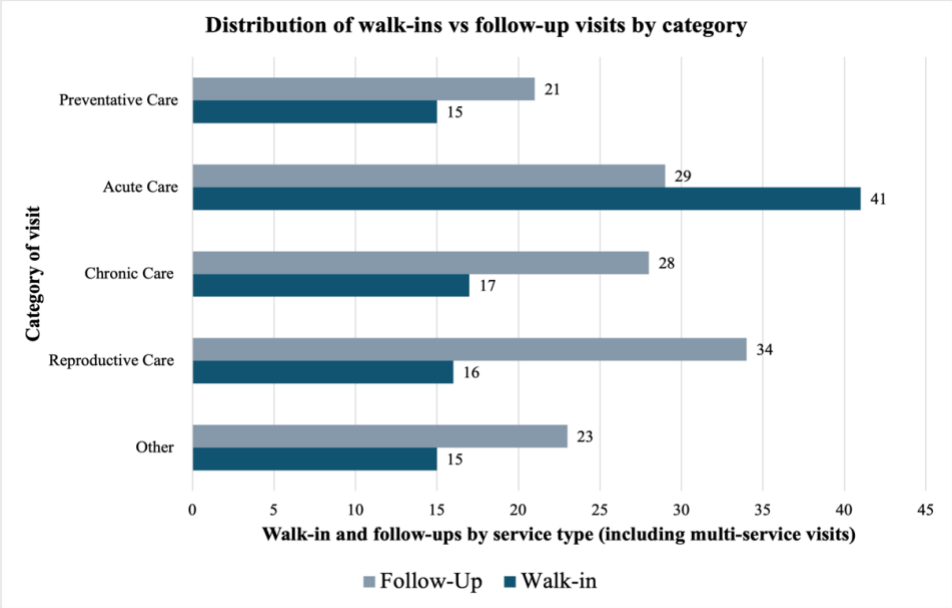

Figure 4. Distribution of walk-in versus follow-up visits, including multi-service visits, by major categories (acute care, chronic care, preventative care, reproductive care, and "other"). Multi-service visits are counted under only one category (walk-in or follow-up). Each bar represents a category (walk-in or follow-up).

The total number of walk-in and follow-up visits including multi-service visits across all categories was 239. Preventative, chronic, reproductive care, and "other" visits each saw more follow-up visits than walk-in visits; n=21 versus n=15 for preventative care, n=28 versus n=17 for chronic care, n=34 versus n=16 for reproductive care and n=23 versus n=15 for visits categorized under other. Conversely, acute care visits saw more walk-in visits (n=41) compared to follow-ups (n=29). Overall, this demonstrated that walk-in visits were more common for acute care, while follow-ups were more common for chronic and reproductive care visits.

5.5 Average Time Per Appointment and Time Allotted to Education

Appointment times were documented retrospectively, therefore timeframes in **Figure 5** are estimates.

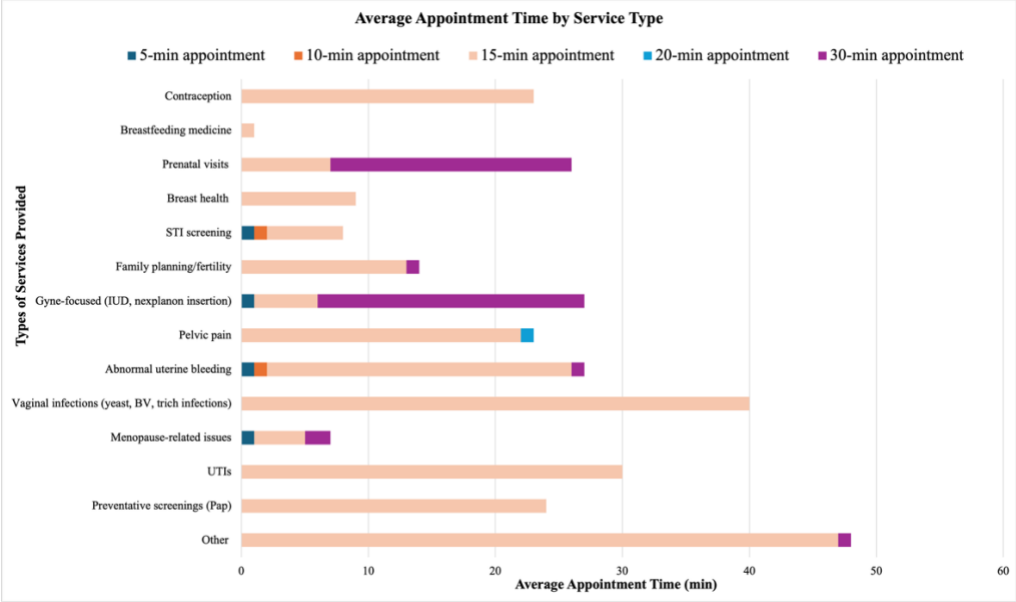

Figure 5. Illustration of average appointment time by type of service provided. The variations in appointment length range from 5 minutes to 30 minutes.

Figure 5 summarizes appointment time by service across single and multiple service visits. For consistency in reporting results, multiple service appointments were included only if a specified amount of time (5, 10, 15, or 20 minutes) were spent on the additional concern. The average appointment time across all services was 17.05 minutes, with the average time per concern in a multiple-service visit being 7.50 minutes. As there was limited variation and range in appointment times within each visit category, the median appointment time was 15 minutes. The most common estimated appointment length was a 15-minute appointment (n=255), followed by 30-minute appointments (n=45), while the least common appointment length was a 20-minute appointment (n=1).

Preventative care visits (**Table 1**) encompassed 46 appointments lasting 15 minutes (n=46), 19 appointments lasting 30 minutes (n=19), 1 appointment lasting 10 minutes (n=1), and 1 appointment lasting 5 minutes (n=1). All acute care visits (**Table 1**) were 15-minute appointments (n=70). Chronic care visits (**Table 1**) encompassed 50 appointments lasting 15

minutes (n=50), 3 appointments lasting 30 minutes (n=3), a single 10 minute appointment (n=1), and 2 appointments lasting 5 minutes (n=2). Reproductive-care visits (**Table 1**) encompassed 42 appointments lasting 15 minutes (n=42), compared to 22 appointments lasting 30 minutes (n=22), and a single 5-minute appointment (n=1). "Other" categorized visits encompassed 47 appointments lasting 15 minutes (n=47), and a single appointment lasting 30 minutes (n=1).

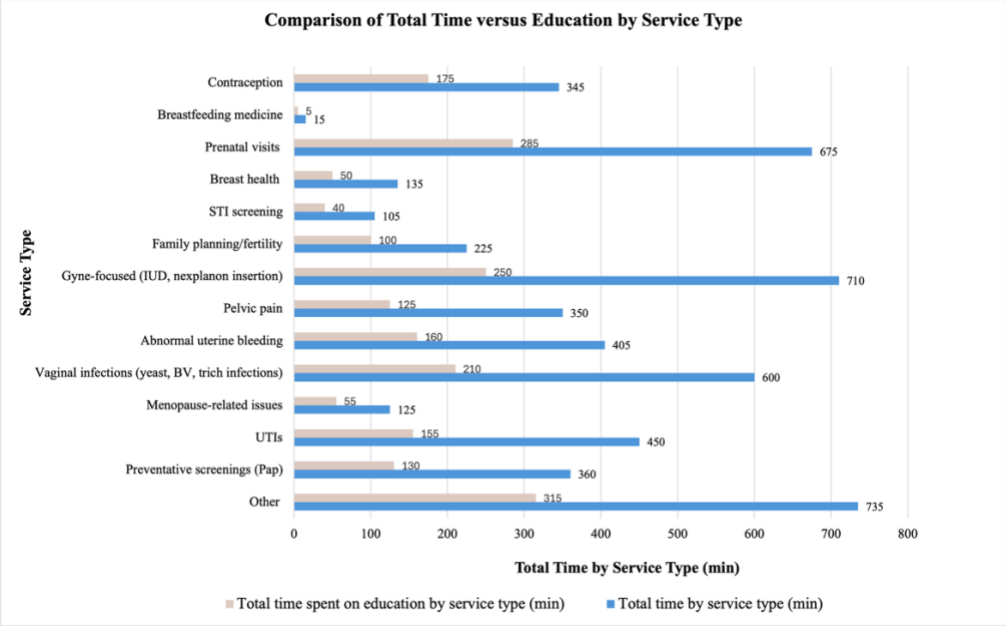

Figure 6. Distribution of total time spent on each service type, and time allocated to education for single and multiple issue visits (n=350).

The service type with the most significant amount of time spent on education was the "other" category, with 315 minutes total. Prenatal visits were the service type with the second highest time spent on education, with 285 minutes total. Conversely, the service with the least time spent on education was breastfeeding medicine, which was only 5 minutes in total.

By major service category (**Table 1**), the reproductive care visits involved 530 minutes total of education, preventative care visits with 505 minutes total of education, acute care visits with 365 minutes total of education, and chronic care visits with 340 minutes of education total.

5.6 Preventative Screenings

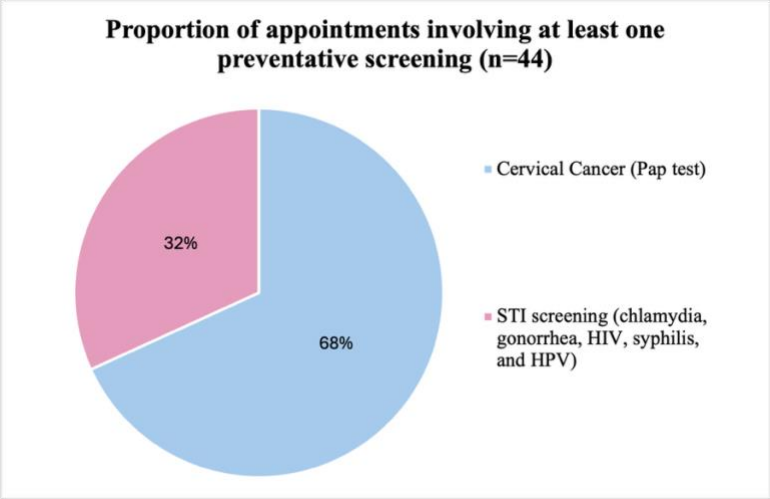

Figure 7. Proportion of preventative screenings provided over 80 days to n=306 patients across 350 services which included at least one preventative screening. Preventative screenings provided included cervical cancer screening through a Pap test, and STI screening for chlamydia, gonorrhea, HIV, syphilis, and HPV.

The number of appointments involving at least one preventative screening was 44, resulting in a preventative screening frequency of 14.4% over 306 visits. The number of overall appointments without preventative screening measures provided was 262 (85.6%). **Figure 7** highlights more cervical cancer screening than STI screening (n=30 versus 14, respectively). No mammograms or bone density DEXA (dual-energy X-ray absorptiometry) scans were provided.

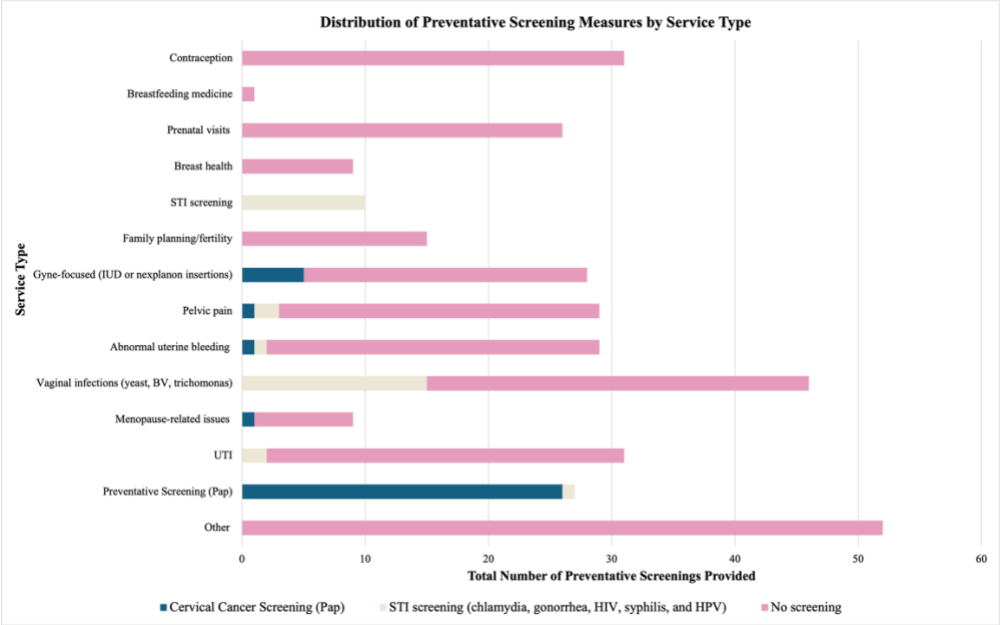

Figure 8. Distribution of preventative screenings (cervical cancer screening through Pap test, STI screening for chlamydia, gonorrhea, HIV, syphilis, and HPV) offered by service type over 80 days (n=350). When a preventative screen (Pap or STI) was provided in a multi-service visit, the screening was categorized to the primary clinical reason for the visit (with the other service category being assigned “no screening”). The preventative (Pap) and STI screening categories in this figure represent appointments where screening was the primary indication.

The two most common preventative screening measures offered were for cervical cancer and STIs across all visit categories. Cervical cancer screening was the most common reason for a primary preventative screen visit. The visit category with the most significant sum of preventative screenings specific to cervical cancer was for appointments specifically intended for Pap screening (n=26, 7.4%), followed by gynecology-focused visits (n=5, 1.4%), AUB, pelvic pain, and menopause-related issues (n=1, 0.29% each). Visit categories resulting in the highest amount of STI screening were vaginal infections (n=15, 4.3%), STI screening (n=10, 2.9%), pelvic pain and UTI (n=2, 0.57% each), AUB and preventative Paps (n=1, 0.29% each). Zero

preventative screenings were provided for the following visit categories: family planning/fertility, breast health, prenatal visits, contraception, breastfeeding medicine, and "other" visits. Visit categories with the highest number of visits resulting in no screening were as follows: "Other" (n=52, 14.9%), contraception and vaginal infections (n=31, 8.8% each), UTI (n=29, 8.3%), AUB (n=27, 7.7%), pelvic pain and prenatal visits (n=26, 7.4% each).

5.7 Appointments Resulting in Plans for Follow-up Visits

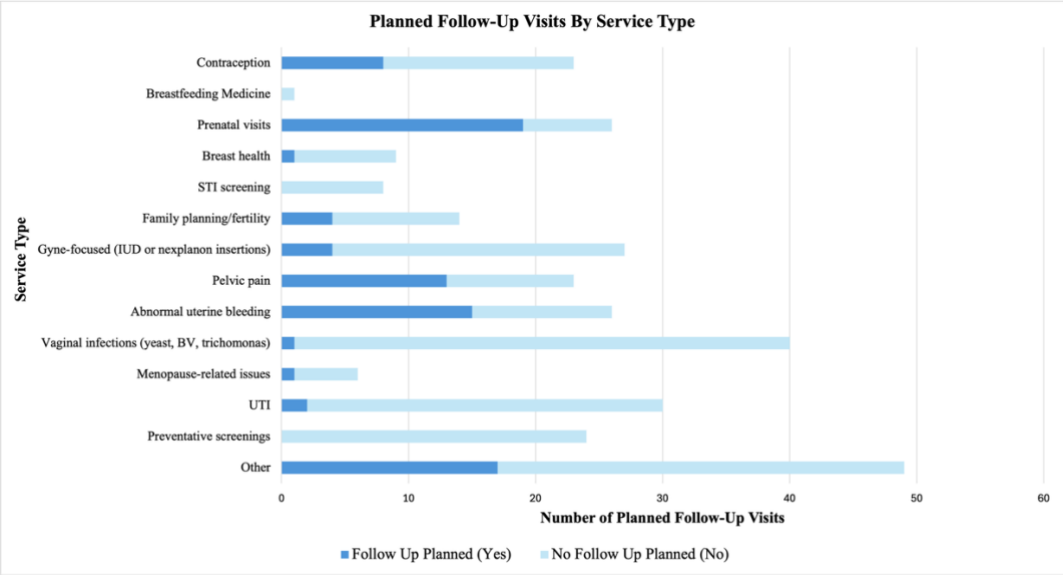

Figure 9. The proportion of visits with determined follow-up versus no follow-up by service type. Either a follow-up was scheduled ("Yes") or there was no follow-up scheduled ("No").

Out of 306 total women's health visits over 80 days, 221 (72.2%) of those visits did not result in a plan for follow-up care, compared to 85 visits (27.8%) with planned follow-up. The visit category with the highest number of appointments not resulting in any planned follow-up were vaginal infections (n=39, 17.6%), followed by the "other" category (n=32, 14.5%), UTIs (n=28, 12.7%), and preventative screenings such as Pap tests (n=24, 10.9%). The visit category with the lowest number of appointments without a planned follow-up was breastfeeding medicine (n=1, 0.5%).

Conversely, the visit category with the highest number of appointments for planned follow-ups was prenatal visits (n=19, 22.4%), followed by the "other" category (n=17, 20.0%), AUB (n=15, 17.6%), and pelvic pain (n=13, 15.3%). Finally, the visit category with the lowest number of appointments for planned follow-up care was breast health (n=1, 1.2%).

Planned follow-up rates by major category were as follows: chronic care at 34.1%, preventative care at 23.5%, other at 20.0%, reproductive care at 18.8%, and acute care at 3.5%.

5.8 Chronic Condition Management

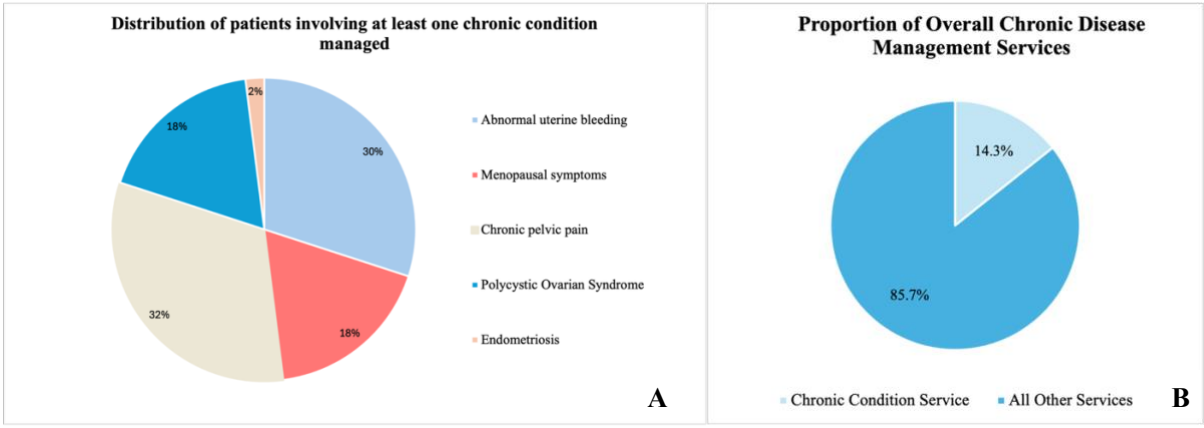

Figure 10. (A) Distribution of patients where at least one chronic condition was managed over 80 days (n=350). **(B)** Proportion of chronic disease services provided by a PA (n=350). Chronic conditions included polycystic ovarian syndrome (PCOS), endometriosis, chronic pelvic pain, abnormal uterine bleeding (AUB), and menopausal symptoms.

The two most common conditions managed by the PA were chronic pelvic pain (n=16) and AUB (n=15), while PCOS and menopause-related symptoms encompassed 36% of all chronic conditions managed (n=9, 18% each) (**Figure 10A**). The least common chronic condition managed in the clinic was endometriosis, with it being managed in 2.0% of chronic condition visits (n=1) (**Figure 10A**). Over 80 days, 14.3% (n=50) of appointments involved

management of at least one chronic condition (**Figure 10B)**, helping to identify the PAs role in chronic care management.

Despite there being 67 services associated with chronic management recorded in **Figure 2**, only 50 were included based on criteria for consistent reporting. This included a documented chronic diagnosis, as pelvic pain and AUB may have both acute and chronic presentations. Services without chronic condition labelling by the PA, but with planned follow up, were included. Pelvic pain, and AUB were classified as acute if they were both walk-ins without follow up, and if they were not labelled as a chronic diagnosis. Chronic management involves ongoing surveillance of a long-term condition, such as menopause-related symptoms.

5.9 Specialist Referrals

Of the total number of appointments over 80 days (n= 306), 9.8% (n=30) resulted in a referral to another service. The distribution of referrals by service is summarized in **Figure 11.**

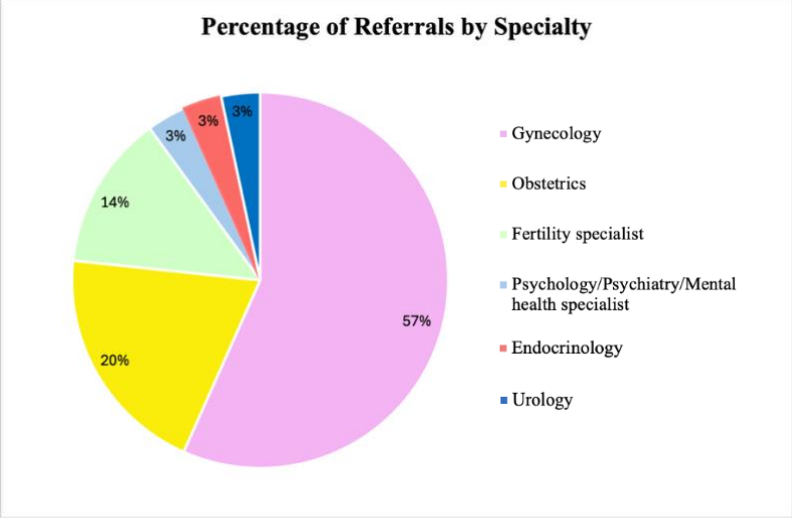

Figure 11. Proportion of appointments resulting in a referral by specialty type (n=30).

The majority of referrals were sent to Gynecology (n=17), followed by Obstetrics (n=6), and to a Fertility specialist (n=4). The lowest number of referrals were sent to

Psychology/Psychiatry/Mental Health, Endocrinology, and Urology (n=1 each). No recorded referrals were sent to Oncology, Dermatology, Physical Therapy, or to a Dietician.

Discussion

6.1 Interpretation of Key Results

Our main objective was to examine utilization, efficiency, and services provided to define practice scope of a primary care PA focusing on women's health. The PA provided care to 306 patients through 350 services to extend the supervising physician's practice capacity. This demonstrated how a PA in this setting can significantly improve access to care, patient flow efficiency, and comprehensively address multiple issues by providing various services in one visit. The PA saw a large number of patients for preventative women's healthcare, followed by acute, reproductive, chronic and "other" care, with many visits resulting in follow up appointments; this demonstrates diversity of practice scope. The data demonstrated more single-service visits than multiple-service visits. Appointment time typically varied by service type, with the standard estimated appointment time being approximately 15 minutes across all service categories. The PA provided the most education time during "other" and preventative care visits, which may translate to higher quality care. Existing literature is consistent with our findings about the utilization and workflow efficiency of women's health PAs (12,13).

The short-term implications of a PA seeing high numbers of preventative care visits include improving health literacy by empowering and educating patients to initiate early interventions, such as cervical cancer screening. In Manitoba, cervical cancer screening occurs every 3 years with any sexual contact history for patients with a cervix between the ages of 21 and 69; the frequency of screening increases for individuals with abnormal results (17). The long-term implication of a proactive women's health practice includes better overall long-term

health outcomes, fewer hospitalizations, and reduced burden of illness related to women's health complications for patients (14).

As expected, there was a strong trend of seeing more scheduled visits (follow-up appointments) for preventative, reproductive, chronic care, and "other" visits, while there were more unscheduled acute care walk-in appointments. This result speaks to the PA's role in improving continuity and quality of care by establishing trusting relationships with patients, in addition to improving care availability to see more patients. Multi-service walk-in and follow-up visits were equal in number, illustrating similar clinical duty efficiency regardless of visits being scheduled. Regarding patient scheduling, our findings illustrate the importance of having different and dedicated appointment times to accommodate acute services in high volumes. Chronic care services had the highest rate of follow-up plans, specifically demonstrating a strong commitment to comprehensive and continuous surveillance of women in the community.

Our analysis of preventative, acute, chronic, reproductive and "other" visits revealed the estimated 15-minute appointment duration to be most common. Ideally, longer appointments for complex chronic and reproductive services offer opportunity for comprehensive histories, physical exams, and investigations; however pre-set appointment times determined by the clinic made this challenging. The clinic should consider optimization of appointment duration and allocated resources to ensure proper education and investigations can occur.

6.2 Comparison to Existing Literature

PAs in women's health are more established in the Netherlands and the US, providing an opportunity to reflect on service models that can be adapted to women's health practice in Canada (12,13). The outpatient PA in this study offered diverse services across preventative, acute, chronic, and reproductive care. However, service gaps were identified in several areas. In

the US, women's health PAs work in various settings, including primary care, specialty, and subspecialty areas (18), with 54.7% reported to work in outpatient settings (12). Similar to the Canadian PA of this study, American outpatient women's health PAs are involved in various gynecological care, including office-based procedures, preventative screens, reproductive health, fertility services, and ante, intra, and post-partum pregnancy management (12). According to Rodriguez and Roderick (2023), PAs are involved in over forty procedures, including outpatient biopsies, fetal assessments, and insertion/removal of intrauterine contraception devices (IUCDs) (12). We infer that US women's health PAs have extended scopes of practice and utility based on their OB/GYN roles (12,18), suggesting that Canadian PAs are underutilized in these areas. There is no literature on PAs working in family medicine concentrating on women's healthcare in the US for direct comparison (12).

Despite the Netherlands having a substantially higher number of women's health PAs than the US, there is limited literature on this topic for comparison with our study (13). Women's health PAs in the literature appear to perform essential roles in secondary care visits involving medical interventions, in addition to working on quality improvement, education, and research (13). The idea of "task shifting" is a significant theme in the Dutch healthcare system (19); it implies that PAs practice with considerable autonomy in expanded roles based on their specialized focus training for better patient flow and utility (19). This specialized approach to training in the Netherlands likely contributes to the increased number of PAs working in women's health (13), compared to Canada's generalist approach to PA education. Our study findings align with broader Dutch literature, which suggests that PAs generally improve continuity of care and decrease physician workload to provide higher quality care (19,20).

The cross-sectional analysis in this study revealed that Canadian PAs working in women's health are underutilized in their capacity to perform procedures and may have more restricted autonomy compared to their international peers (12,13,18,19). This international contrast highlights that women's health PAs are essential for addressing reproductive and chronic care service gaps (12,13,18). International models may serve as a guide for practice and policy changes to improve women's health accessibility in Canada by increasing PA autonomy to enhance efficiency (12,13,19).

6.3 Strengths and Limitations

There are several limitations to our study. Firstly, our sample size of 306 patients and study duration of 80 days may not comprehensively define the specific PA role in this context. Since we prospectively defined categories over a limited period of time, this may not have been inclusive to all possible services provided. This also may have influenced how we defined practice scope, especially when considering holiday-related volume changes with seasonal health trends. Secondly, sampling bias is possible as we focused on a single primary care PA working in an urban setting, whose work might not be generalizable to other practice settings, such as rural centers or hospitals. Thirdly, data collection accuracy may have affected the validity of the results, due to the occurrence of retrospective manual data entry and challenges fitting certain data into defined categories, potentially changing our interpretation of practice scope. This may be an important consideration for the retrospective reporting of appointment times, as they may not be accurate. Finally, a lack of control for confounding variables associated with visits, such as complex conditions or individual patient factors, may have influenced time spent and education provided. Although there are limitations, our study is unique as it provides a novel perspective to women's health research through its reproducible methods and generation of real-

world quantitative data to distinguish the role of a primary care PA focusing on women's health. This invaluable information may serve as a baseline to inspire measurable change in practice to enhance patient health outcomes.

6.4 Practice Implications and Recommendations for Future Research

Our findings bring attention to several key clinical practice and research implications. From an educational standpoint, there should be consideration of additional training for higher demand services, such as prenatal, acute, reproductive, and chronic care. Conversely, attention should also be brought to lower demand services, including menopause, fertility, and breast health. This observation of lower demand may be due to a lack of patient awareness of relevant treatments or services; improvement in patient awareness may occur indirectly through more extensive PA education.

From a quality improvement standpoint, we suggest expansion of in-house clinic resources to address low volume services, and overcome long specialist referral wait times. Ideally, varied appointment durations by service type allows for bundling multiple issues into a single visit, which can address low volume services; however, this may not always be practical for individual clinics.

Future studies should observe PAs in this context over an extended time period to develop a deeper understanding of this concentrated role, while focusing on specific demographics for more insight and statistical data. Collecting more research evidence to demonstrate the PA role in this context can help spark change including improved patient health outcomes, education-related curriculum changes, and healthcare system adjustments to better match community and population needs.

Conclusion

The role of a primary care PA concentrating on women's health is a novel and unexplored topic in Canada. Understanding the practice scope of a PA in this context is essential to inform hiring practices, education curriculum changes, and policy creation that benefits patients and practicing PAs. An additional 350 services were delivered to 306 patients over 80 days including preventative, acute, chronic, reproductive, and "other" care services, highlighting the diversity of the PA role in this context. Practice patterns were identified regarding the highest and lowest demand services by volume. PAs have essential roles in the continuity of care through follow-up visits observed, and spend varying amounts of time on patient education by service type. Our findings demonstrate a PA's invaluable role in diversifying and optimizing access to care, improving practice efficiency, and providing continuity of care within the community to comprehensively meet women's healthcare needs on numerous levels through a primary care lens.

Acknowledgements

The author expresses gratitude to the primary investigator, CCPA Gabrielle Derraugh, for her mentorship, guidance, support, and enthusiasm with developing this research project. Additionally, the author recognizes Margaret Banka, the former Max Rady College of Medicine MPAS librarian, and Meg Miller, Data Visualization Librarian, for sharing their invaluable knowledge to help formulate this study. Finally, the author would like to acknowledge the unwavering support of the MPAS faculty, advisors, and classmates for helping to navigate the exceptional journey of PA school.

References

1. Fowler T, Garr D, Mager NDP, Stanley J. Enhancing primary care and preventive services through Interprofessional practice and education. *Isr. J. Health Policy Res*. 2020 Mar 23; 9(1):12.
2. Jarvis K, Farrell A, Richter S, Lukewich J. Determinants of accessibility to primary sexual reproductive health care among vulnerable women in Canada: a scoping review protocol. *JBI Evid Synth.* 2020 Sep;18(9):2065-2074.
3. Bowen S, Botting I, Huebner LA, Wright B, Beaupre B, Permack S et al. Potential of physician assistants to support primary care: Evaluating their introduction at 6 primary care and family medicine sites. *Can Fam Physician.* 2016 May; 62(5):e268-e277.
4. Primary care. World Health Organization [internet]. [Updated 2025; cited 2024 Sept 24]. Available from: https://www.who.int/teams/integrated-health-services/clinical-services-and-systems/primary-care.
5. Patrick K, Laupacis A. A focus on access to health care in Canada. *CMAJ.* 2023 Jan 23; 195(3): e123-e124.
6. Canadian PA. What is a Physician Assistant (PA)? [internet]. [Updated 2025 Mar 31; cited 2024 Sept 23]. Available from: https://canadianpa.ca/whatisapa#scope.
7. Halter M, Drennan V, Chattopadhyay K, Carneiro W, Yiallouros J, de Lusignan S, et al. The contribution of physician assistants in primary care: A systematic review. *BMC Health Serv Res.* 2013 Jun 18;13:223.
8. Hooker RS, Everett CM. The contributions of physician assistants in primary care systems. *Health Soc Care Community*. 2011 Aug 18; 20(1):20-31.
9. History of the Physician Assistant (PA). Canadian Association of Physician Assistants (CAPA) [internet]. [Updated 2024; cited 2024 October 2]. Available from: https://capa-acam.ca/pa-profession/history.
10. Hu X, Coplan B, Barnes H, Smith N, Essary A, Dill M. Physicians working with physician assistants and nurse practitioners: perceived effects on clinical practice. *Health Aff Sch.* 2024 Jun 25; 2(6):qxae070.
11. Merone L, Tsey K, Russell D, Nagle C. Sex inequalities in medical research: A systematic scoping review of the literature. *Womens Health Rep.* 2022 Jan 31; 3(1): 49-59.
12. Rodriguez MA, Hooker RS. Procedures by physician associates in obstetrics and gynecology. *Women's Health Rep*. 2023 Nov 16;4(1):536-543.
13. van Doorn–Klomberg A, Ruiterkamp B, van den Brink G. The first 2 decades of the physician assistant movement in the Netherlands. *Future Healthc J*. 2022 Nov; 9(3):301-304.
14. Philipp MS, Stonehocker J. Women's health outpatient care teams: Focus on advanced practice providers. *Clin Obstet Gynecol.* 2018 Mar; 61(1):76-89.
15. How to Become a PA Specialized in Obstetrics and Gynecology. PhysicianAssistantEDU.org [internet]. [Updated 2025; cited 2024 December 2]. Available from: https://www.physicianassistantedu.org/obstetrics-gynecology/.
16. van den Brink GTWJ. The physician assistants and nurse practitioners in the Netherlands: A solution for healthcare [dissertation]. Radboud Repository. 2023.
17. Cervix Check Screening Guidelines. CancerCare Manitoba Cancer Screening Guidelines [internet]. [Updated 2024 Jul; cited 2025 May 4]. Available from:

https://www.cancercare.mb.ca/export/sites/default/screening/.galleries/files/getcheckedmb/g-hcp-guidelines.pdf
18. Rodriguez M. PAs: Obstetrics and Gynecology Needs You! American Association of Physician Associates [internet]. [Updated 2021 Aug 3; cited 2025 Mar 22]. Available from: https://www.aapa.org/news-central/2021/08/pas-obstetrics-and-gynecology-needs-you/
19. van den Brink GTWJ, Kouwen AJ, Hooker RS, Vermeulen H, Laurant MGH. An activity analysis of Dutch hospital-based physician assistants and nurse practitioners. *Hum Resour Health.* 2019 Oct 29;17(1):78.
20. van der Biezen M, Derckx E, Wensing M, Laurant M. Factors influencing decision of general practitioners and managers to train and employ a nurse practitioner or physician assistant in primary care: A qualitative study. *BMC Fam Pract.* 2017 Feb 7;18(1):16.