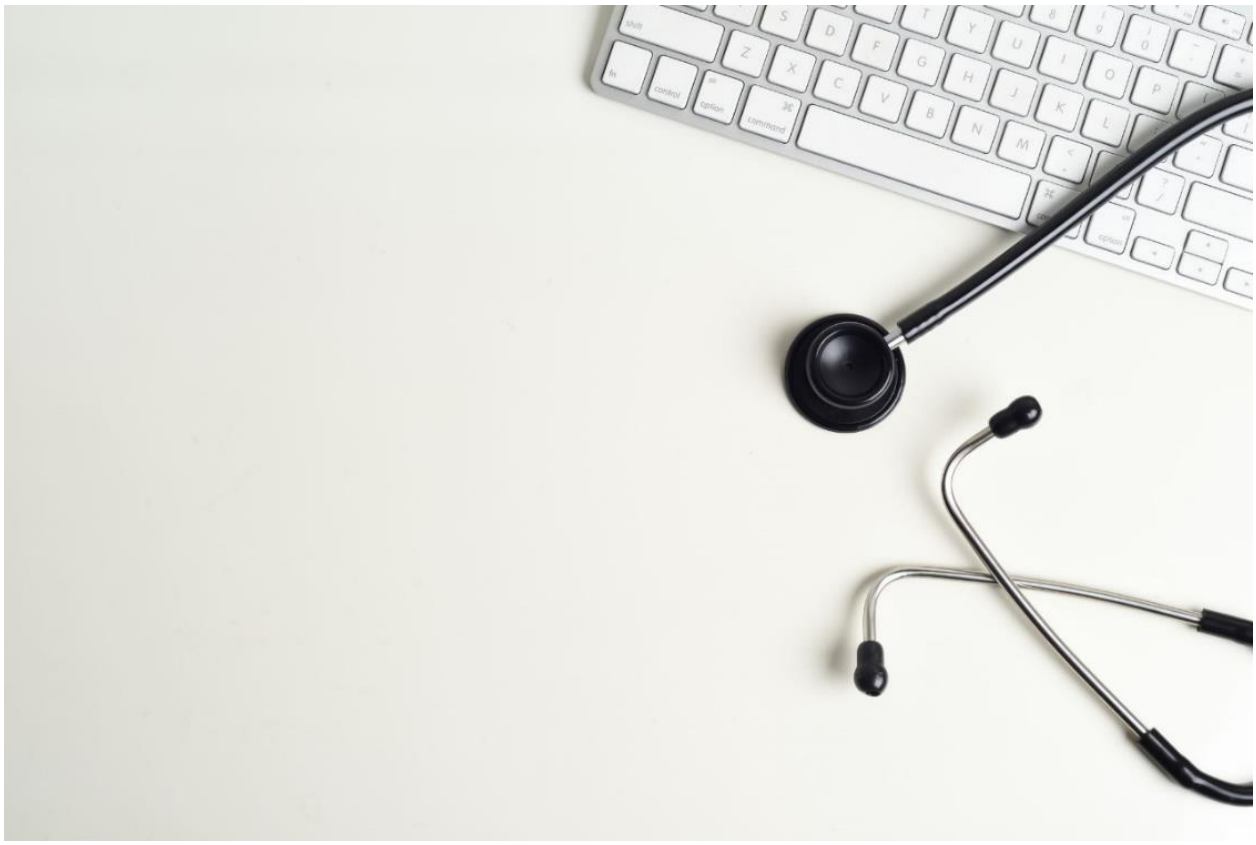
Evaluation of the Pharmacist Care Clinic pilot in New Brunswick

Final report



Chris Folkins, PhD, BScPhm
Priya Bhakat, PhD
Chandy Somayaji, MSc
Timipere Allison, PhD
Debbie Peters, BN, MBA

Laurence Lambert-Côté, MSc
Mallory Murphy, BA (Hons), BPhil
Linyun Shen, MSc
Haylie Simmons, BSc
Ted McDonald, PhD

Project Title

Evaluation of the Pharmacist Care Clinic pilot in New Brunswick

Principal Investigators

Chris Folkins, Senior Research Scientist, NB-IRDT
Ted McDonald, Director, NB-IRDT

NB-IRDT Research Team

Timipere Allison, Research Assistant
Priya Bhakat, Program Evaluator
Jessica Bouchard, Research Scientist
Andrea Bowes, Research Scientist
Laurence Lambert-Côté, Program Evaluator
Kianna Mau, Research Assistant
Mallory Murphy, Research Assistant
Debbie Peters, Program Evaluator
Linyun Shen, Health Research Analyst
Haylie Simmons, Research Assistant
Paramdeep Singh, Data Analyst
Chandy Somayaji, Senior Data Analyst
Matthew Stackhouse, Data Analyst
Gavin Woodward, Research Assistant

Project Managers

Greg Paterson, Qualitative Analyst Lead, NB-IRDT
Andrew Sexton, Project Engineer, Institute of Biomedical Engineering, UNB

Publication Date

March 2025

Acknowledgements

This evaluation was conducted on behalf of the New Brunswick Pharmacists' Association (NBPA) by the New Brunswick Institute for Research, Data and Training at the University of New Brunswick. Funding was provided by the McKenna Institute at the University of New Brunswick, by ResearchNB (RNB) and by the Maritime SPOR SUPPORT Unit (MSSU), which receives financial support from the Canadian Institutes of Health Research (CIHR), the Nova Scotia Department of Health and Wellness, the New Brunswick Department of Health, Research Nova Scotia and RNB. The results and conclusions are those of the authors, and no official endorsement by the NBPA, the McKenna Institute, RNB or MSSU and associated funders was intended or should be inferred.

How to Cite This Product

Folkins, C., Lambert-Côté, L., Bhakat, P., Murphy, M., Somayaji, C., Shen, L., Allison, T., Simmons, H., Peters, D., & McDonald, T. (2025). Evaluation of the Pharmacist Care Clinic pilot in New Brunswick. Fredericton, NB: New Brunswick Institute for Research, Data and Training.

Table of Contents

List of Tables

List of Figures

List of Supplementary Files

This report refers to supplementary files that provide additional and more comprehensive details on the methodology and results:

Supplementary File S1 – List of service PINs
Supplementary File S2 – Clinic operational dashboards
Supplementary File S3 – Raw service PIN frequencies

These supplementary files are maintained separately from this document but are available upon request.

Abbreviations and Definitions

COPD	Chronic Obstructive Pulmonary Disease
CVD	Cardiovascular disease
NBPA	New Brunswick Pharmacists' Association
NB-IRDT	New Brunswick Institute for Research, Data and Training
OTC	Over-the counter
PIN	Product Identification Number
SD	Standard Deviation

Executive Summary

Background
New Brunswick's healthcare system faces many issues and challenges, such as limited access, workforce shortages and an aging population, which strain resources and increase demand for services. To address these issues, innovative programs have been implemented to enhance service delivery and improve the efficiency and sustainability of the healthcare system. In 2023, the New Brunswick College of Pharmacists, in collaboration with New Brunswick's Department of Health and the New Brunswick Pharmacists' Association, introduced the Pharmacist Care Clinic pilot program.

About the program
Under the Pharmacist Care Clinic pilot program, pharmacists' expanded authority includes point-of-care screening and prescribing for Group A Strep, as well as medication management for chronic diseases (i.e., diabetes, cardiovascular disease, asthma and chronic obstructive pulmonary disease). The program aimed to improve healthcare access by utilizing the expertise of community pharmacists who are readily available and provide convenient primary care. The pilot ran from August 2023 to September 2024 in six pharmacies located in different parts of the province.

Purpose of the report
The purpose of this report is to evaluate the impact of the Pharmacist Care Clinic pilot program. The evaluation was divided into three parts: 1) Description of clinic operational details; 2) Description of clinic services provided; 3) Evaluation of client experiences and perceptions.

Methodology
A mixed methods study was conducted using clinic operational data, clinic service records and client surveys. A self-administered cross-sectional survey was used to collect participants' experiences and perceptions about the clinic. Clinic operational details such as operating hours, appointment bookings and staffing, and a summary of clinical services rendered were reported using descriptive statistics, while participants' comments were analyzed qualitatively.

Key Findings from the Evaluation

Clinic operations and services
A total of 10 365 appointments occurred across all clinic sites during the pilot period, with 7800 unique clients served. The majority (75%) of clients were attached to a primary care provider. The most common reason for clinic appointments was prescription renewal and adaptation (38% of reported services), followed by chronic disease management (18.4%), minor ailments (15.9%) and Group A Strep (15.2%). Classifying services according to scope of practice and funding status, publicly funded services within the general scope of practice were most common (48.3% of reported services), followed by services exclusive to the pilot clinics (non-funded) (35.5%) and non-funded services within the general scope of practice (16.2%).

Services for chronic disease management were more common than services for Group A Strep among clients unattached to a primary care provider, while the opposite was true among attached clients.

Interventions reported by clinic pharmacists during the pilot period included 2975 pharmacist prescriptions (not including renewals), 275 changes to therapy and 190 over-the-counter recommendations. These interventions were associated with services for minor ailments, chronic disease management and Group A Strep. The majority of appointments for these conditions (60.2%) resulted in a pharmacist prescription.

The majority of clients (78.4%) visited a clinic only once during the pilot period, while 21.6% were repeat users. Repeat users were more common among clients unattached to a primary care provider. Follow-up visits accounted for 22.8% of chronic disease management appointments and were most commonly associated with appointments for management of cardiovascular disease.

Pharmacists referred patients to another healthcare provider in 8.9% of appointments, and 43.7% of these referrals were for the purpose of laboratory testing. Referrals were most commonly associated with appointments for minor ailments and chronic disease management, while referrals associated with Group A Strep were less common.

Evaluation of client experiences and perceptions

A total of 409 individuals (68% women) completed the client survey, with the majority of respondents (71%) visiting the clinic for services associated with Group A Strep. Survey participants visiting the clinics for chronic disease management services more frequently reported not having a primary care provider, were more frequently seeking care for an ongoing (rather than new) concern and were more likely to report not having any other option for care besides the clinic. Conversely, most participants visiting the clinics for Group A Strep had a primary care provider but indicated they chose to visit the pharmacy clinic anyway due to the need for rapid access to acute care. Nearly half of the participants were able to schedule their appointment on the same day they contacted the clinic. More than 90% of the participants reported that the pharmacist was able to provide the care for their health concern and that visiting the clinic had saved them from having to seek care from another healthcare provider (e.g., family doctor or nurse practitioner, a walk-in clinic or a hospital emergency department). Participants gave high ratings for their clinic experience and the services provided by pharmacists. After receiving care at the clinic, they also reported improved knowledge and confidence in managing their health concerns, as well as greater confidence in the accessibility of healthcare. Overall, participants reported high satisfaction with the healthcare services received, with 99% indicating they would use the Pharmacist Care Clinic again in the future and 100% stating they would recommend it to family and friends.

Discussion/Conclusions

Clinic service records demonstrate that pharmacy clinics were heavily used for both routine, previously available pharmacy services as well as novel, expanded scope services available exclusively as part of the Pharmacist Care Clinic pilot. Clinic clients were less likely than the general population to have a primary care provider, suggesting that the clinics served an unmet

need. Follow-up visits for chronic disease management were relatively common, particularly among clients unattached to a primary care provider, demonstrating the ability of the clinics to provide continuity of care. Clinic pharmacists made interventions, including writing prescriptions and adjusting therapy, provided follow-up care and made referrals to other healthcare providers when necessary, demonstrating provision of comprehensive pharmaceutical care within the expanded scope of the pilot program. Notably, nearly half of referrals were for the purpose of laboratory testing, suggesting that extending pharmacists' scope of practice to include ordering lab tests has the potential to facilitate more seamless patient care and further reduce the burden on other healthcare providers.

The results of the client survey suggest that the Pharmacist Care Clinic pilot program improved access to care for respondents. The program provided timely and accessible services, which were utilized even by individuals with a primary care provider. The results also suggest that the clinic was highly effective, and clients surveyed expressed great satisfaction with the care, the services offered and their overall experience at the clinic.

Introduction

Background

New Brunswick's healthcare system, like many others, has faced various challenges and changes in recent years. These include limited access, workforce shortages and an aging population, which strain resources and increase demand for services. In 2021, the Government of New Brunswick released its provincial health plan (*Stabilizing health care: An urgent call to action*), which is a five-year strategy to make systemic changes to address challenges in the healthcare system, streamline services and provide New Brunswickers with better access to health care (New Brunswick Department of Health, 2021). As part of these ongoing efforts, the New Brunswick College of Pharmacists, in collaboration with New Brunswick's Department of Health and the New Brunswick Pharmacists' Association (NBPA), launched the Pharmacist Care Clinic pilot program in 2023 (Government of New Brunswick, 2023). Community pharmacists are trusted and highly accessible primary care providers. By capitalizing on pharmacists' expertise and broadening their scope of practice, the Pharmacist Care Clinic pilot provides an opportunity to evaluate how an expanded role for pharmacists may positively impact health service delivery, patient health outcomes and health system sustainability in New Brunswick.

Brief Pilot Project Description

Pharmacists working under the Pharmacist Care Clinic pilot were permitted to assess and prescribe for certain additional medical conditions beyond their usual scope of practice. Expanded scope of practice under the pilot included point-of-care testing and prescribing for Group A Strep as well as medication management for chronic diseases including diabetes, cardiovascular disease (CVD), asthma and chronic obstructive pulmonary disease (COPD).

Pharmacy sites for the pilot clinics were recruited through an open application process. Interested pharmacies submitted a proposal to the Department of Health demonstrating how they would meet the 12 criteria for the pilot program (see **Appendix A** for a complete list of criteria). A panel consisting of members from the Department of Health and the New Brunswick College of Pharmacists was responsible for the selection process. Six pharmacies located in different parts of the province were chosen to participate in the Pharmacist Care Clinic pilot:

Table 1. List of pharmacies participating in the pilot program

Pharmacy	Location	Open
Marie-Claude Cyr Inc. Familiprix	1351 Des Fondateurs St., Paquetville	Sep 18, 2023
Lawtons Drugs	435 Brookside Dr., Fredericton	Sep 18, 2023
The Medicine Shoppe	1685 Main St., Moncton	Sep 18, 2023
Jean Coutu Riverview	438 Coverdale Rd., Riverview	Aug 01, 2023
Shoppers Drug Mart	1040 Prospect St., Fredericton	Aug 01, 2023
Hampton Pharmasave	599 Main St., Hampton	Sep 18, 2023

The pilot program launched in August 2023 at two participating sites, with the remaining four sites opening in September (individual opening dates for each clinic site are show in **Table 1** above). The pilot was originally intended to operate over a period of 12 months, although this period has been temporarily extended to permit continuity of care while allowing time for consideration of evaluation results in decision making surrounding potential changes to pharmacist scope of practice at a province-wide level.

The participating pharmacies agreed to collaborate with the New Brunswick Institute for Research, Data and Training (NB-IRDT) to collect the data required for evaluation of the clinics. Data sharing agreements were established to permit the transfer of relevant study data from the individual pharmacies to NB-IRDT for evaluation.

Evaluation

NB-IRDT was contracted to evaluate the Pharmacist Care Clinics pilot program by the NBPA, examining service delivery and client perceptions associated with the pilot clinics. The evaluation was divided into three parts:

1. **Description of clinic operational details**
    - Summary of clinic operations sourced from weekly dashboard data

2. **Description of clinic services provided (PINs data)**
    - Descriptive summary of clinical services rendered sourced from recorded service PIN (Product Identification Number) codes

3. **Evaluation of client experiences and perceptions (Client survey)**
    - Description of survey population
    - Appointment details and clinic use
    - Navigation in the healthcare system
    - Perceived clinic effectiveness and impact on health
    - Satisfaction with their experience at the clinic and with the care they received

Methodology

Study Design

The study used a mixed method approach combining clinic operational data, clinic service records and client surveys. The client survey was reviewed and approved by the University of New Brunswick's Research Ethics Board (REB #2023-183, REB #2023-191).

Recruitment and Data Collection

Clinic operations

Clinics were provided with a data collection template and asked to record daily clinic operations data. Data were recorded manually by clinic administrative staff. Variables collected are summarized in **Table 2** below. Collected data were transferred to NB-IRDT on a weekly basis for analysis and visualization. Data collection began when clinic sites opened and ended May 20, 2024. Due to initial difficulties with data collection at the clinic sites, however, substantial amounts of data were missing from the early months of the data collection window. Data collection issues were mostly resolved by January 2024, and the period from January 21 to May 20, 2024, provides the most robust and complete clinic operations data. Therefore, only data from that period are presented in this report.

Table 2. List of clinic operational data variables collected

Variable Name	Definition
Clinic Site	Identifies the reporting clinic site
Date	Date for which data are reported
Clinic Open Hours	Number of hours clinic was open on reported date (i.e., providing Pharmacist Care Clinic pilot-specific services)
Store Open Hours	Number of hours pharmacy was open for business on reported date (regardless of clinic hours)
Added Hours	Number of hours on reported date worked by clinic pharmacist(s) on clinic duties in addition to Clinic Open Hours
Admin Hours	Number of hours worked by designated clinic administrative staff member on reported date
Appts Avail	Number of available appointments on reported date
Appts Booked	Number of booked appointments on reported date
No Shows	Number of booked appointments on the reported date that were not attended by the booked client
Attached Appt	Number of attended appointments on the reported date that were attended by a client attached to a primary health care provider

Variable Name	Definition
Unattached Appt	Number of attended appointments on the reported date that were attended by a client unattached to a primary health care provider
Cancelled Before	Number of clients with booked appointments whose appointment was cancelled before arriving for their appointment due to insufficient clinic capacity
Cancelled During	Number of clients with booked appointments whose appointment was cancelled during their booked appointment time due to insufficient clinic capacity
After Hours	Categorical reporting reflecting the number of daily requests for clinic services received during the hours the clinic was closed (when the pharmacy was otherwise open). Categories: LOW for 0-5 requests (within one day), MEDIUM for 6-10 requests, HIGH for 11-20 requests, and VERY HIGH for 21 or more requests.
Strep POCT	Number of Group A Strep point of care tests performed on the reported date

Clinic services

Clinic sites were provided with a list of PIN codes describing all possible pharmacy services offered during the Pharmacist Care Clinic pilot. These included the novel, expanded scope services available only at the pilot clinic sites (i.e., assessment and prescribing for Group A Strep, and chronic disease medication management of asthma, CVD, COPD and diabetes), as well as both publicly funded and non-funded clinical pharmacy services available at all NB pharmacies under the existing scope of practice (for example, minor ailments assessment, vaccinations and prescription renewals). The full list of PINs is provided in **Supplementary File S1**.[1]

Clinics were instructed to record all services rendered during the pilot period (including those rendered during periods when the Pharmacist Care Clinic was not operating but the pharmacy was otherwise open) using the corresponding PINs. Methods of recording data were left to the discretion of the individual clinic sites, but generally data were captured using pharmacy management software. Clinics also provided PIN data from pharmacy records describing services rendered during the year prior to the Pharmacist Care Clinic pilot for the purpose of comparison. Only a subset of the PINs used during the pilot period were active during the pre-pilot year, and only these PINs were captured for the pre-pilot period.

The data collection date ranges for the pre-pilot and pilot periods for each site are shown in **Table 3** below. At the conclusion of the pilot data collection period, data were extracted by the clinic sites and de-identified, such that services received by the same client at a given site could be linked to one another, but clients were otherwise not identifiable. De-identified data were

[1] **Supplementary File S1 – List of service PINs** is maintained separately from this document but is available upon request.

transferred to NB-IRDT in accordance with established data sharing agreements, following standard operating procedures to maintain data security and individual privacy.

Table 3. Data collection periods for clinic service record (PINs) data, by clinic site

	Pre-Pilot Period		Pilot Period	
	Start Date	**End Date**	**Start Date**	**End Date**
Marie-Claude Cyr Inc. Familiprix	Sep 18, 2022	Mar 30, 2023	Sep 18, 2023	Mar 30, 2024
Lawtons Drugs	Sep 18, 2022	Mar 31, 2023	Sep 18, 2023	Mar 31, 2024
The Medicine Shoppe	Oct 04, 2022	Dec 16, 2022	Sep 20, 2023	Mar 28, 2024
Jean Coutu Riverview	Aug 01, 2022	Mar 31, 2023	Aug 01, 2023	Mar 31, 2024
Shoppers Drug Mart	Aug 01, 2022	Mar 31, 2023	Aug 01, 2023	Mar 31, 2024
Hampton Pharmasave	Sep 18, 2022	Mar 30, 2023	Sep 18, 2023	Mar 30, 2024

Client survey

A self-administered cross-sectional survey was used to collect participants' demographic characteristics (age, gender, attachment to a primary care provider, etc.) and details of their clinic visit appointment (main reason for visit, referral to the clinic, etc.). The survey also documented how participants would have navigated the healthcare system in the absence of the clinic, their perception of the clinic's effectiveness and their satisfaction with their experience at the clinic and the care they received. The survey consisted of 21 questions, including multiple-choice, Likert, dichotomous and rating scale questions, as well as one open-ended question. The survey was available in French and English.

On behalf of NB-IRDT, pilot clinic staff invited clients who visited the clinics for any of the conditions included in the pilot program (Group A Strep, asthma, COPD, diabetes, CVD), or for any other reason (e.g., minor ailments, vaccination, prescription renewal, etc.), to complete the survey. The survey was accessed and completed online at the clinic using a tablet or on a personal device using a QR code or hyperlink. In addition, paper copies of the survey were distributed by clinic staff. Clients were invited to return the completed paper copies to NB-IRDT using the stamped envelope provided. Paper surveys were then entered by NB-IRDT personnel into LimeSurvey, the platform used for the online survey. Participation was voluntary and anonymous. All participants consented to participate, and those under the age of 19 were required to have parental or guardian consent. Data were collected from January 23, 2024, to May 17, 2024.

Sample

Clinic operations

Reported data cover the period from January 21 to May 20, 2024.

Clinic services

The sample includes all individuals receiving PIN-coded pharmacy services at the clinic sites during the date ranges specified in **Table 3**.

Client survey

A total of 409 clients completed the client survey. Among them, 371 (90.7%) visited the clinics regarding one of the five conditions included in the pilot program (Group A Strep, asthma, COPD, diabetes, CVD), and 38 (9.3%) visited the clinic for other reasons (e.g., minor ailment, vaccination). Additional details about the participants can be found in the results section below.

Data Analysis Procedures

Clinic operations

Clinic operations data were compiled each week and presented in a weekly dashboard format to the NBPA to permit ongoing monitoring of clinic activities during the pilot period. A cumulative dashboard reflecting the entire period from January 21 to May 20, 2024, is included in this report, and individual weekly dashboards are included in **Supplementary File S2**.[2]

Clinic services

Analysis of clinic services (PINs) data was conducted using SAS 9.4 within NB-IRDT's secure research environment following standard operating procedures to protect data security and individual privacy.

When counting services rendered, all reported PINs were counted. When counting appointments, all PINs reported for the same client at the same clinic site on the same day were counted together as a single appointment (i.e., a maximum of one appointment per client per clinic site per day was counted, even if multiple PINs were reported).

[2] **Supplementary File S2 – Clinic operational dashboards** is maintained separately from this document but is available upon request.

Some elements of the analysis involved categorizing PINs by service category. Service categories are summarized in **Table 4** below, along with a description of which PINs are included under each category. The full list of PINs is provided in **Supplementary File S1**.

Table 4. PIN service categories

Service Category	Description of PINs included
Group A Strep	All PINs related to Group A Strep (from Table 3, Supplementary File S1)
Chronic disease management	All PINs related to management of asthma, COPD, CVD and diabetes (from Table 3, Supplementary File S1), and chronic disease management referral PIN (from Table 4, Supplementary File S1)
Minor ailments	All PINs related to minor ailments (from Tables 1 and 2, Supplementary File S1); minor ailment referral PINs (from Table 4, Supplementary File S1)
Prescription renewal and adaptation/other	PINs used for billing of the Rx Renewal service (from Table 1, Supplementary File S1); PINs for pharmacist adaptation and therapeutic substitution (from Table 2, Supplementary File S1); PIN for 'non billable Rx service in clinic' (from Table 4, Supplementary File S1)
PharmaCheck	PIN for billing PharmaCheck service (from Table 1, Supplementary File S1)
Vaccination and injection	PINs associated with injections and vaccine assessment (from Table 2, Supplementary File S1); injection referral PINs (from Table 4, Supplementary File S1)

PINs are also categorized according to scope of practice and funding status. Categories and associated descriptions of included PINs for this classification are summarized in **Table 5** below. Note that when categorizing PINs by scope of practice and funding status, PINs from Table 4 of Supplementary File S1 (i.e., Tracking PINs to support the evaluation) were excluded.

Table 5. PIN categories by scope of practice and funding status

Scope/Funding Category	Description of PINs included
Publicly funded services within general scope of practice	All PINs from Table 1, Supplementary File S1
Non-funded services within general scope of practice	All PINs from Table 2, Supplementary File S1
Services exclusively available in Pharmacist Care Clinic pilot clinics (non-funded)	All PINs from Table 3, Supplementary File S1

When examining one-time and repeat clinic users, repeat users were defined as clients who visited the same clinic they had visited previously on an earlier date and received a service

within the same category as that of the service received on the earlier date. It was not possible to identify from study data clients who visited more than one clinic site, so a client with multiple initial visits to different sites would not be counted as a repeat visitor.

Management of small cell counts for clinic services data

NB-IRDT's minimum release requirements specify that frequency counts of less than 5 cannot be released from the secure research environment in order to minimize risk of disclosure of personally-identifying information. Since the clinic services results included many counts less than 5, random rounding (March & Norris, 1988) was conducted to preserve as much granularity as possible when reporting results. Random rounding involves rounding result values up or down to a multiple of 5 following a pre-determined probability algorithm. The process is applied uniformly across all results values (regardless of whether the unrounded values meet or do not meet minimum release requirements). The random rounding process is conducted as follows:

- Each result value is divided by 5, and the remainder is determined.
- Values with a remainder of 0 are not rounded.
- Values with a non-zero remainder are randomly rounded up or down to the next highest or lowest multiple of 5, according to the following probability algorithm: The probability of rounding up is given by (remainder/5), and the probability of rounding down is given by [1 – (remainder/5)].

Client survey

The client survey responses were analyzed using descriptive statistics (e.g., counts, percentages (%), means and standard deviations [SD]). The analysis was conducted overall, by clinic site and by primary reason for the visit. For variables using Likert scales (e.g., strongly disagree, disagree, neutral, agree, strongly, agree), responses were converted into numeric values (e.g., "Strongly agree" = 5), and the mean score and SD were calculated. Interpretation of quantitative results is based on general trends rather than statistical outcomes. Consequently, the predictive or inferential power of the quantitative analysis is limited, and results should be cautiously interpreted.

Due the low number of participants consulting for asthma and COPD, the two conditions were combined and were reported together as "respiratory condition." In cases where the number of observations was small (less than 5), response categories were combined in the tables, or data for some variables were not presented in the tables, to prevent the risk of respondent identification and ensure confidentiality. Similarly, in some cases, sites were combined, and the conditions were regrouped as follows for the stratified analysis: Group A Strep/other and chronic disease (COPD, respiratory condition, diabetes).

The open-ended question was coded by two research team members individually using Excel. They then compared their codes to resolve any disagreements and identify the final themes. French responses were translated using an online translator (*DeepL*) and validated by a bilingual member of the research team whose mother tongue is French.

Results

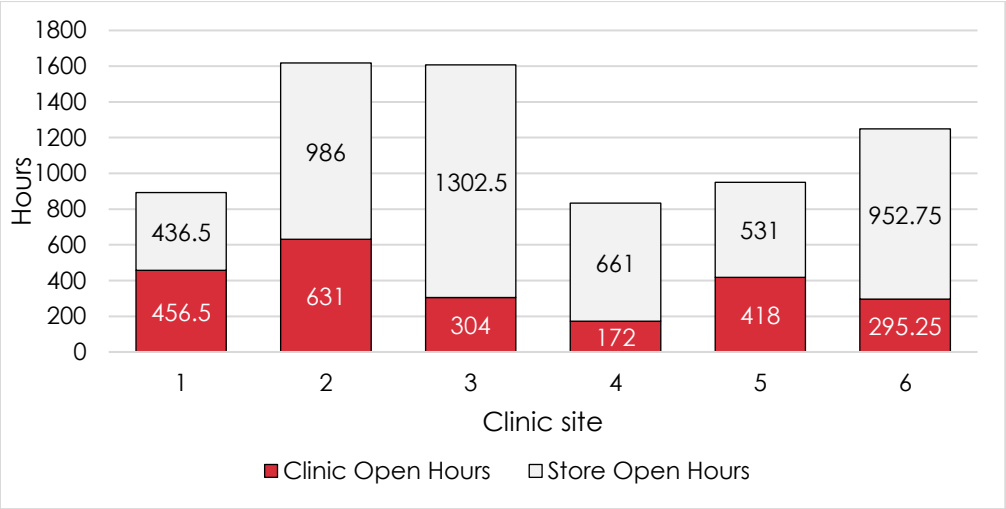
Clinic sites were randomly assigned a number from 1 to 6 for reporting purposes in order to conceal the identity of the sites.

Clinic Operations

Results presented here reflect the entire period from January 21 to May 20, 2024. Weekly results during this period are presented in **Supplementary File S2**.

From January 21 to May 20, 2024, the stores hosting the clinics were open a combined total of 7147 hours, and clinics were operating during 2277 (32%) of those store open hours. The proportion of store open hours during which clinics were operating varied by site, from 18.9% at Site 3 to 51.1% at Site 1 (**Figure 1**).

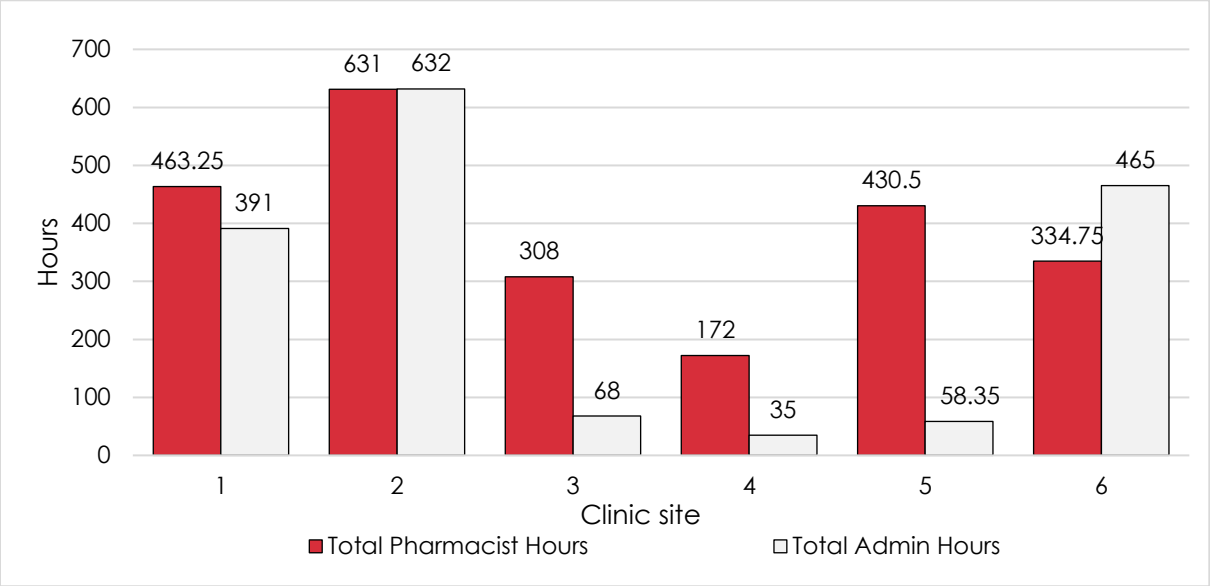
Figure 1. Clinic open hours and store open hours by clinic site



Total combined Clinic Open Hours:
2277
(32% of store open hours)

Pharmacists worked a combined total 2349 hours on Pharmacist Care Clinic duties across all clinics, representing a total of 63 additional hours beyond the total reported clinic open hours. Administrative clinic staff were on duty for 1649 total hours (72% of clinic open hours). Pharmacist and administrative hours were variable by site, and the proportion of clinic open hours worked by administrative staff ranged from 14% at Site 5 to 157% at Site 6 (**Figure 2**).

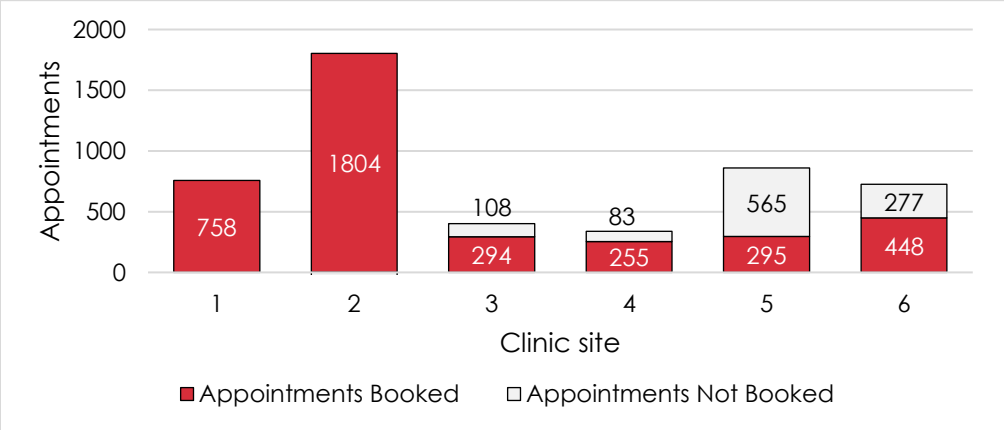
Figure 2. Pharmacist and administrative staff hours worked by clinic site



Pharmacists worked an additional **63** hours beyond clinic open hours *(3% of clinic open hours)*	Admin Staff on duty for **1649** hours *(72% of clinic open hours)*

A combined total of 4621 appointments were available across all clinics, and a combined 3854 of these (83%) were booked. Numbers of available and booked appointments varied by clinic site (**Figure 3**), and the proportion of available appointments booked ranged from 34% at Site 5 to 100% at Sites 1 and 2.

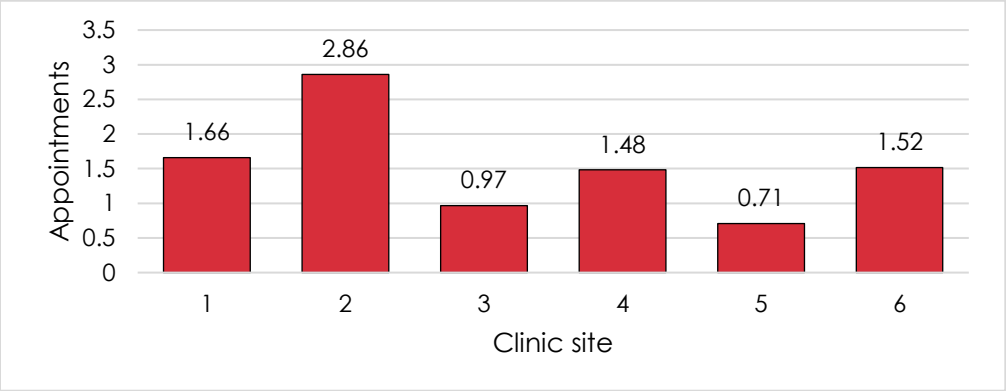
Figure 3. Available and booked appointments by clinic site



4621 Appointments Available	**3854** *(83% of available)* Appointments Booked

The overall appointment rate across all clinic sites was 1.69 booked appointments per clinic open hour. Rates varied by site, ranging from 0.71 at Site 5 to 2.86 at Site 2 (**Figure 4**).

Figure 4. Appointments booked per clinic open hour by clinic site

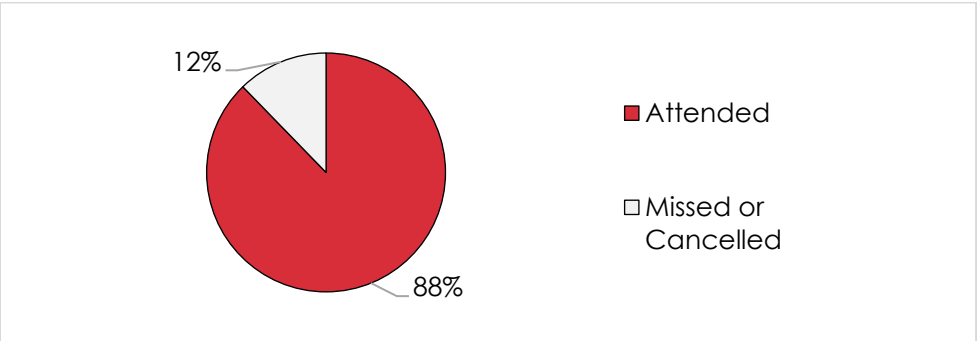


Overall **1.69**
appointments booked per clinic open hour

A total of 3381 (88%) booked appointments were attended across all clinics, while 388 were missed by clients, 68 were cancelled before the client's arrival due to insufficient clinic capacity, and 17 were cancelled due to capacity after the client's arrival, for a total of 473 (12%) missed/cancelled appointments (**Figure 5**).

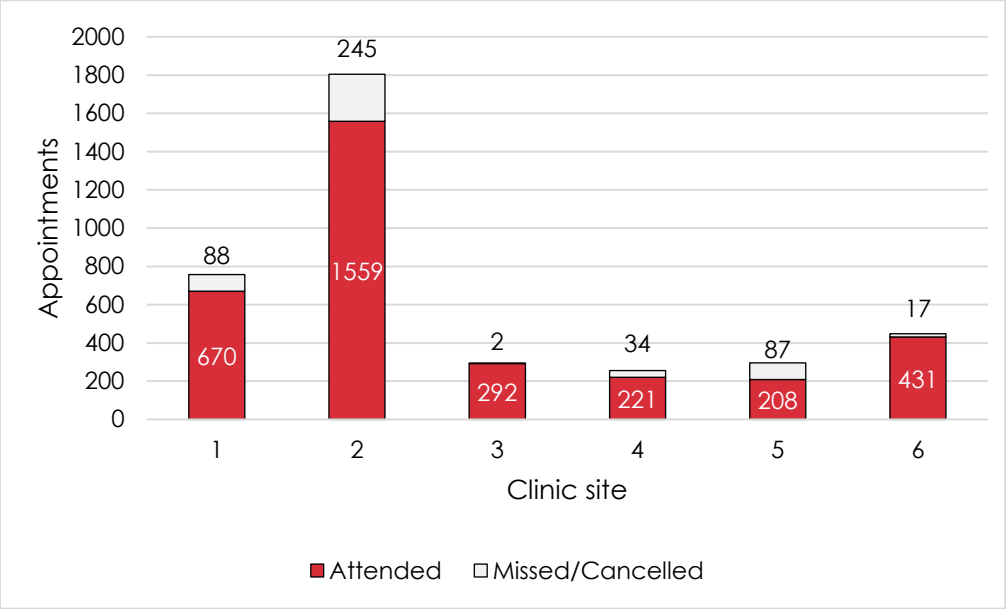
The proportion of booked appointments missed or cancelled varied by clinic site, ranging from 1% at Site 3 to 29% at Site 5 (**Figure 6**).

Figure 5. Attended, missed and cancelled appointments overall



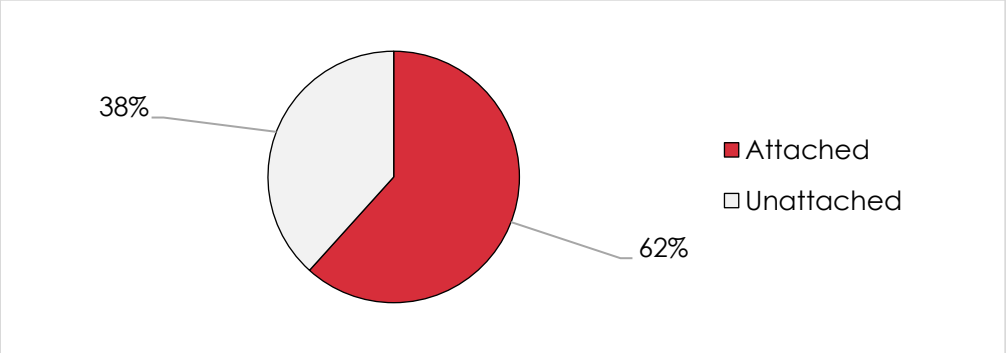
3381 Appointments attended	**388** Appointments missed	**68** Appointments cancelled before arrival	**17** Appointments cancelled after arrival

Figure 6. Attended, missed and cancelled appointments by clinic site



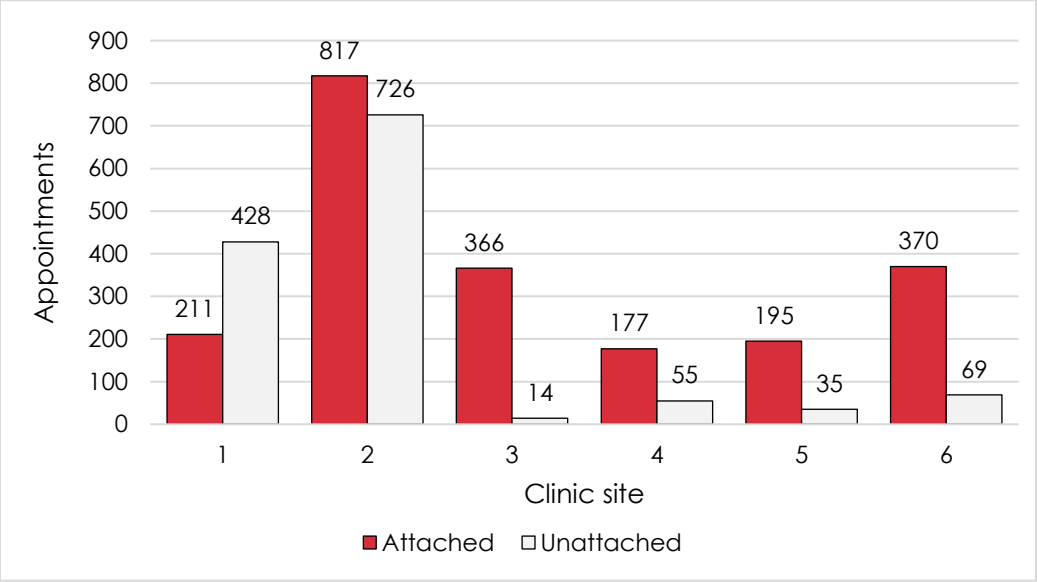
Across all clinic sites, 38% of clients were unattached to a primary care provider (**Figure 7**). The proportion of unattached clients varied by site, ranging from 4% at Site 3 to 67% at Site 1 (**Figure 8**).

Figure 7. Clinic clients attached and unattached to a primary care provider overall



2136 Clients attached to a primary care provider	**1327** Clients unattached to a primary care provider

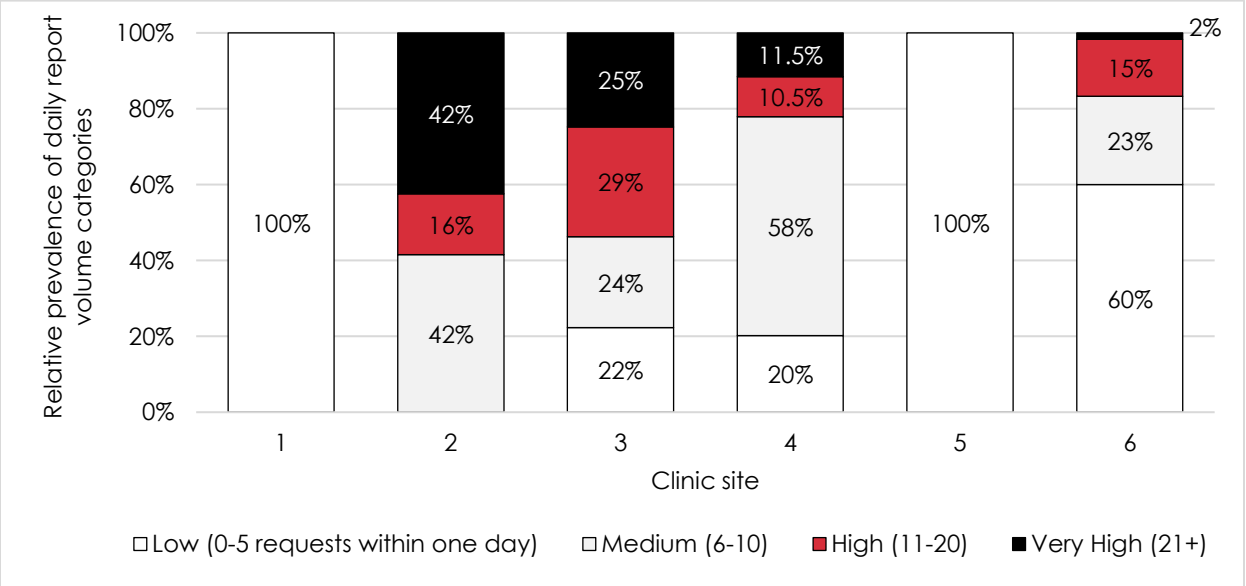
Figure 8. Clinic clients attached and unattached to a primary care provider by clinic site



Daily after-hours appointment request volumes varied by site (**Figure 9**). Sites 1 and 5 received only low volumes of daily requests, and Site 6 received predominantly low volumes. Request volumes were high most days at Site 4, and high or very high most days at Site 2. Request volumes were relatively evenly distributed across all four categories at Site 3.

Figure 9. After-hours appointment requests by clinic site

Categorical request volume (low/med/high/very high) was reported daily. Bars show relative prevalence of each report volume category across all daily reports, by clinic site.



A total of 1492 Group A Strep point of care tests were conducted across all clinic sites, resulting in an overall rate of one test performed per 1.5 clinic open hours. Test volumes varied by site, ranging from 24 tests at Site 5 to 391 tests at Site 2 (**Figure 10**). Testing rate also varied by site, ranging from one test per 17.42 clinic open hours at Site 5 to one test per 0.78 clinic open hours at Site 4 (**Figure 11**).

Figure 10. Group A Strep point of care tests conducted by clinic site

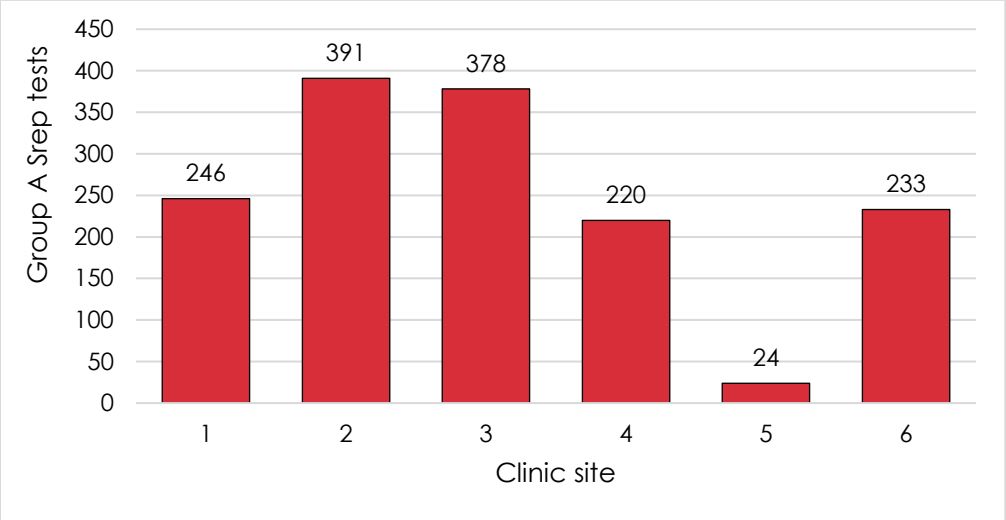
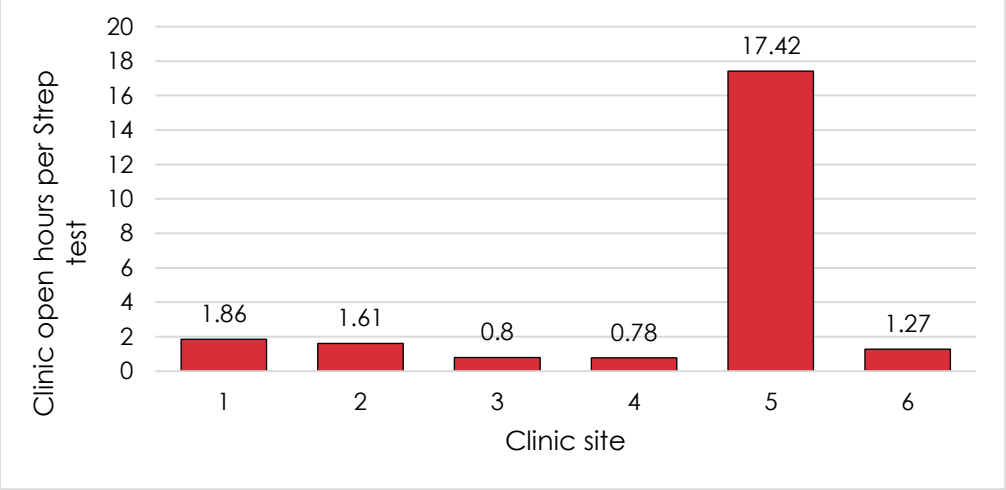


Figure 11. Clinic open hours per Group A Strep point of care test by clinic site



1492 Strep point of care tests performed	One strep point of care test performed every **1.5** hours clinics are open

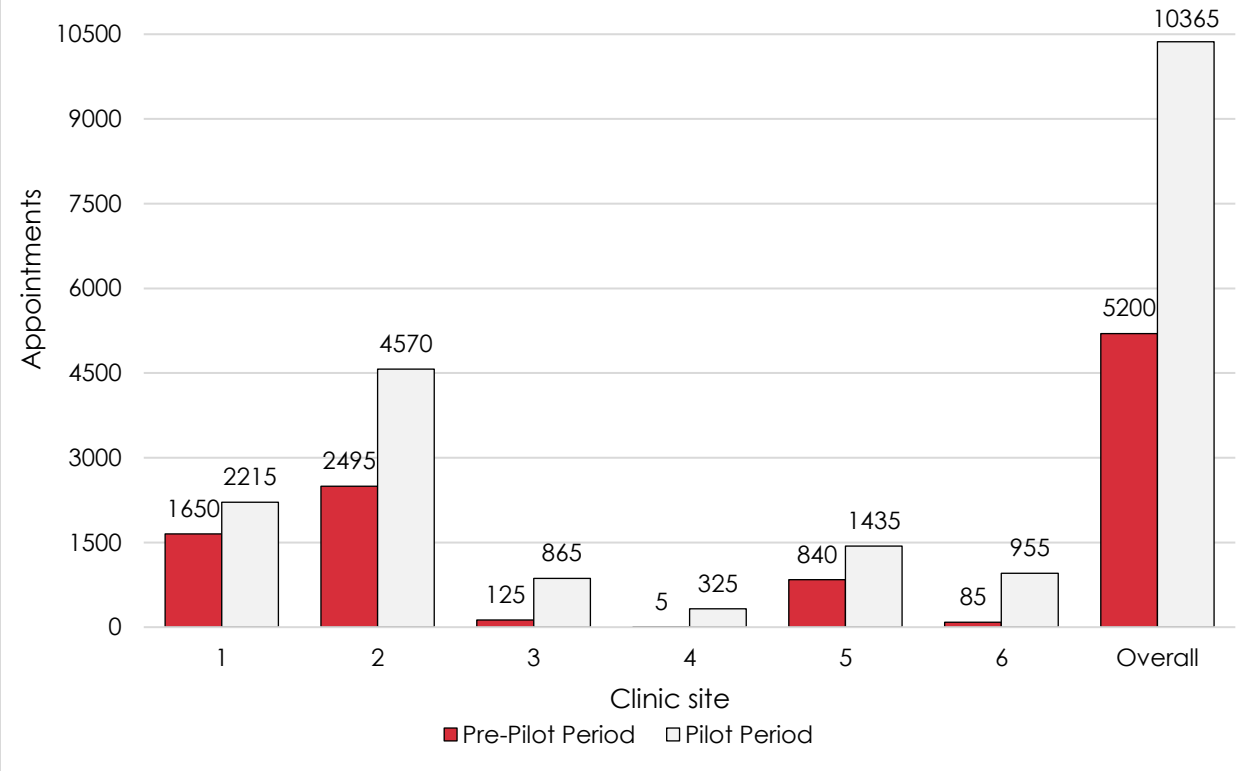
Clinic services

For reference, **Supplementary File S3**[3] presents the raw reported frequencies of each service PIN overall and by clinic site in the pre-pilot and pilot period, as well as separating clients as attached vs. unattached to a primary care provider during the pilot period.

Appointment counts and unique clients served

A total of 10 365 service appointments occurred during the pilot period across all clinic sites, ranging from 325 appointments at Site 4 to 4570 appointments at Site 2. During the pre-pilot period, a total of 5200 service appointments occurred, ranging from 5 appointments at Site 4 to 2495 appointments at Site 2 (**Figure 12**).

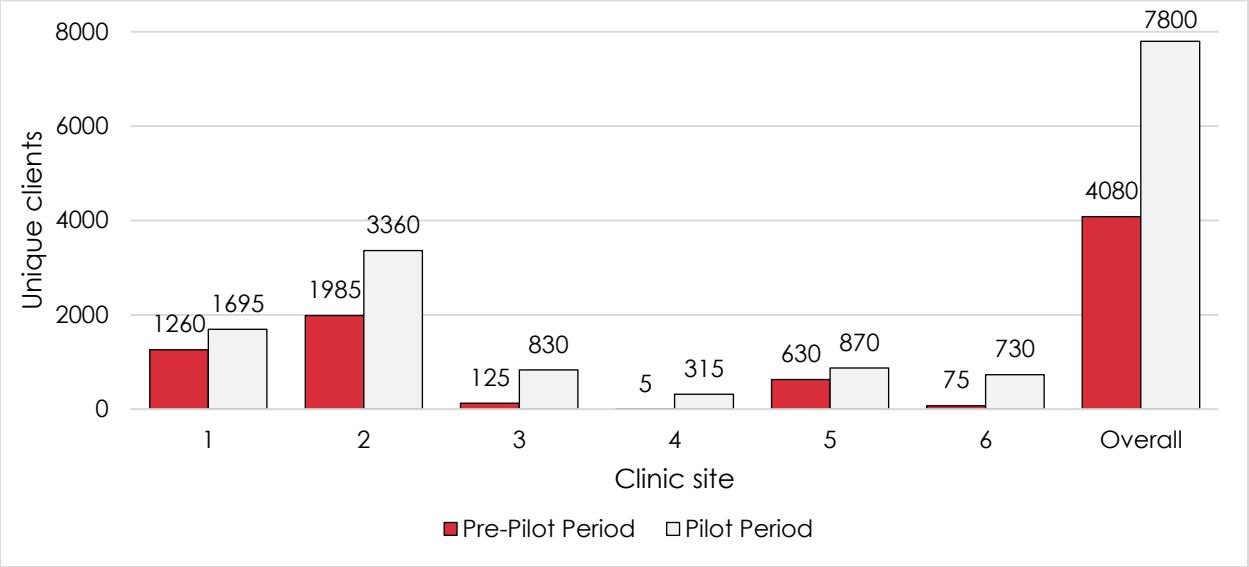
Figure 12. Appointment counts overall and by clinic site during pre-pilot and pilot periods



Clincs served a total of 7800 unique clients during the pilot period across all sites, ranging from 315 clients at Site 4 to 3360 clients at Site 2. During the pre-pilot period, clinics served a combined total of 4080 unique clients, ranging from 5 clients at Site 4 to 1985 clients at Site 2 (**Figure 13**).

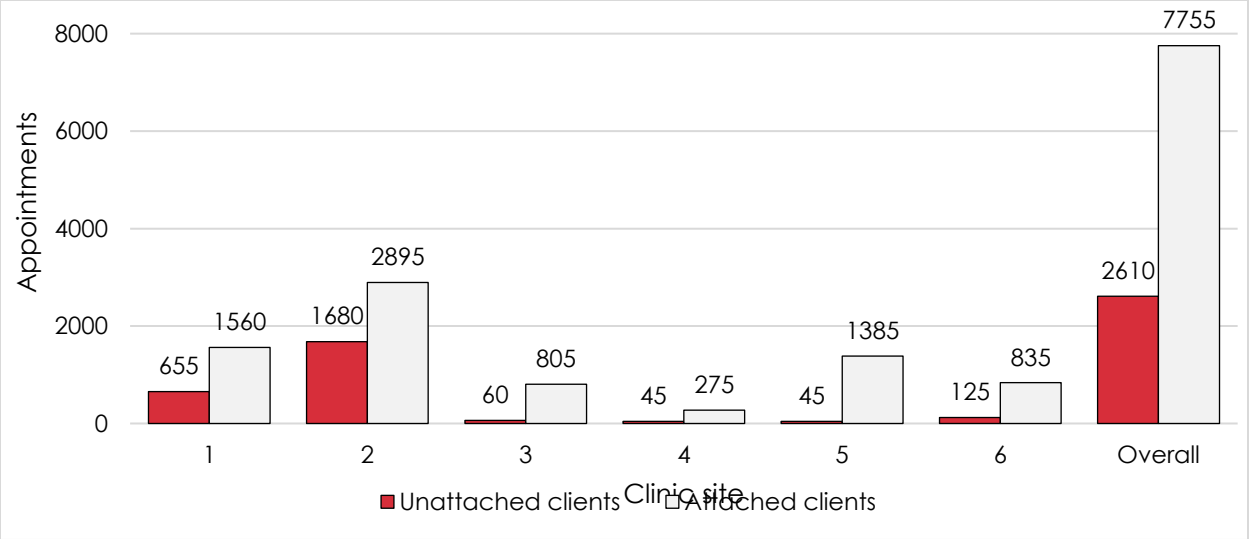
[3] **Supplementary File S3 – Raw service PIN frequencies** is maintained separately from this document but is available upon request.

Figure 13. Unique clients served overall and by clinic site during pre-pilot and pilot periods



During the pilot period, the majority of appointments (7755 appointments; 74.8%) across all clinic sites involved clients who were attached to a primary care provider. The proportion of appointments with attached clients varied by clinic site, from 63.3% (2895 appointments) at Site 2 to 96.9% (1385 appointments) at Site 5 (**Figure 14**).

Figure 14. Appointment counts overall and by clinic sites during the pilot period among clients unattached and attached to a primary care provider



Service counts by service category

Considering all service PINs reported by all clinic sites combined during the pilot period, the most commonly reported services were prescription renewals and adaptations/other (5355 PINs;

38.0% of total reported PINs), followed by services for chronic disease management (2590; 18.4%), minor ailments (2235; 15.9%), Group A Strep (2140; 15.2%), vaccination and injection (1525; 10.8%) and PharmaCheck (250; 1.8%) (**Figure 15**). The relative frequencies of services by category varied by clinic site. For example, Group A Strep services were more frequent than chronic disease management services at Sites 3, 4 and 6, while the reverse was true at sites 1, 2 and 5 (**Figure 16-21**). During the pre-pilot period, prescription renewal and adaptation/other services accounted for the majority of services at all sites (noting that Group A Strep and chronic disease management services were not offered during the pre-pilot period, and PINs were not used to record vaccination and injection services during this period) (**Figure 15-21**).

Examining services rendered according to scope of practice and funding status, the majority of services rendered across all clinic sites during the pilot period were publicly funded services within the general pharmacist scope of practice (6105 PINs; 48.3% of total reported PINs), followed by services exclusively within the expanded scope of practice permitted under the pilot program (i.e., those related to Group A Strep and chronic disease management) (4490; 35.5%) and services within the general pharmacist scope of practice that are not publicly funded (2045; 16.2%) (**Figure 15**).

Relative frequencies of services categorized according to scope of practice and funding status varied by clinic site. For example, at two of the clinic sites (Sites 3 and 4), pilot-exclusive services accounted for the majority of services rendered (**Figure 16-21**). During the pre-pilot period, only publicly funded services were reported via service PINs (pilot-exclusive services were not offered during this period, and PINs were not used to record non-funded services) (**Figure 15-21**).

Figure 15. Service PIN counts across all clinic sites by service category during pre-pilot and pilot periods

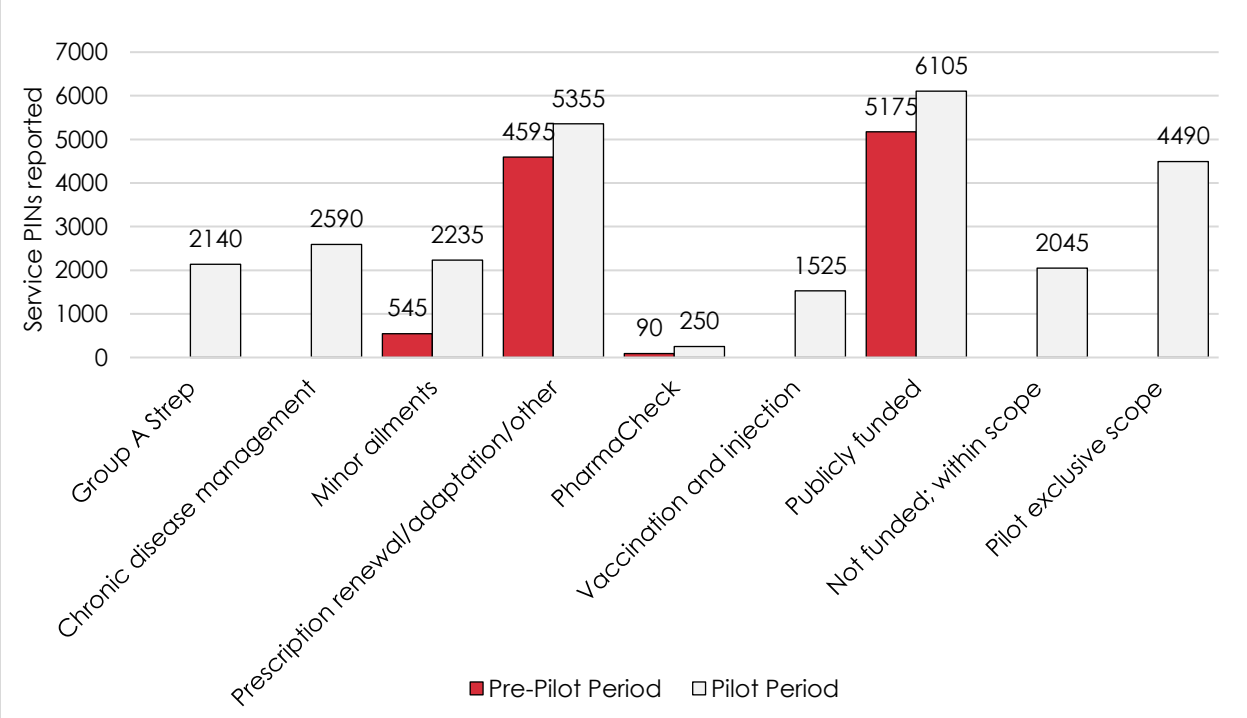


Figure 16. Service PIN counts at Clinic Sites 1-6 by service category during pre-pilot and pilot periods

Figure 16a. Clinic Site 1

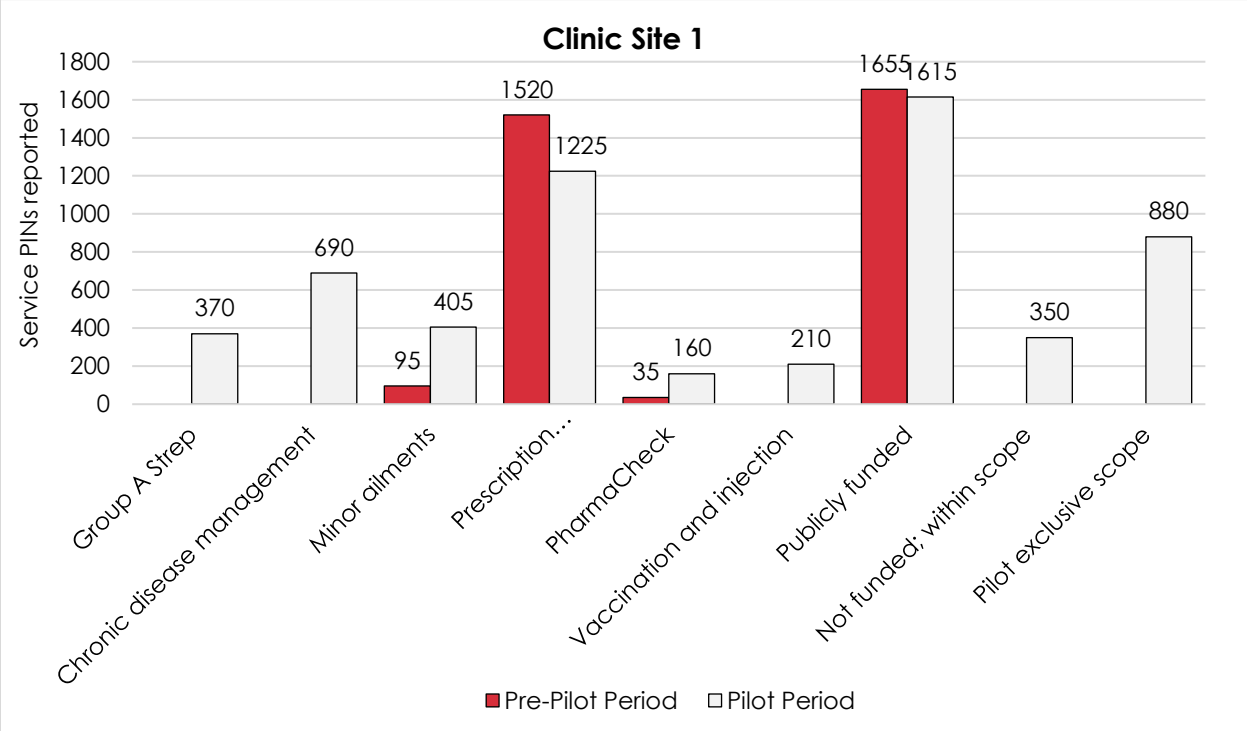


Figure 16b. Clinic Site 2

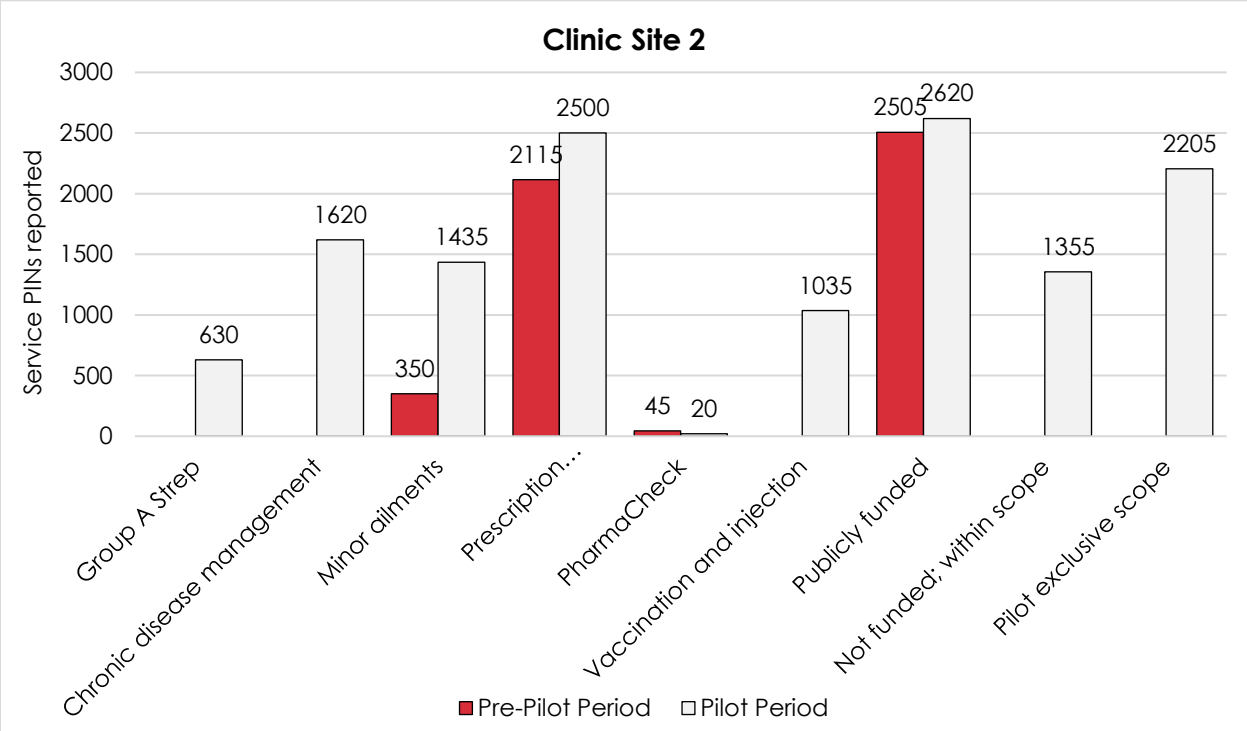


Figure 16c. Clinic Site 3

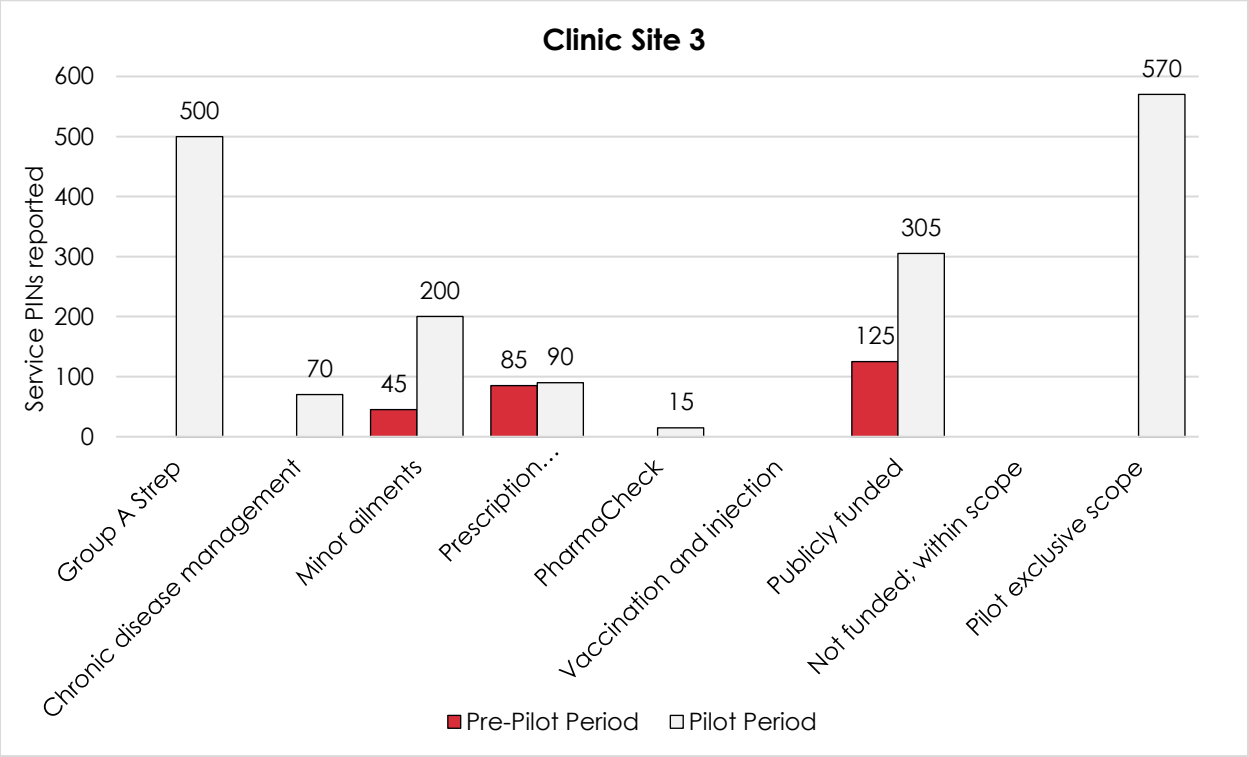


Figure 16d. Clinic Site 4

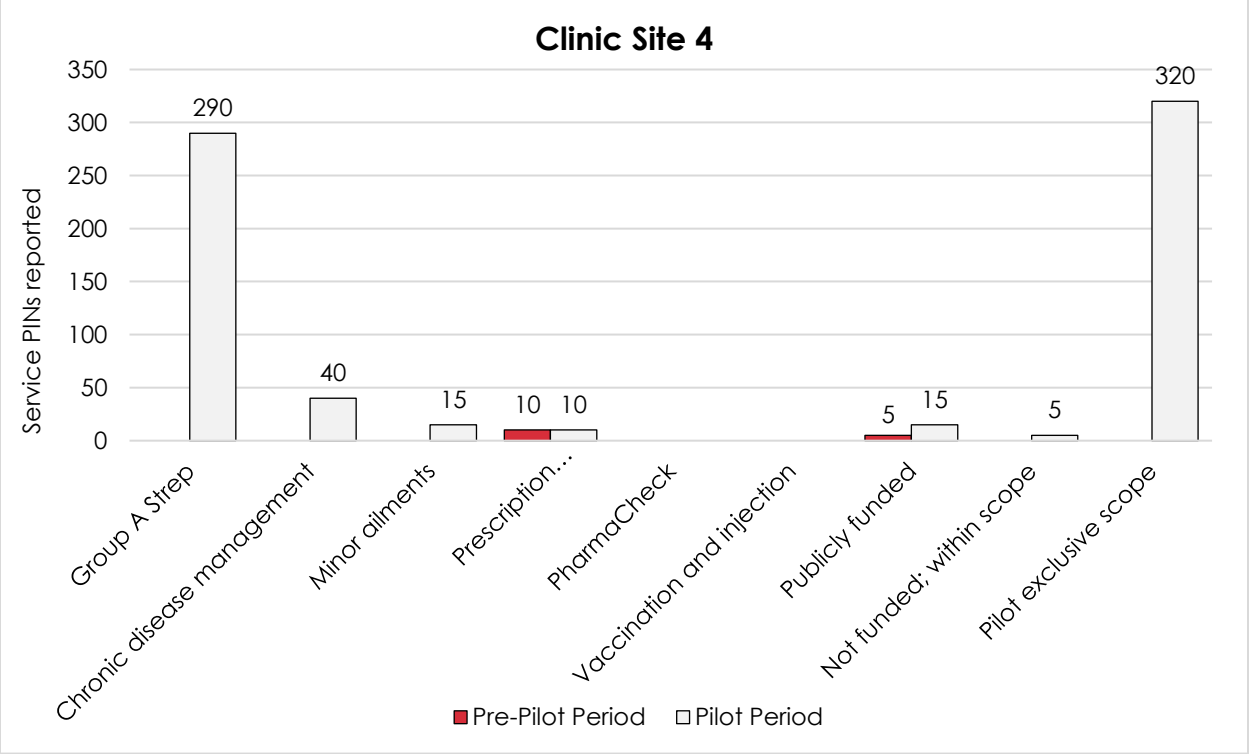


Figure 16e. Clinic Site 5

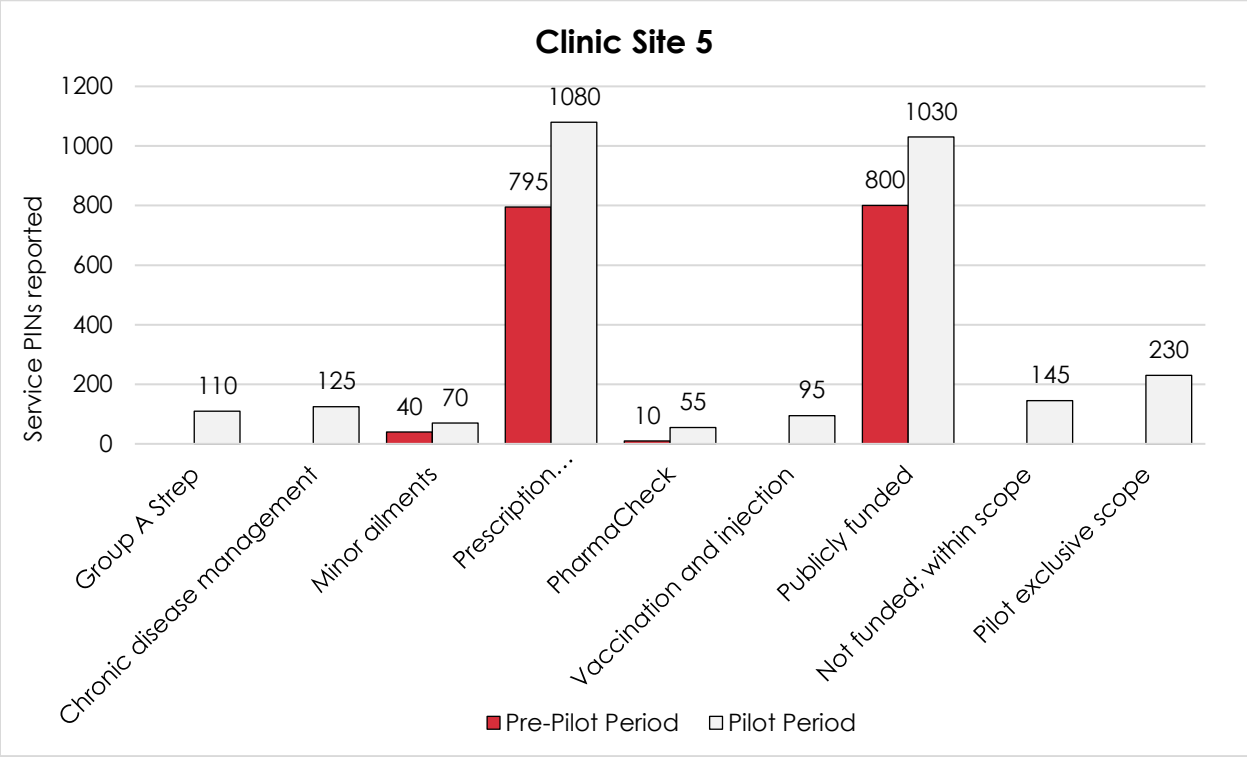
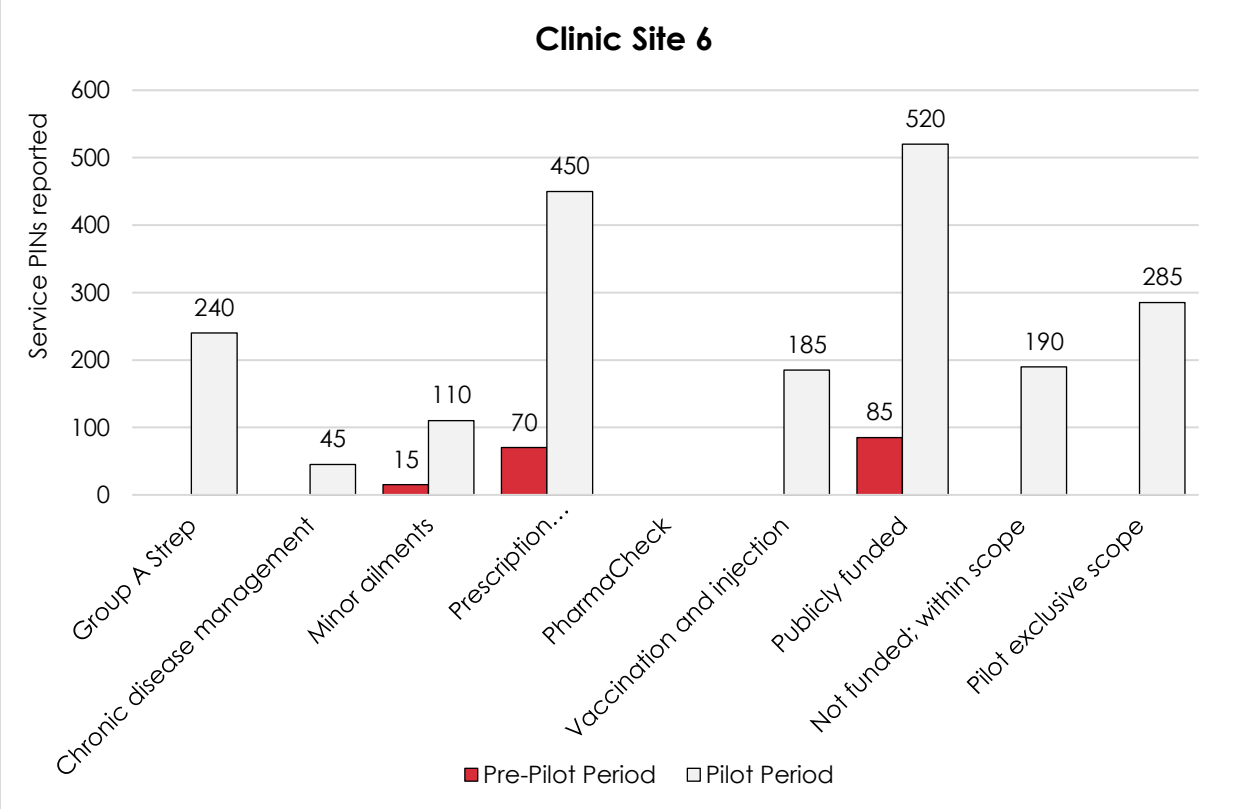


Figure 16f. Clinic Site 6



When comparing service category frequencies between clients attached and unattached to a primary care provider, the relative frequency of some service categories varied according to provider attachment (**Figure 17**).

For example, across all clinic sites combined, chronic disease management accounted for 40.7% (2265 PINs) of total services among unattached clients and only 4.0% (345 PINs) of total services among attached clients; and Group A Strep services accounted for 21.4% (1830 PINs) of total services among attached clients and only 5.8% (325 PINs) of total services among unattached clients.

Prescription renewal and adaptation/other services also varied according to client attachment, accounting for 45.2% (3870 PINs) of total services among attached clients and 26.5% (1475 PINs) of total services among unattached clients. Similar patterns of relative service frequencies between attached and unattached clients were observed within most individual clinic sites, with a few notable exceptions (e.g., Group A Strep services accounted for a higher proportion of total services among attached clients compared to unattached clients at all sites except Site 5, where the reverse was true [7.1% among attached, 12.5% among unattached]) (**Figure 18a-f**).

Services categorized according to scope of practice and funding status also varied according to client attachment. Across all sites combined, publicly funded services were more common among attached clients (accounting for 56.9% [4570 PINs] of total reported PINs, vs. 30.6% [1355 PINs) among unattached clients), and pilot-exclusive services were more common among unattached clients (accounting for 52.8% [2340 PINs] of total reported PINs, vs. 26.8% [2155 PINs] among attached clients) (**Figure 17**).

A similar pattern of relative service frequencies was evident within each individual clinic site, with the exception of Site 4, where the reverse was true (publicly funded: 3.6% among attached and 7.7% among unattached; pilot-exclusive: 84.6% among unattached and 96.4% among attached) (**Figure 18a-f**).

Figure 17. Service PIN counts across all clinic sites by service category during pilot period among clients unattached and attached to primary care provider

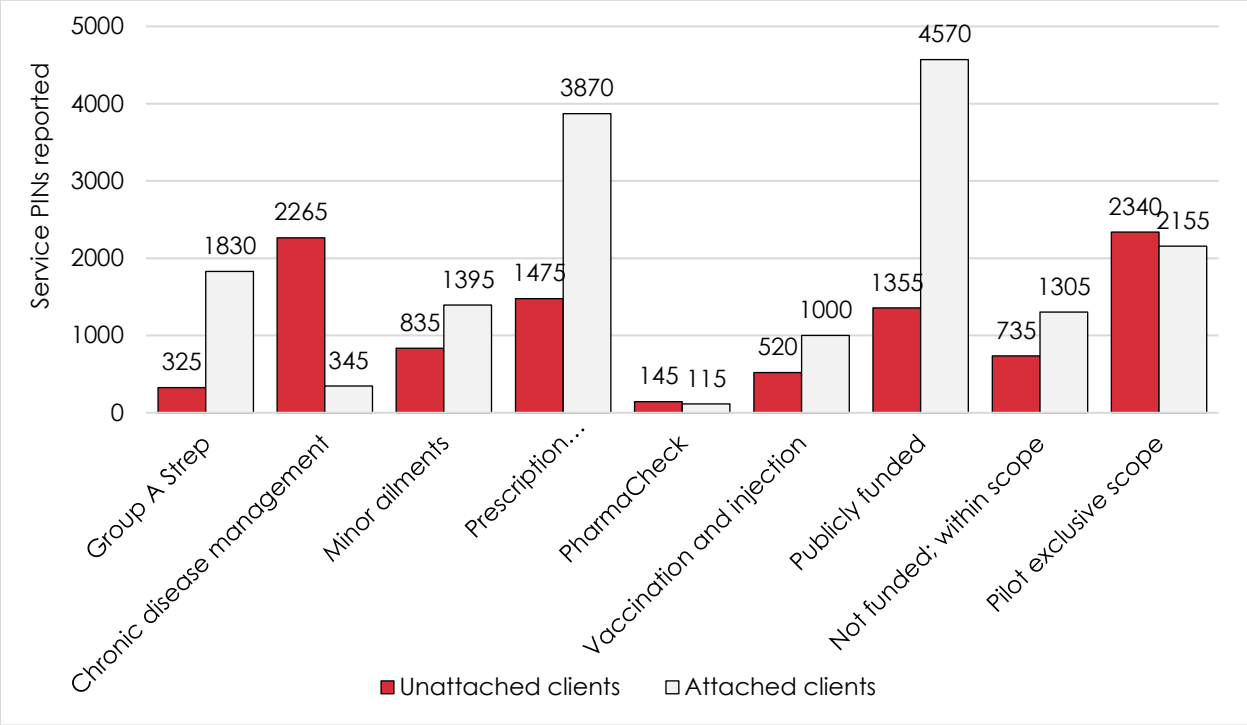


Figure 18. Service PIN counts at Clinic Sites 1-6 by service category during pilot period among clients unattached and attached to primary care provider

Figure 18a. Clinic Site 1

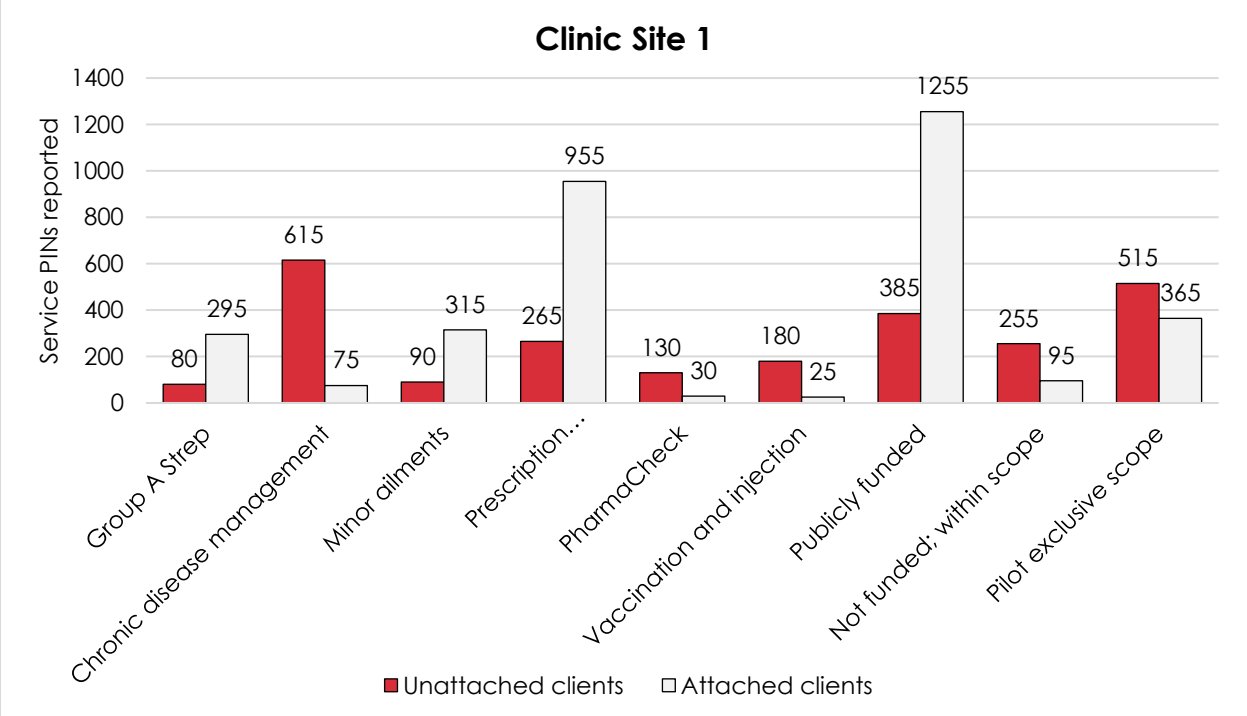


Figure 18b. Clinic Site 2

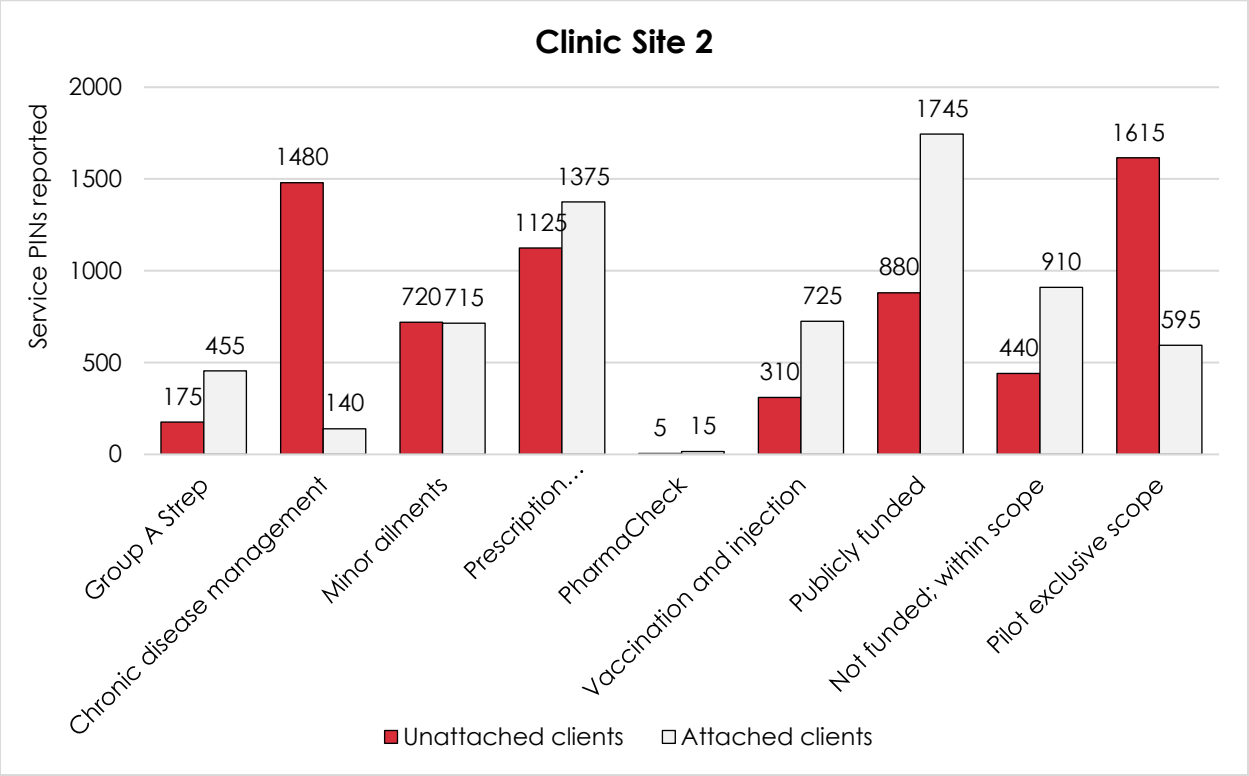


Figure 18c. Clinic Site 3

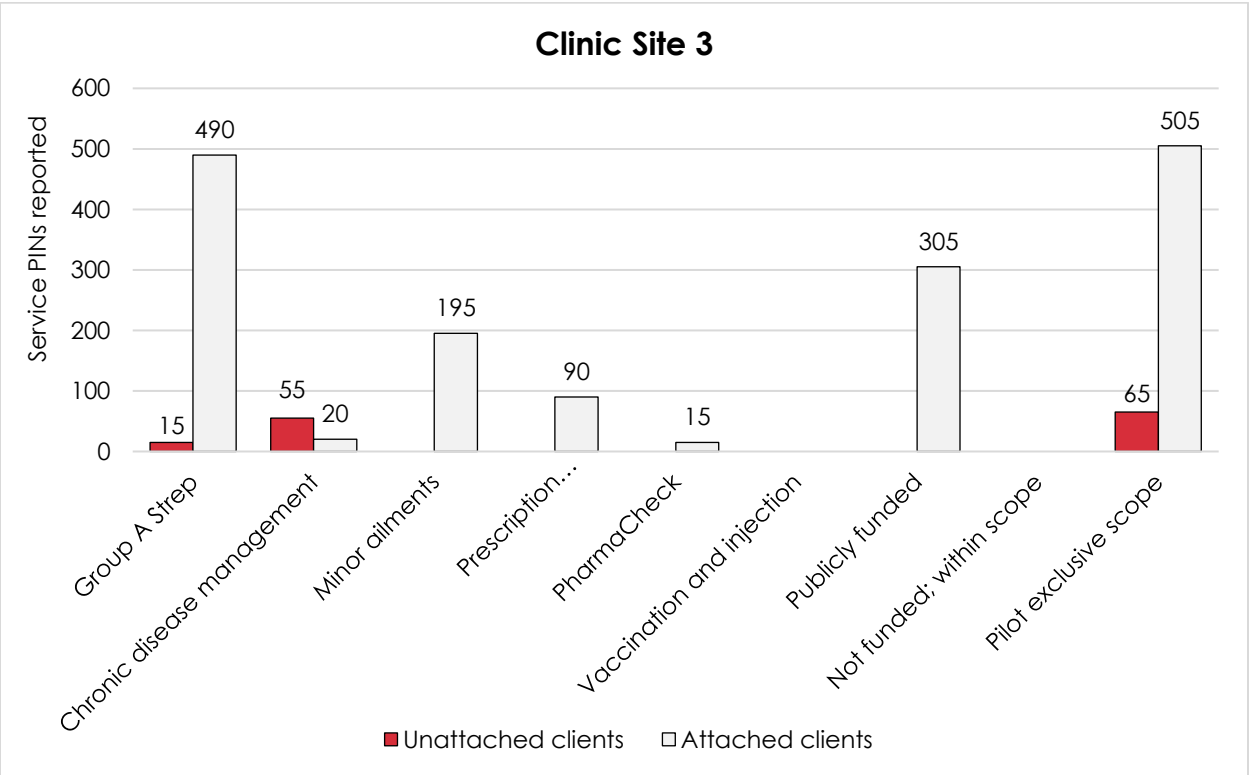


Figure 18d. Clinic Site 4

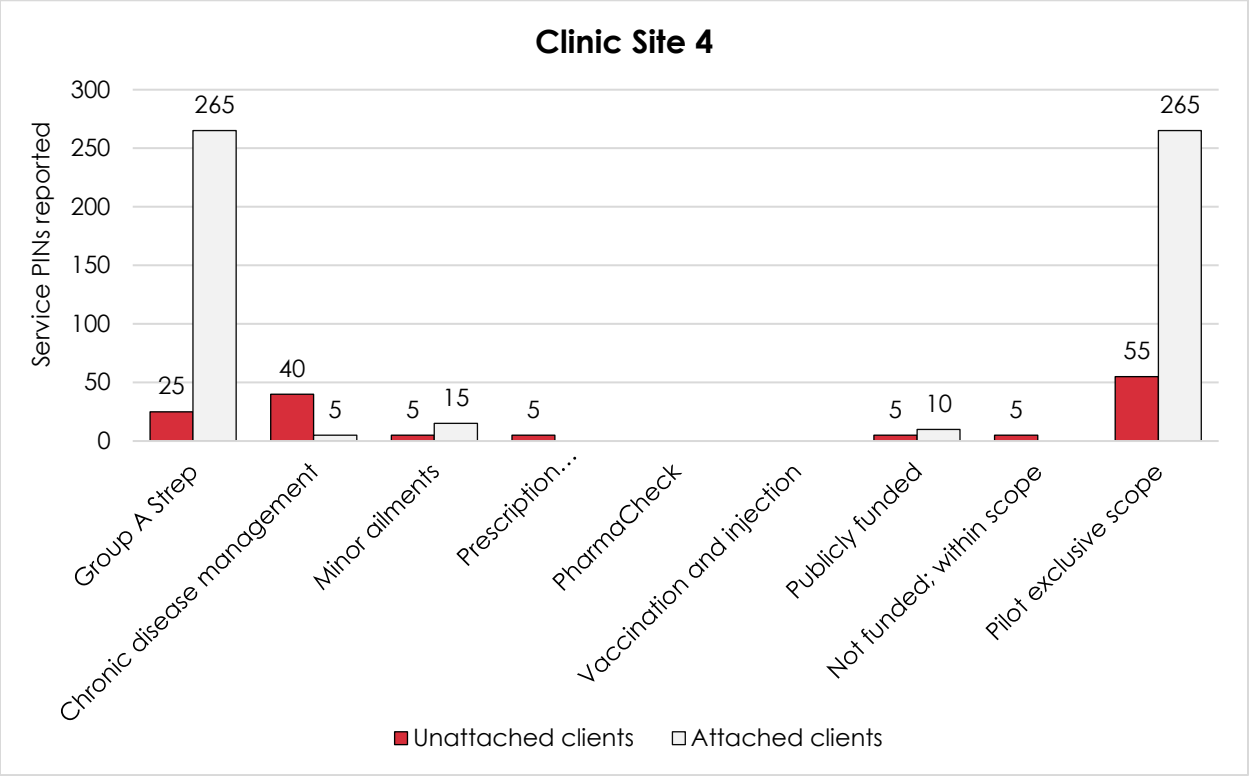


Figure 18e. Clinic Site 5

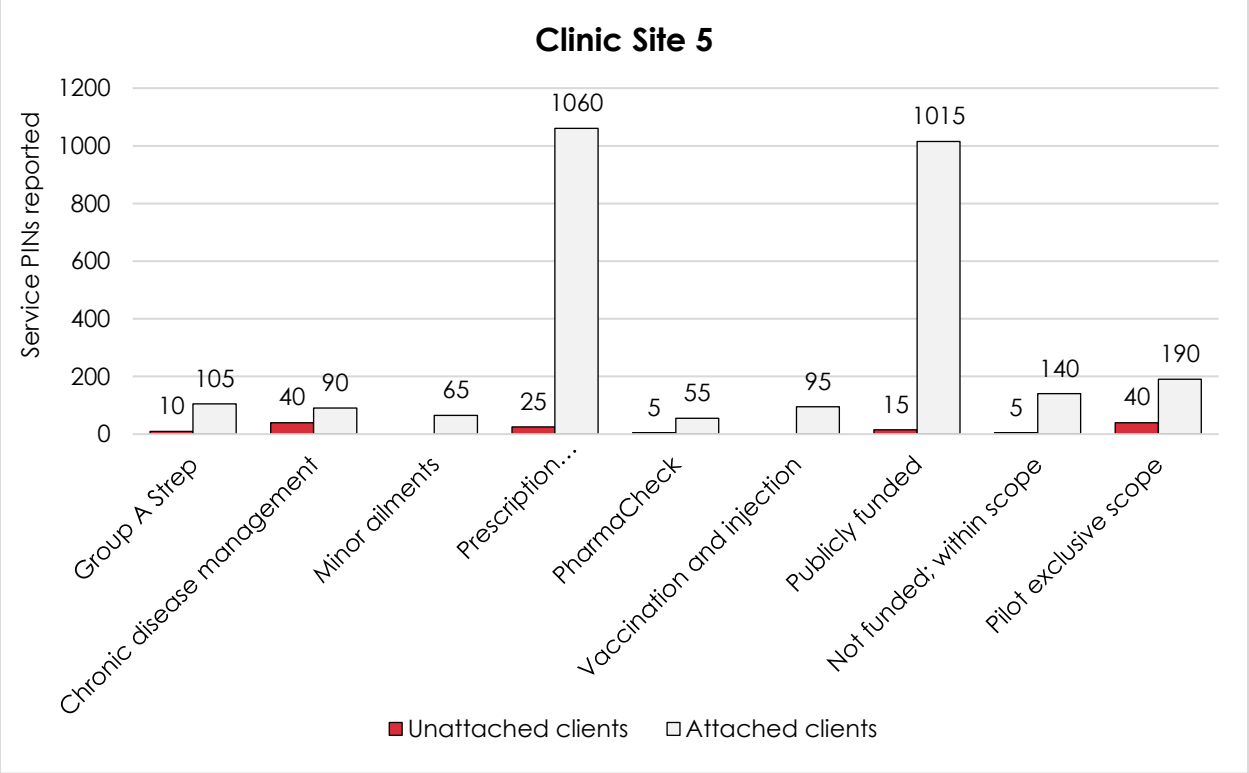
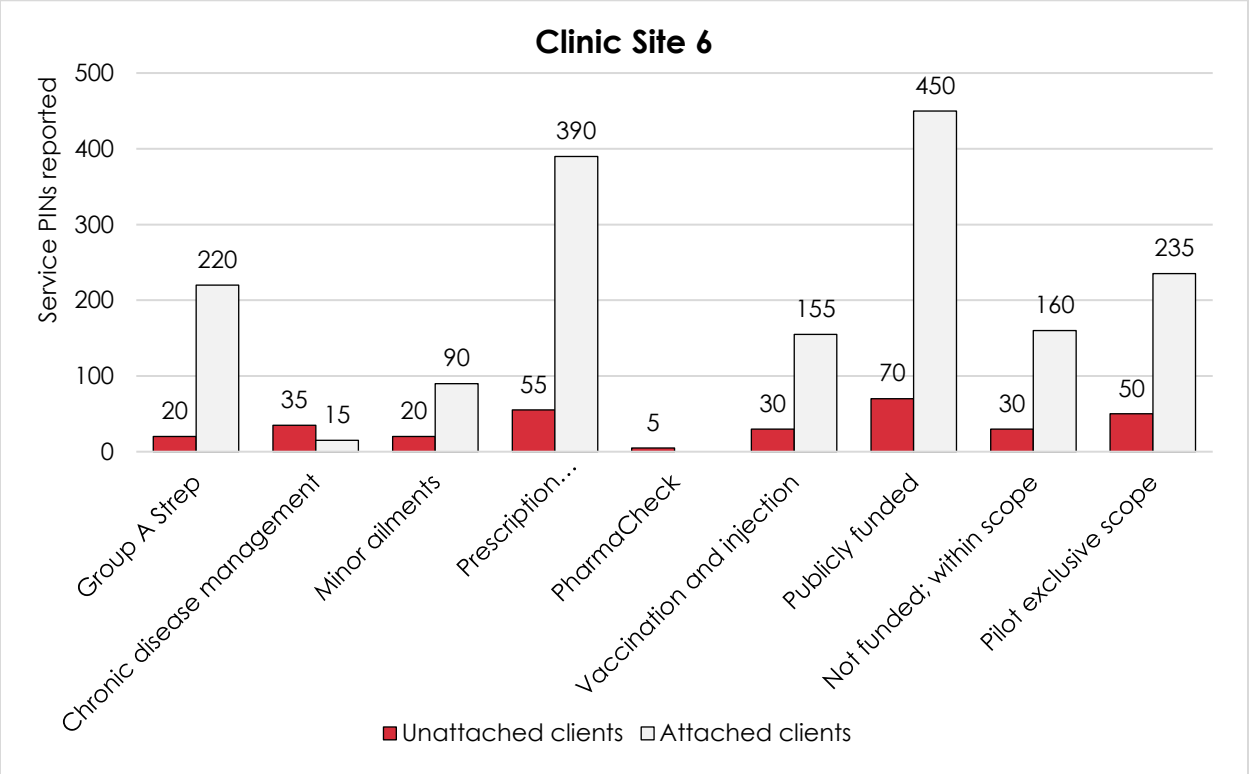


Figure 18f. Clinic Site 6



Prescriptions, prescription changes and over-the-counter recommendations

During the pilot period, across all clinic sites combined, a total of 2975 prescriptions were written by clinic pharmacists in association with services for minor ailments, chronic disease management and Group A Strep (**Figure 19**). This count includes all PINs for minor ailments, chronic disease management and Group A Strep that indicated a prescription was written but does not include standalone PINs for the general prescription renewal service (see **Supplementary File S1**).

Among appointments which had the option to record via PIN that a pharmacist had written a prescription (i.e., appointments for select minor ailments, chronic disease management and Group A Strep; see list of PINs in **Supplementary File S1**), 60.2% of appointments resulted in a pharmacist prescription (**Figure 20**). The proportion of appointments resulting in a prescription varied by clinic site, from 27.7% (90 prescriptions written) at Site 4 to 74.2% (1610 prescriptions written) at Site 2 (**Figure 21a-f**).

Fewer pharmacist prescriptions were reported during the pre-pilot period – 450 across all clinic sites combined (noting that fewer services associated with prescribing were available and/or reportable via PIN during the pre-pilot period) (**Figure 19**). Among appointments during the pre-pilot period which had the option to record pharmacist prescribing via PIN, 82.6% resulted in a pharmacist prescription (**Figure 20**). The proportion of appointments resulting in a prescription varied by clinic site, from 0% (0 prescriptions written) at Site 4 to 100% (45 and 15 prescriptions

written, respectively) at Sites 3 and 6 (**Figure 21a-f**).

During the pilot period across all clinic sites combined, clinic pharmacists made a total of 275 changes to therapy and reported 190 over-the counter (OTC) recommendations (**Figure 19**). The count of changes to therapy includes all PINs for minor ailments, chronic disease management and Group A Strep that indicated a change in therapy or change in prescription was made but do not include standalone PINs for general pharmacist adaptation or therapeutic substitution (see **Supplementary File S1**).

Among appointments which had the option to record via PIN that the pharmacist had made a change in therapy or OTC recommendation (i.e., appointments for select minor ailments, chronic disease management and Group A Strep; see list of PINs in **Supplementary File S1**), 17.4% of appointments resulted in a change in therapy, and 20.8% resulted in an OTC recommendation (**Figure 20**). The proportion of appointments resulting in a change in therapy varied by clinic site, from 0% (0 prescription changes) at Site 3 to 36.8% (35 prescription changes) at Site 5. The proportion of appointments resulting in OTC recommendations also varied by site, from 0% (0 OTC recommendations) at Site 4 to 40.0% (10 OTC recommendations) at Site 5 (**Figure 21a-f**).

Few changes in therapy and no OTC recommendations were reported during the pre-pilot period, and it should be noted that very few services associated with these interventions were available and/or reportable via PIN during the pre-pilot period (**Figure 19-22**).

Figure 19. Service PIN counts across all clinic sites by intervention category during pre-pilot and pilot periods

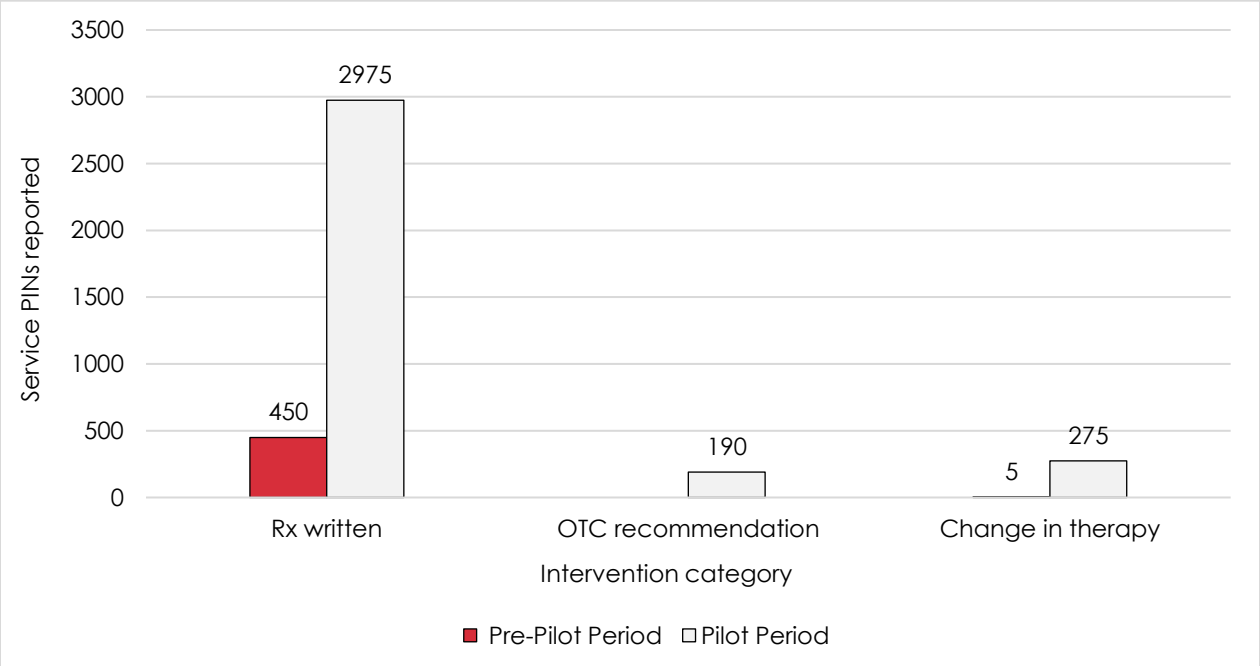


Figure 20. Percentage of eligible appointments resulting in interventions across all clinic sites by intervention category during pre-pilot and pilot periods

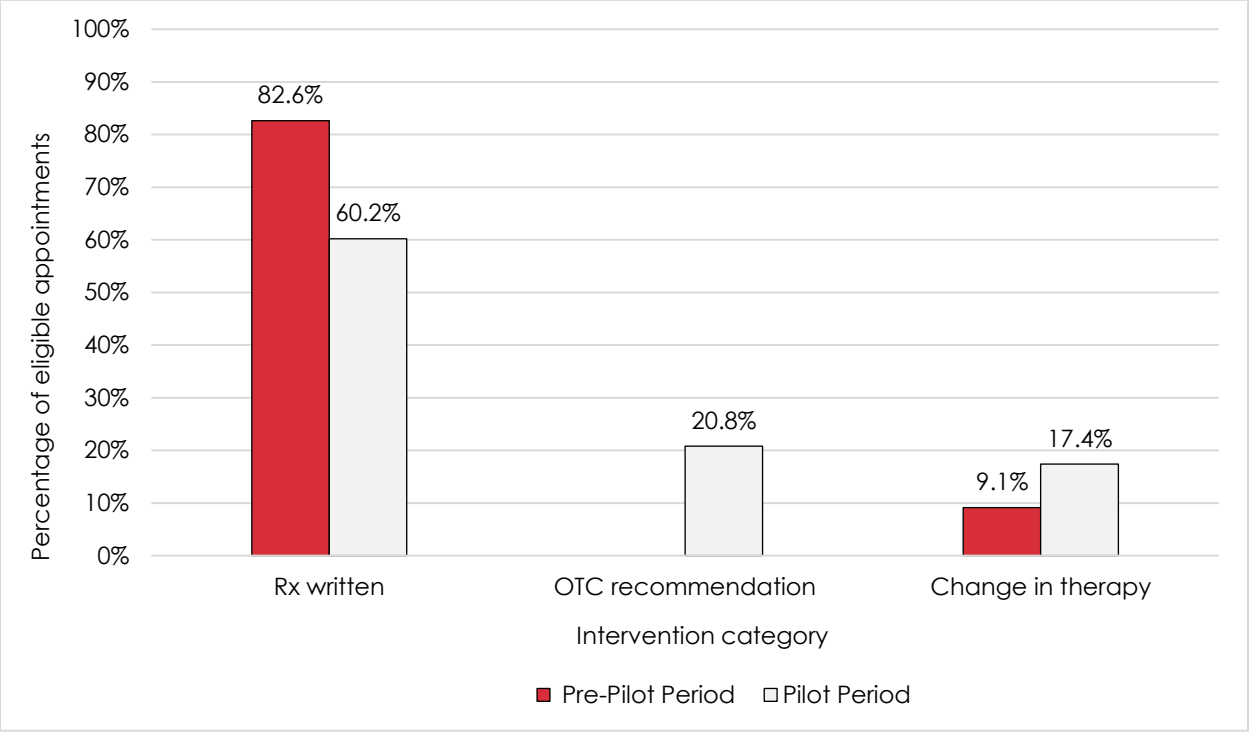


Figure 21. Service PIN counts at Clinic Sites 1-6 by intervention category during pre-pilot and pilot periods

Figure 21a. Clinic Site 1

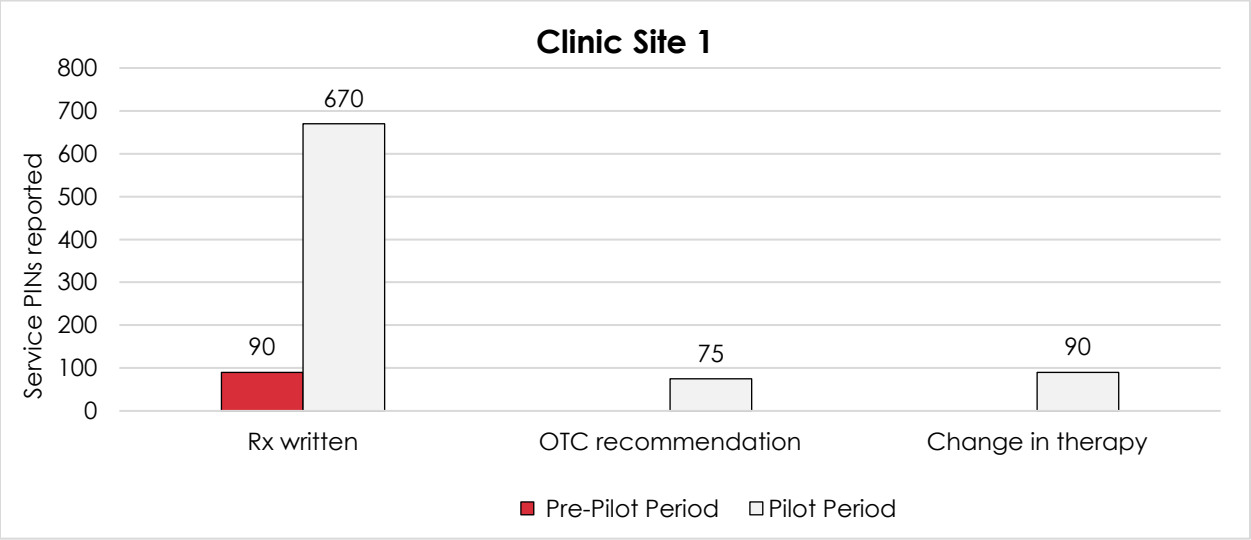


Figure 21b. Clinic Site 2

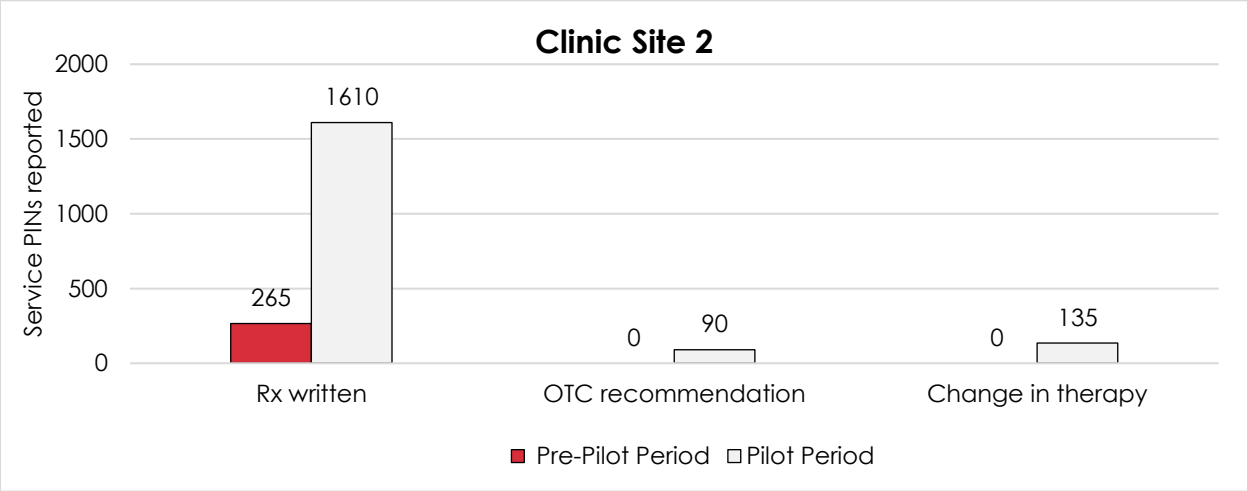


Figure 21c. Clinic Site 3

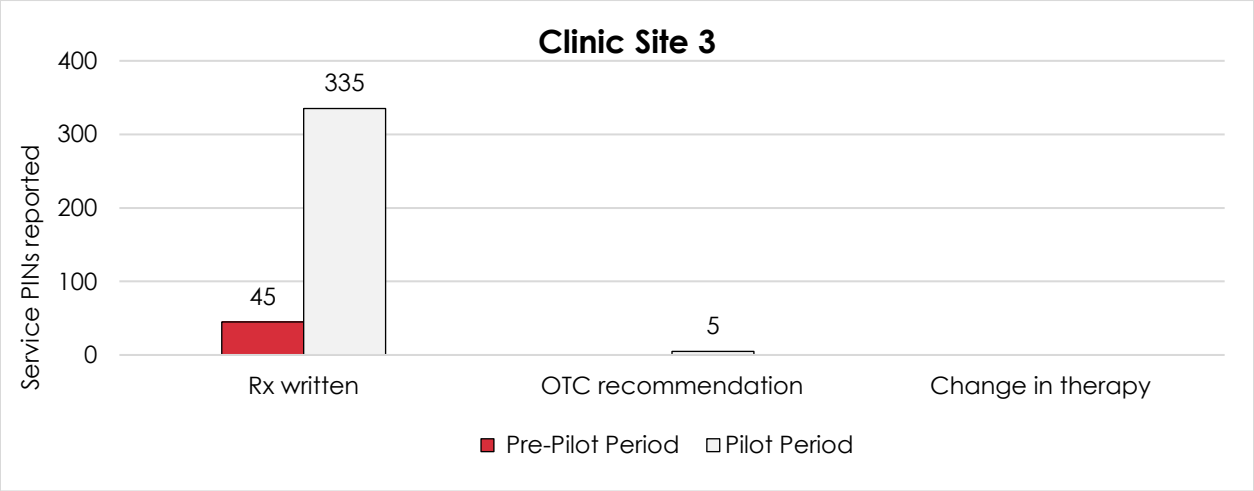


Figure 21d. Clinic Site 4

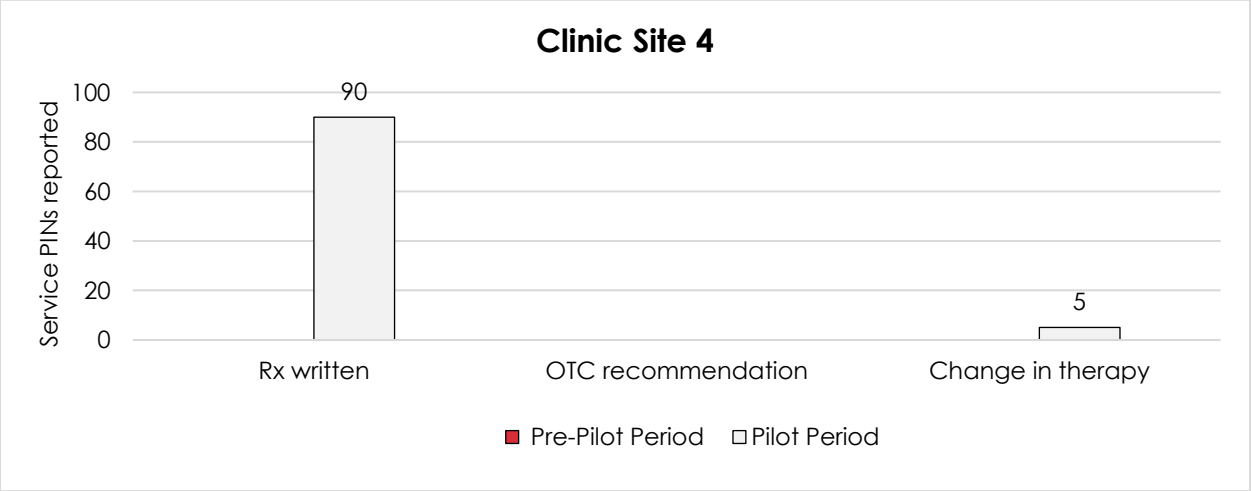


Figure 21e. Clinic Site 5

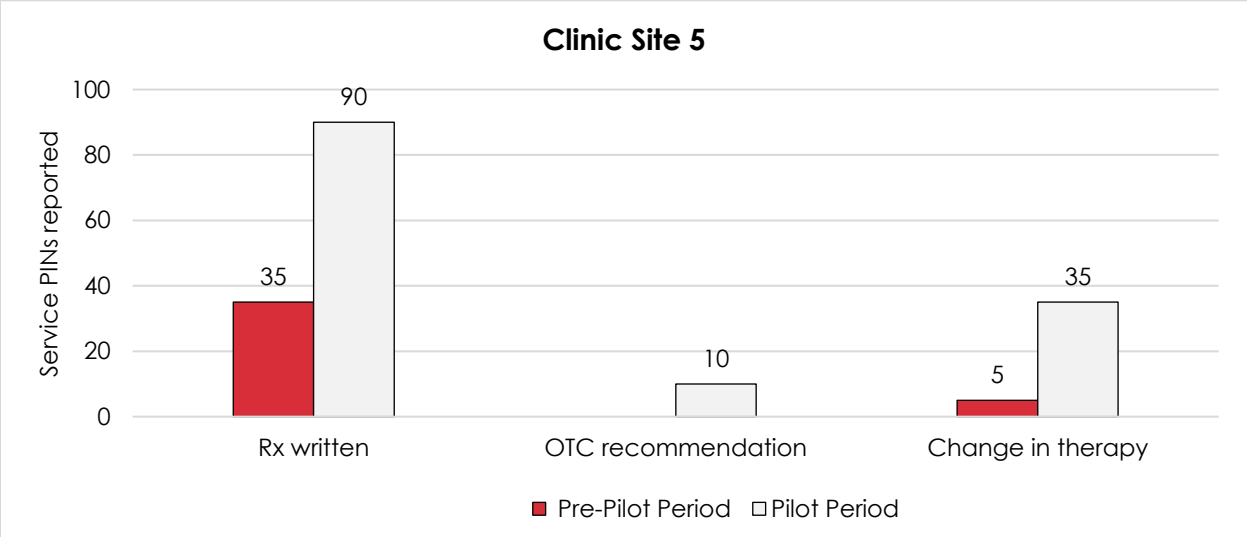


Figure 21f. Clinic Site 6

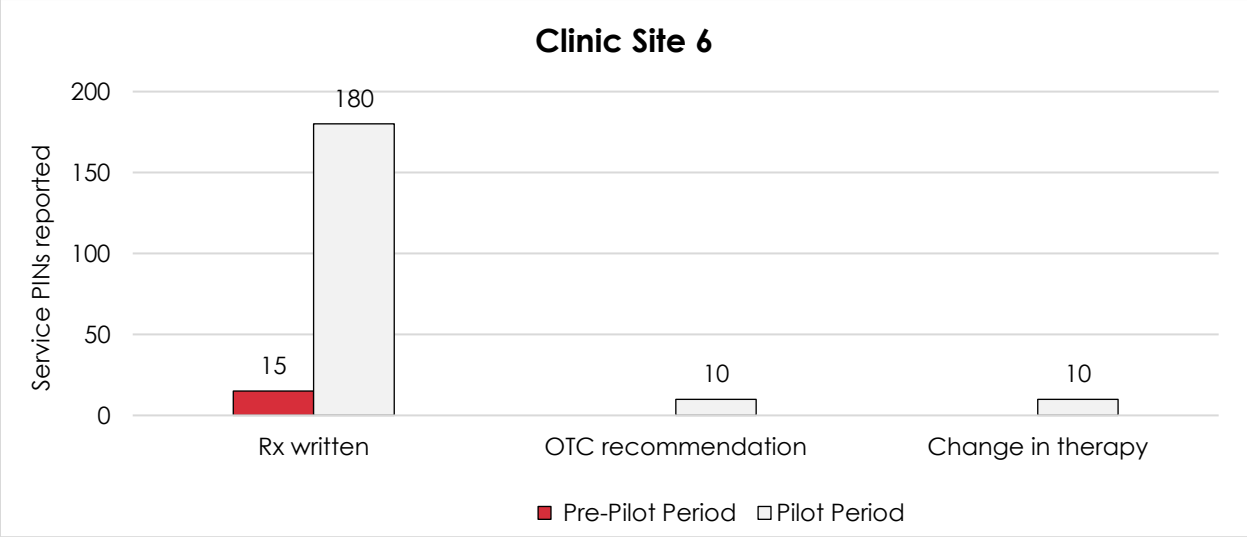


Figure 22. Percentage of eligible appointments resulting in interventions at Clinic Sites 1-6 by intervention category during pre-pilot and pilot periods

Figure 22a. Clinic Site 1

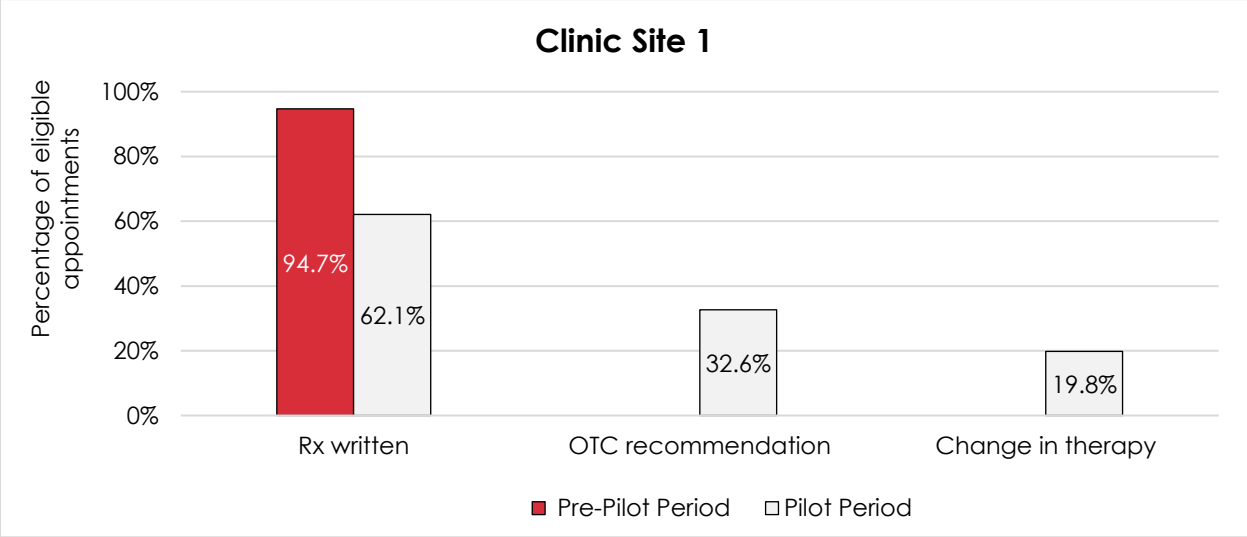


Figure 22b. Clinic Site 2

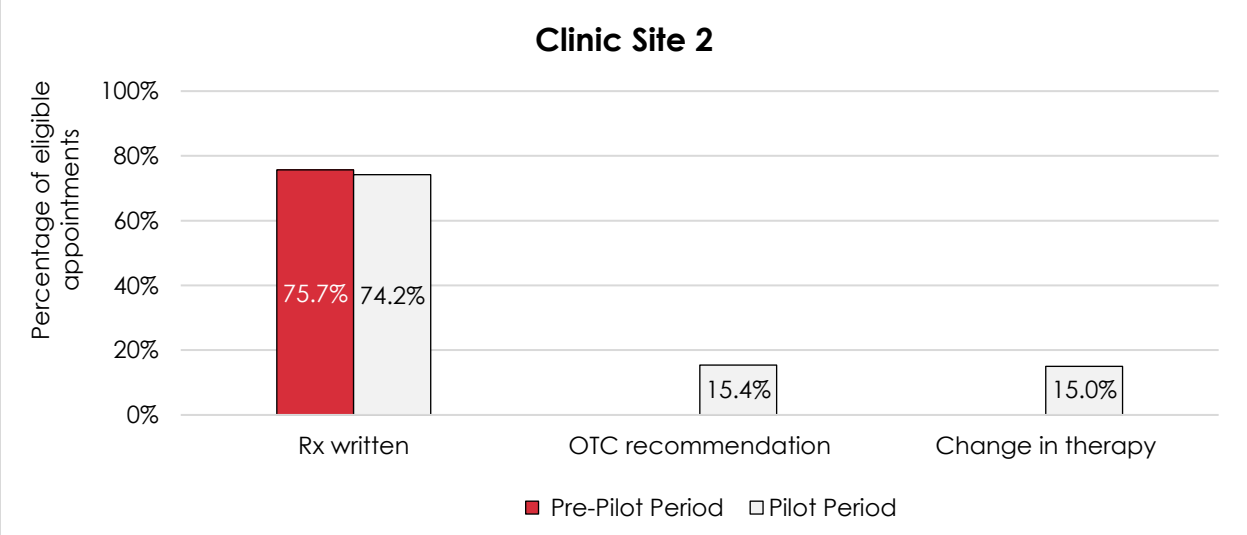


Figure 22c. Clinic Site 3

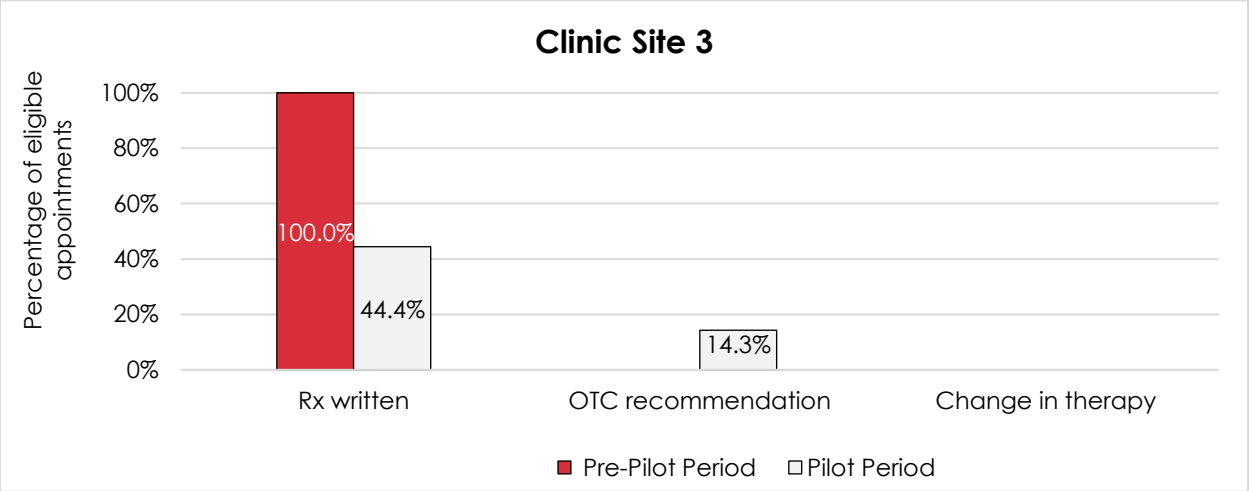


Figure 22d. Clinic Site 4

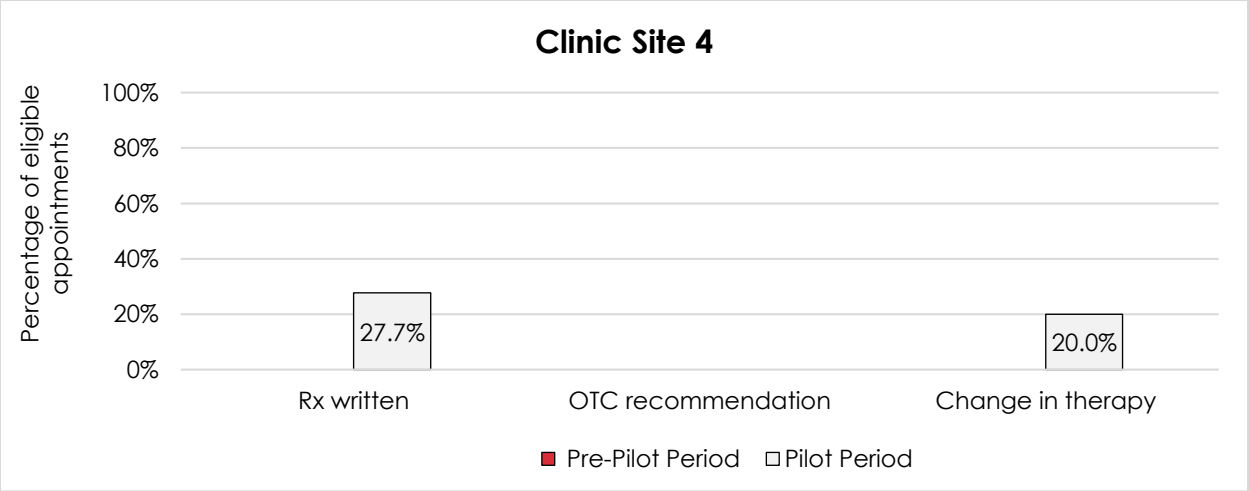


Figure 22e. Clinic Site 5

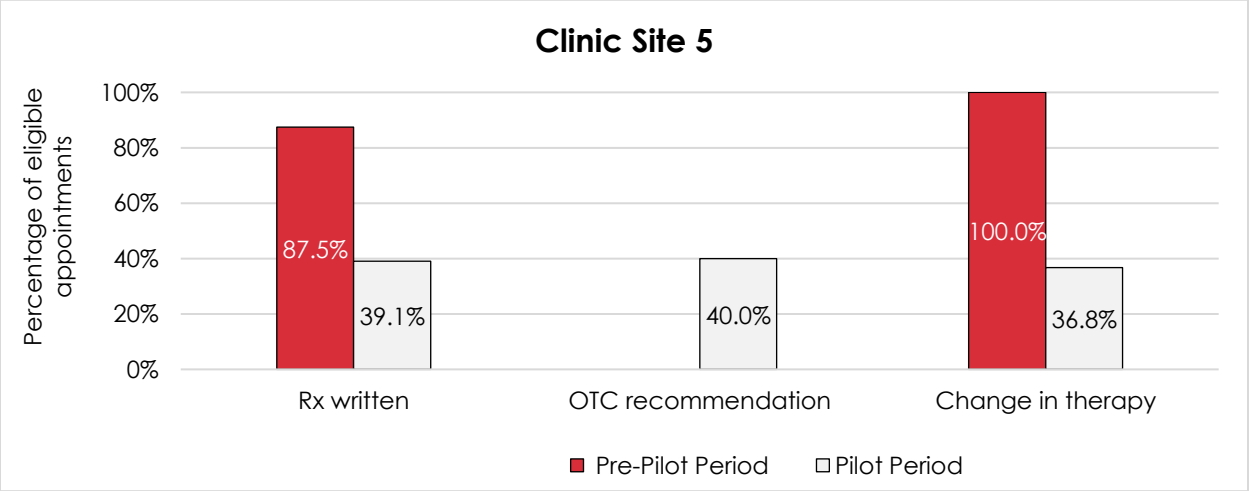
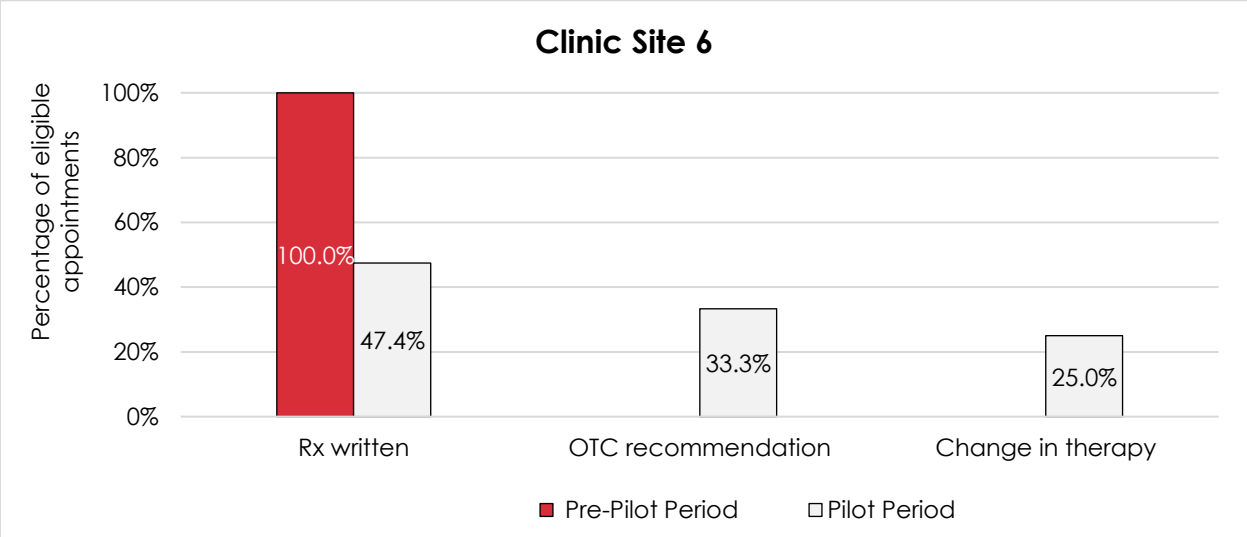


Figure 22f. Clinic Site 6



One-time and repeat clinic users

Across all clinic sites combined, 6115 (78.4%) unique clients served visited a clinic only once for a given category of service during the pilot period, while 1685 (21.6%) visited the same clinic more than once for a given category of service (**Figure 23**).

The proportion of repeat users was similar across most clinic sites, though Sites 3 and 4 had a substantially lower proportion of repeat users (4.8% and 3.2%, respectively). The proportions of repeat users during the pre-pilot period were similar to those observed during the pilot period, with the exception that Site 6 had a substantially lower proportion of repeat users during the pre-pilot period (6.7%) compared to the pilot period (21.2%) (**Figure 24**).

Figure 23. Counts of unique one-time and repeat clinic users in pilot period by clinic site

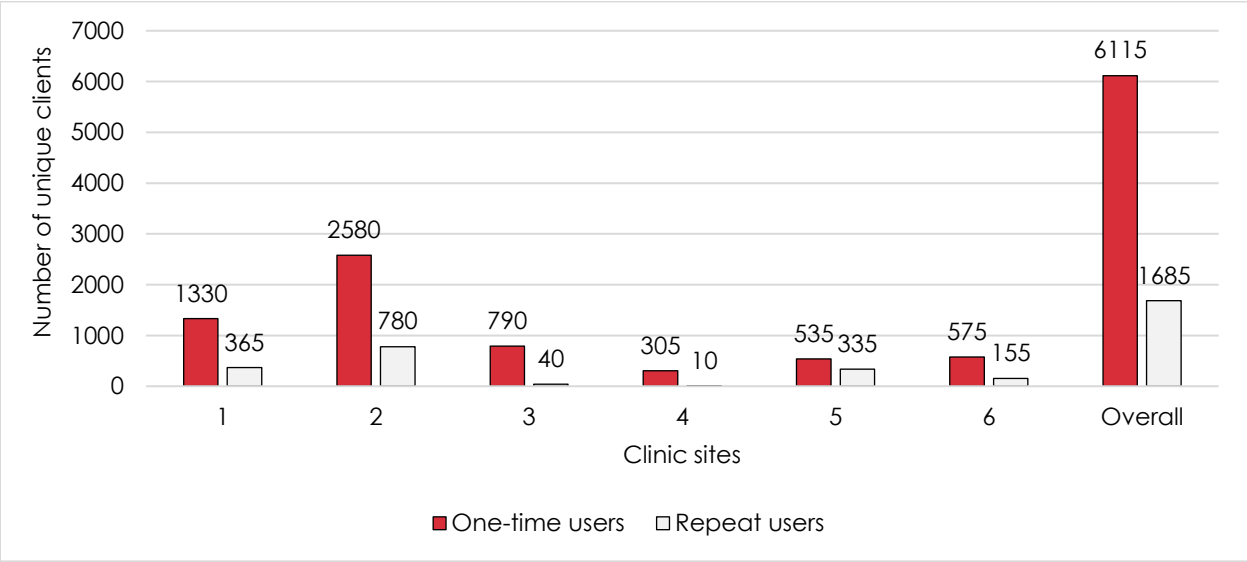
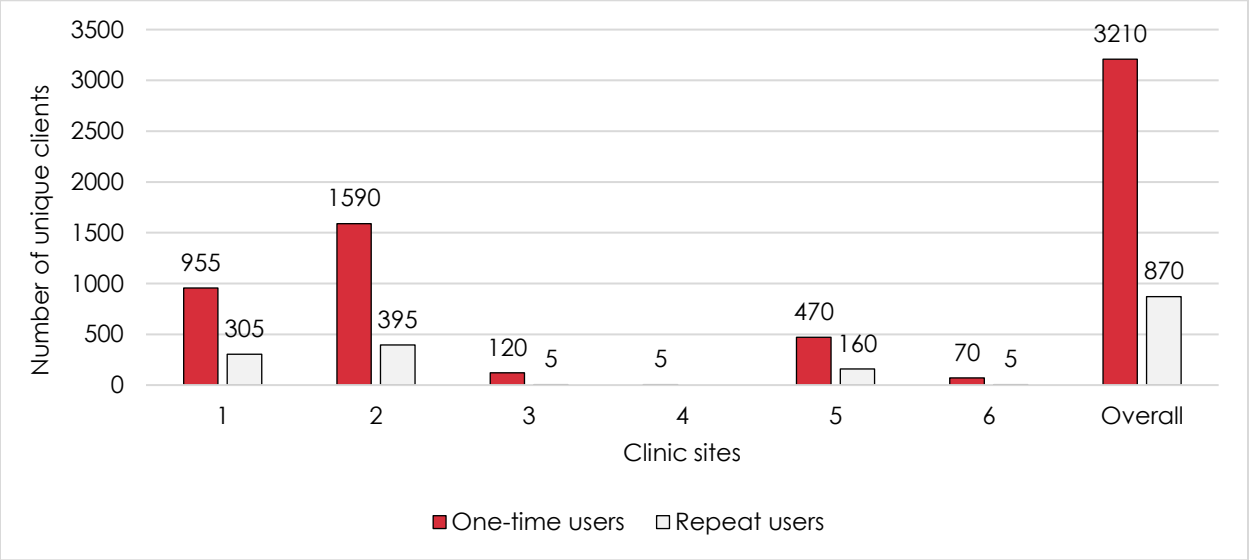


Figure 24. Counts of unique one-time and repeat clinic users in pre-pilot period by clinic site



During the pilot period, the proportion of repeat users across all clinic sites combined was higher among clients unattached to a primary care provider (36.6%) than among those attached (17.8%) (**Figures 25-26**).

Figure 25. Counts of unique one-time and repeat clinic users unattached to primary care provider in pilot period by clinic site

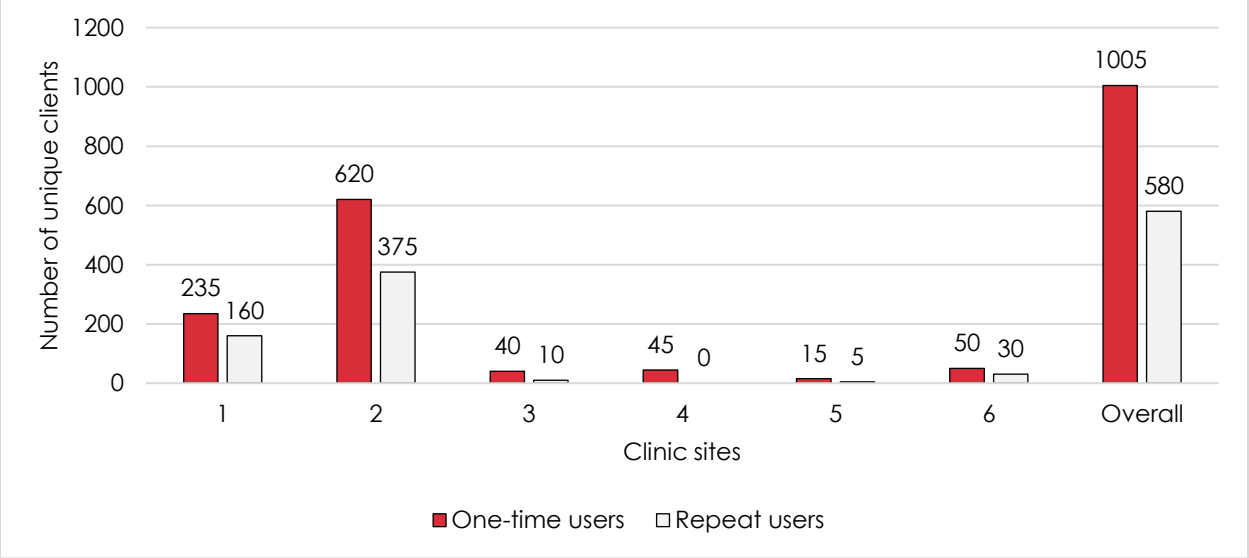
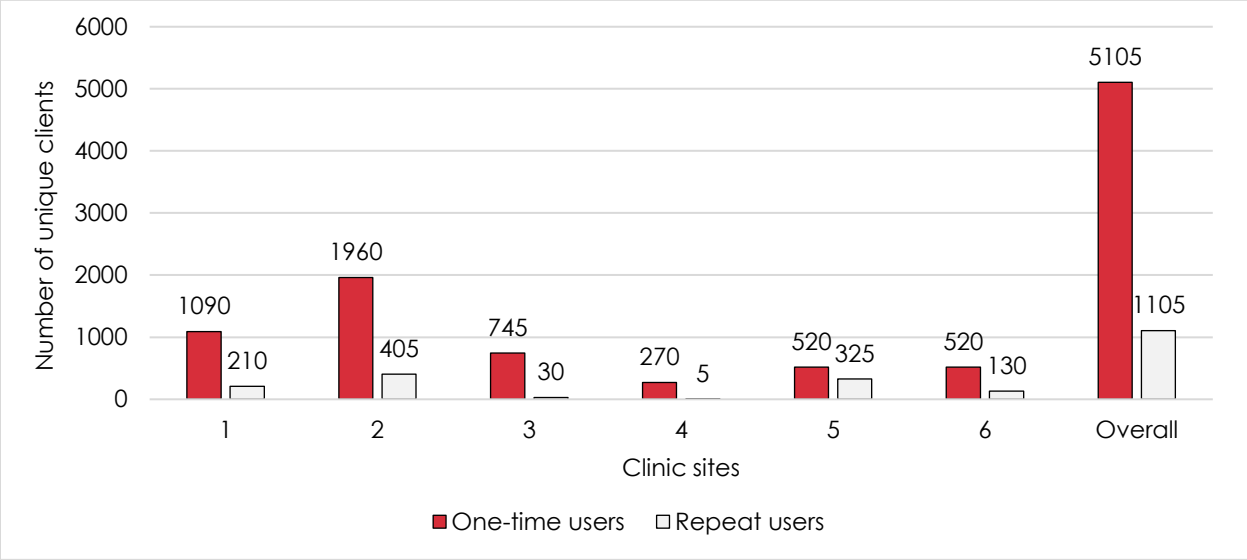


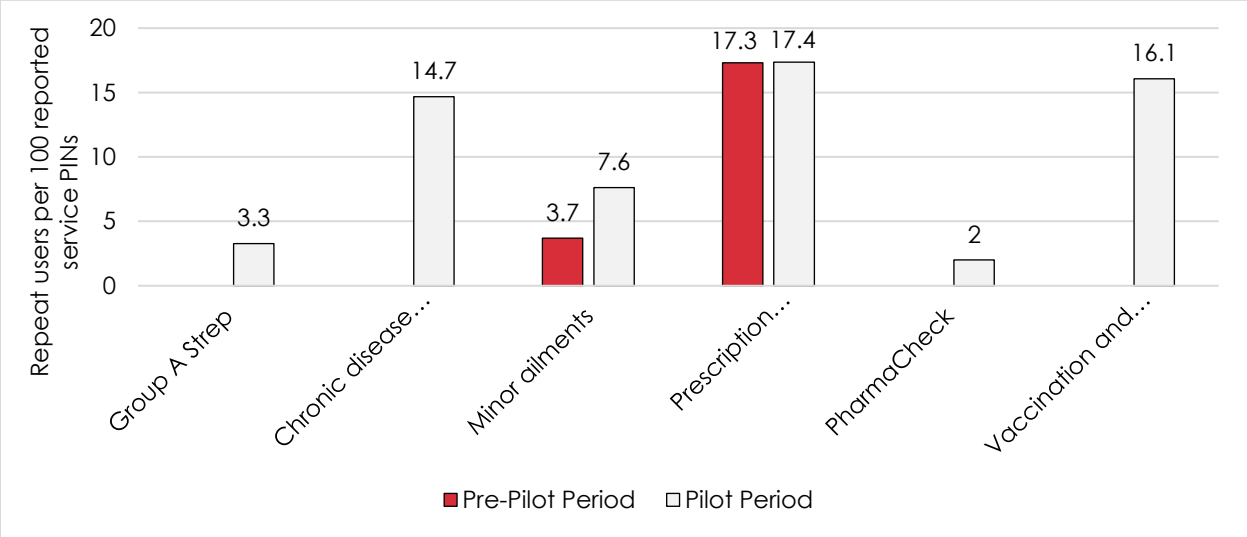
Figure 26. Counts of unique one-time and repeat clinic users attached to primary care provider in pilot period by clinic site



Repeat users were also examined by service category, standardized to the number of reported service PINs in each category. During the pilot period, considering all clinic sites combined, the highest frequency of repeat users was associated with prescription adaptation and renewal/other services (17.4 repeat users per 100 reported service PINs), followed by services for vaccination and injection (16.1), chronic disease management (14.7), minor ailments (7.6), Group A Strep (3.3) and PharmaCheck (2.0) (**Figure 27**).

During the pre-pilot period across all clinic sites (noting that only prescription adaptation and renewal/other, select minor ailments and PharmaCheck services were recorded via PIN during the pre-pilot period), the highest frequency of repeat users was associated with prescription adaptation and renewal/other services (17.3), followed by services for minor ailments (3.7). There were no repeat users for the PharmaCheck service in the pre-pilot period (**Figure 27**).

Figure 27. Counts of unique repeat clinic users per 100 reported service PINs in pre-pilot and pilot periods, by service category



Initial and follow-up appointments for chronic disease management

During the pilot period across all clinic sites, a total of 1515 appointments for chronic disease management (of asthma, CVD, COPD or diabetes) occurred, of which 1170 (77.2%) were initial visits and 345 (22.8%) were follow-up visits (**Figure 28**). The proportion of follow-up visits varied by clinic site, from 19.3% at Site 1 to 47.4% at Site 5 (**Figure 29a-f**). The proportion of follow-up visits also varied by the chronic disease that constituted the reason for visit, from 13.6% for asthma to 23.0% for CVD (**Figure 28**). **Figure 29a-f** show initial and follow-up appointments by chronic disease separately for each clinic site.

Figure 28. Counts of initial and follow-up appointments across all clinic sites during pilot period by chronic disease reason for visit

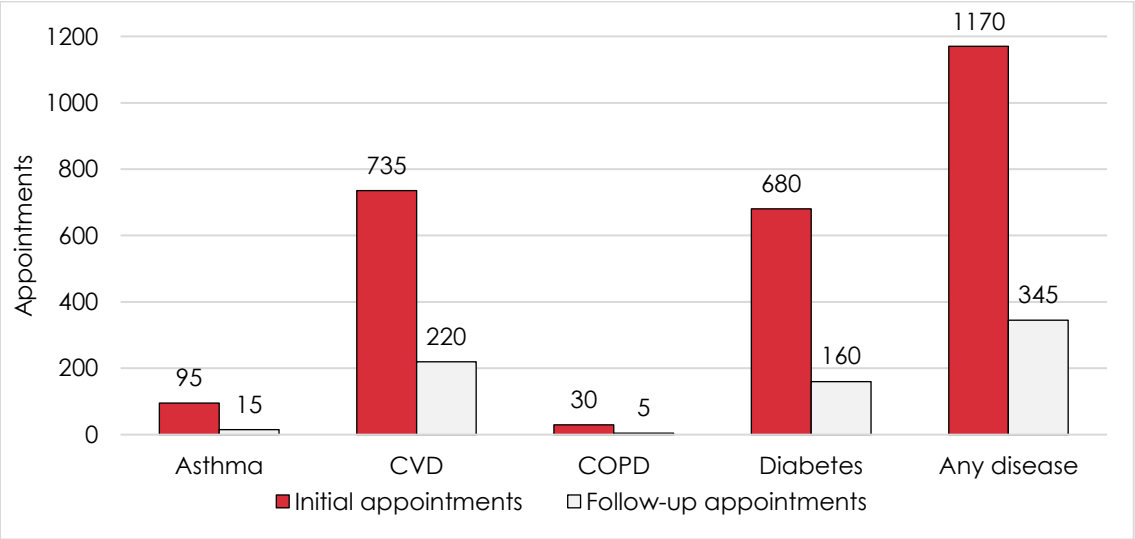


Figure 29. Counts of initial and follow-up appointments at Clinic Sites 1-6 during pilot period by chronic disease reason for visit

Figure 29a. Clinic Site 1

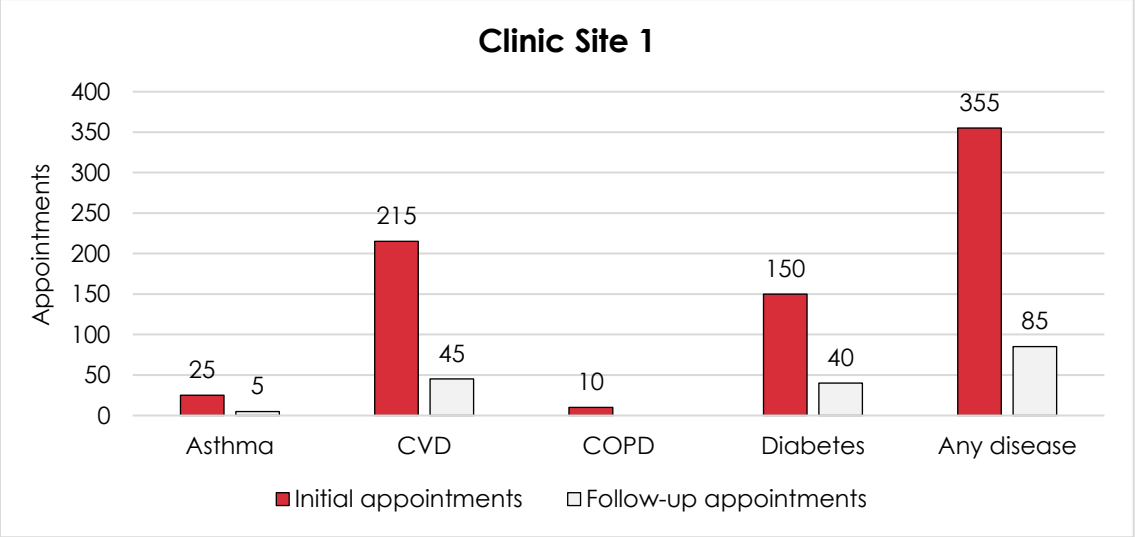


Figure 29b. Clinic Site 2

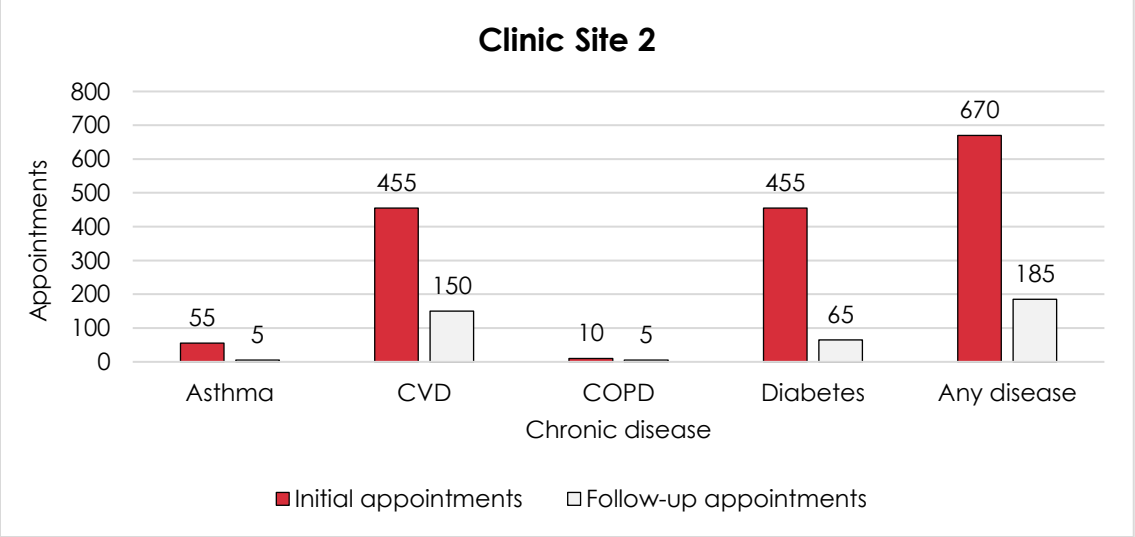


Figure 29c. Clinic Site 3

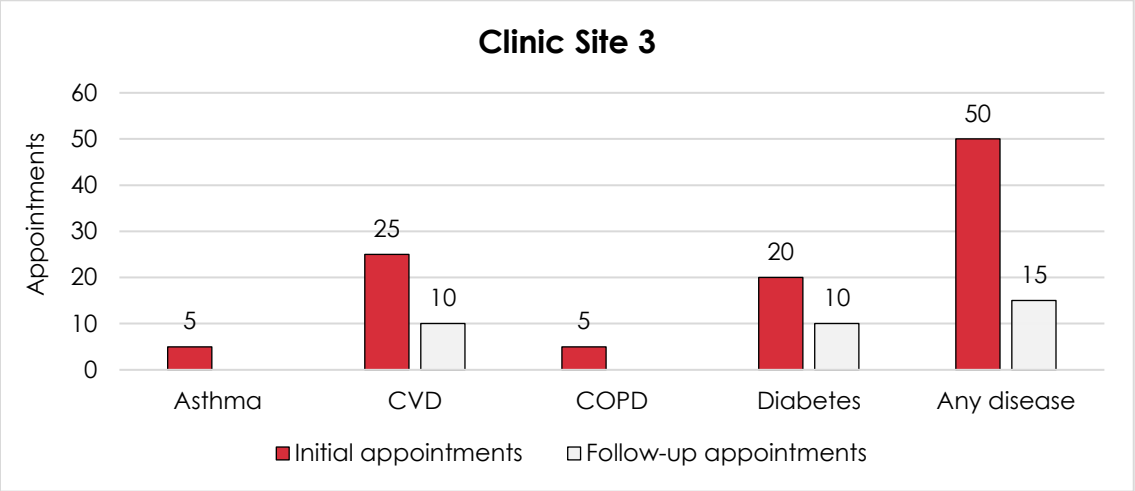


Figure 29d. Clinic Site 4

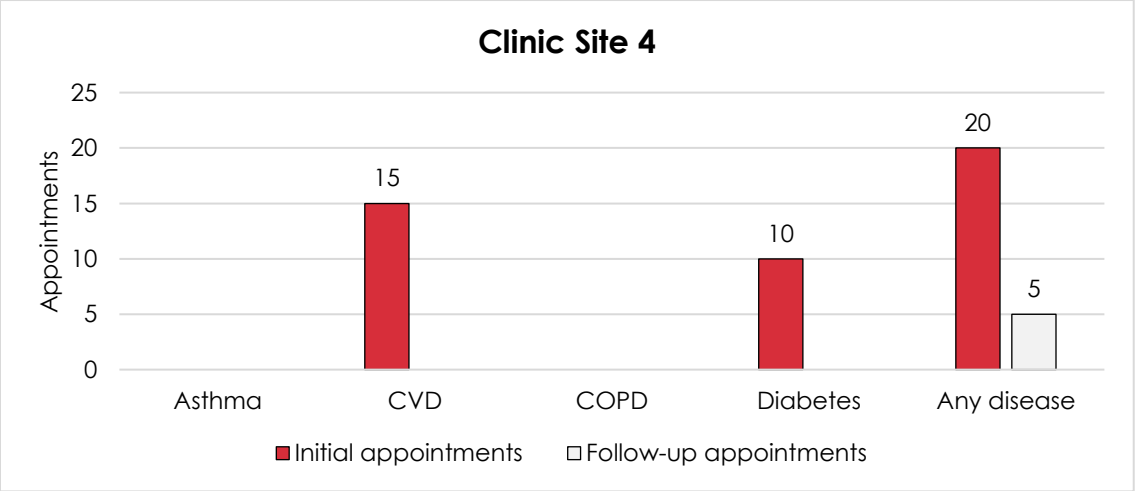


Figure 29e. Clinic Site 5

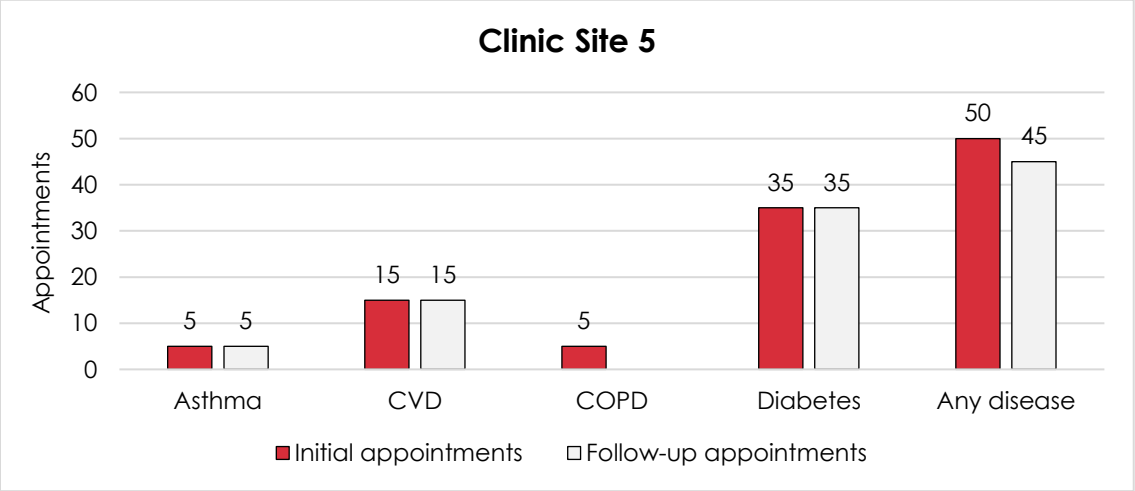
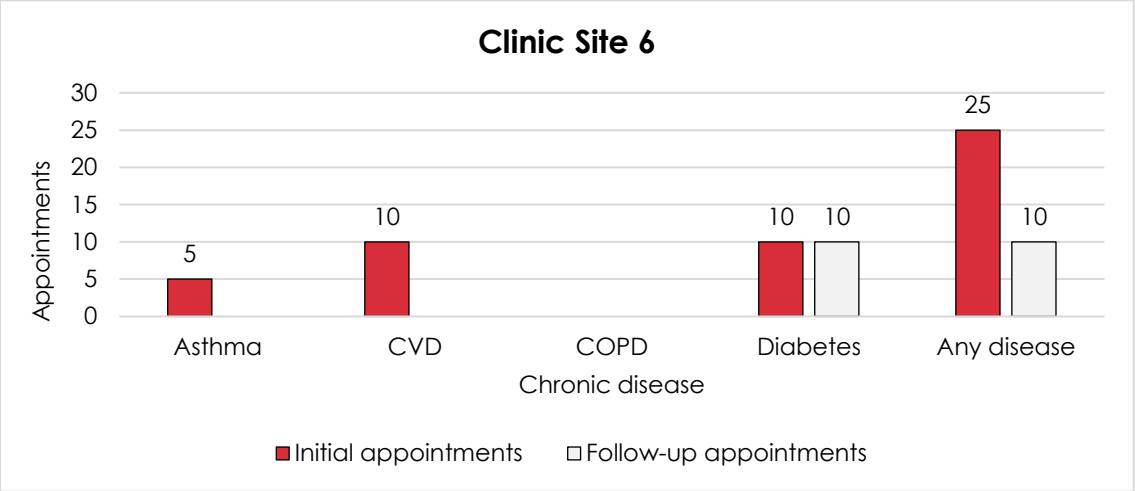


Figure 29f. Clinic Site 6



Referrals to other healthcare providers

During the pilot period across all clinic sites, 915 appointments resulted in a referral to another healthcare provider (referral rate of 8.9 referrals per 100 appointments) (**Figure 30-31**). Among these, 400 referrals (43.7% of referrals; referral rate of 3.9) were for the purpose of laboratory tests, and 515 (56.3%; referral rate of 5.0) were for reasons other than lab tests. The referral rate (combining lab and non-lab referrals) varied by clinic site, from 2.1 at Site 6 to 13.9 at Site 4 (**Figure 31**). The proportion of total referrals for the purpose of lab tests also varied by clinic site, from 0% at Site 3 to 69.1% at Site 1.

Figure 30. Counts of referrals overall and by clinic site during pilot period by reason for referral

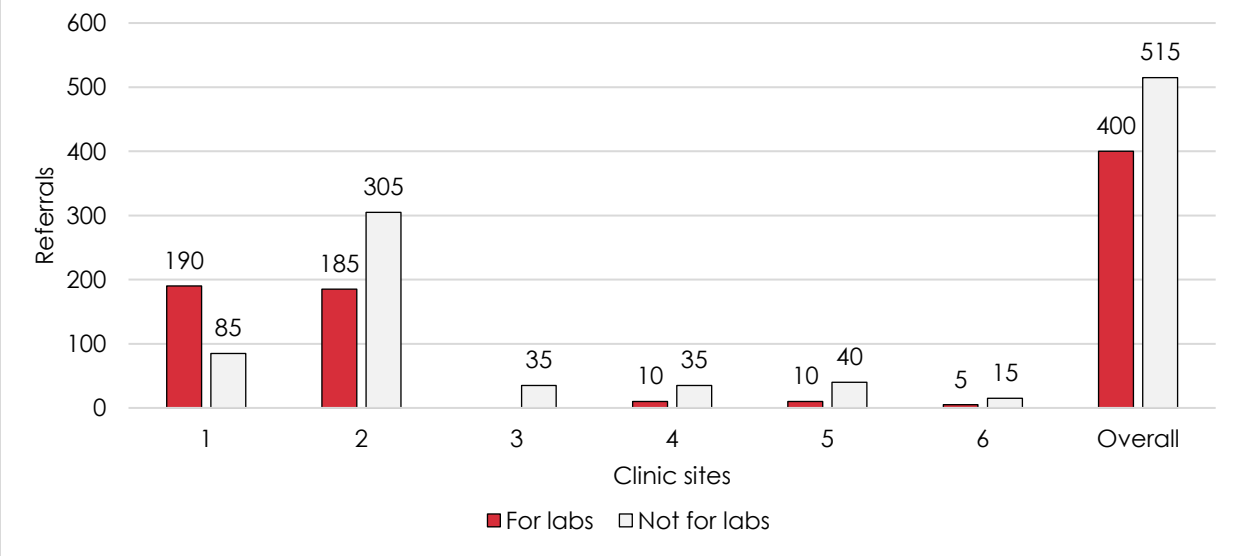
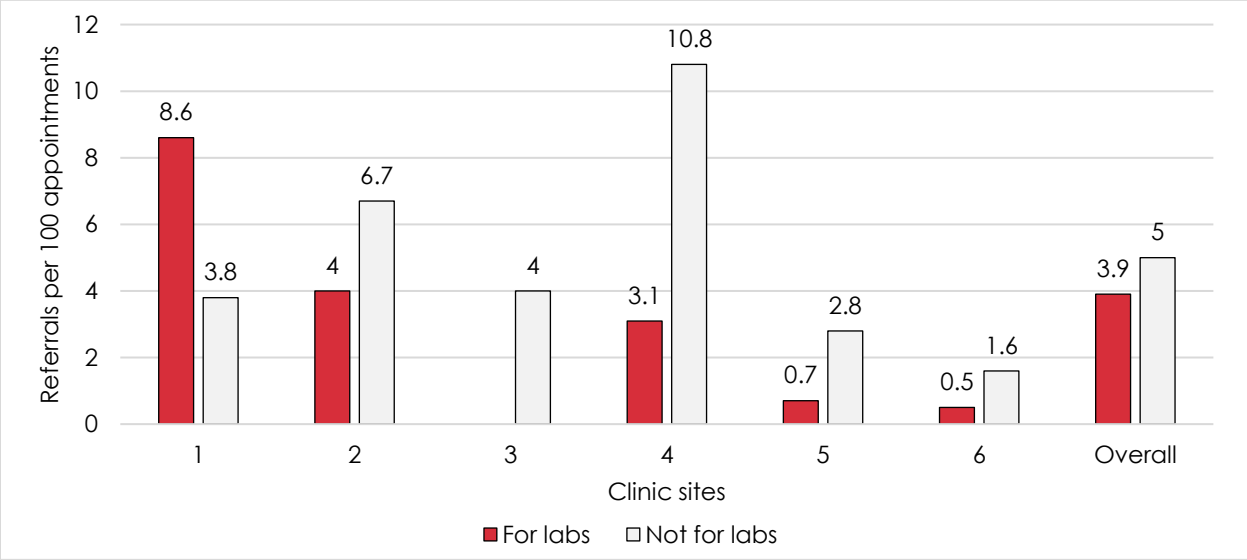


Figure 31. Referral rate (per 100 appointments) overall and by clinic site during pilot period by reason for referral



Across all clinic sites, referrals were most frequently associated with services for minor ailments (17.7 referrals per 100 reported service PINs), followed by chronic disease (all combined) (14.1), Group A Strep (6.3) and injection (1.3) (**Figure 32**). The proportion of total referrals for the purpose of lab tests was highest among referrals for injection (75.0%), followed by referrals for chronic disease (67.1%), minor ailments (35.4%) and Group A Strep (0%). **Figure 33a-f** show referral rates by reason for visit separately for each clinic site.

Figure 32. Referral rate (per 100 appointments) across all clinic sites during pilot period by reason for visit, stratified by reason for referral

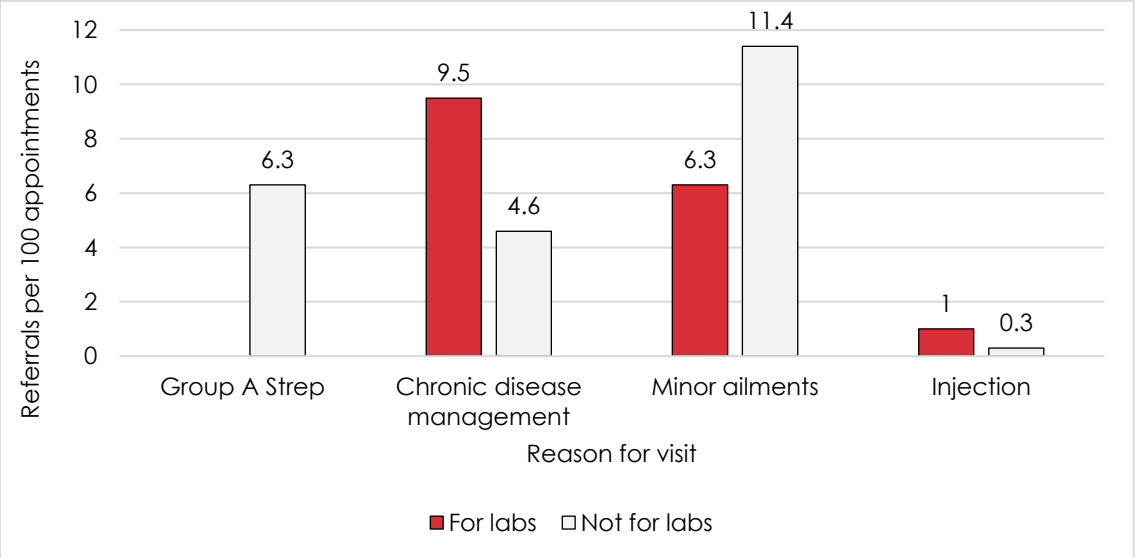


Figure 33. Referral rate (per 100 appointments) at Clinic Sites 1-6 during pilot period by reason for visit, stratified by reason for referral

Figure 33a. Clinic Site 1

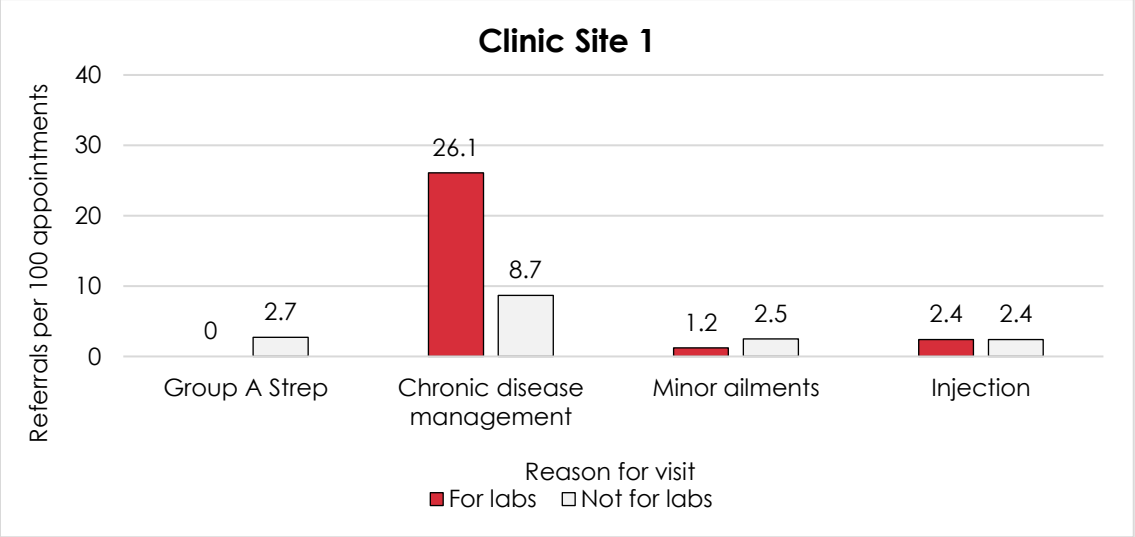


Figure 33b. Clinic Site 2

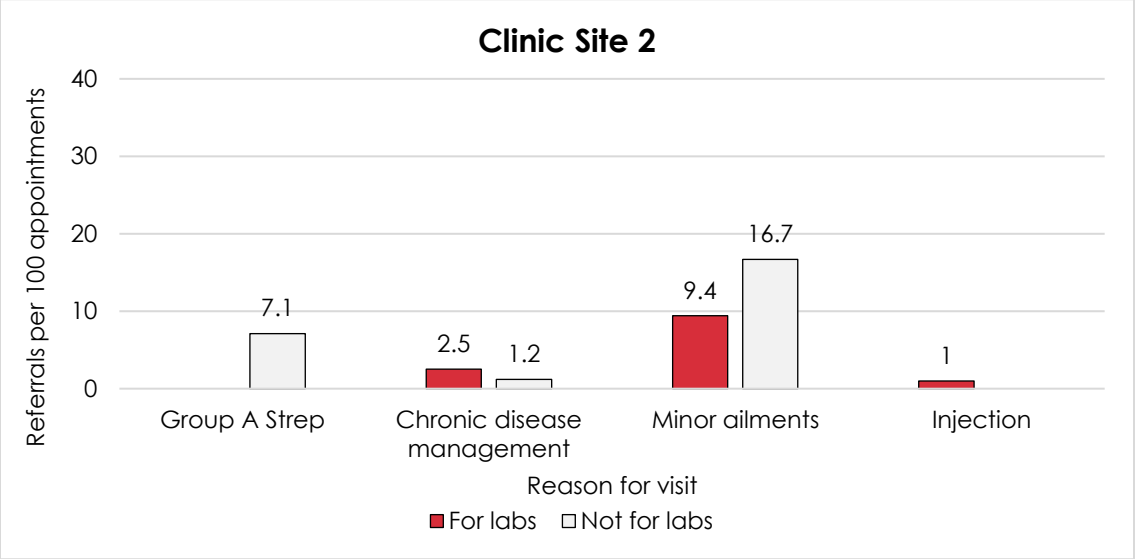


Figure 33c. Clinic Site 3

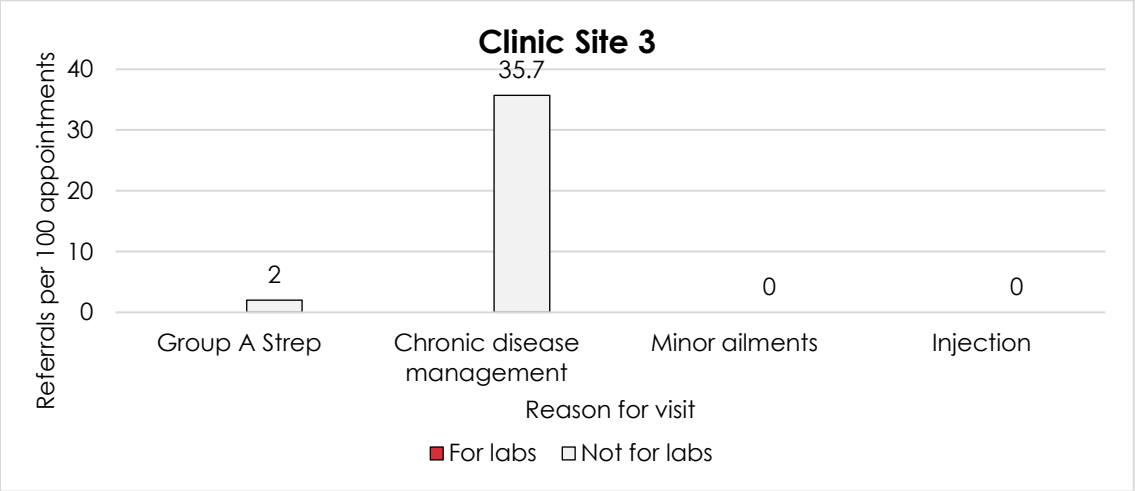


Figure 33d. Clinic Site 4

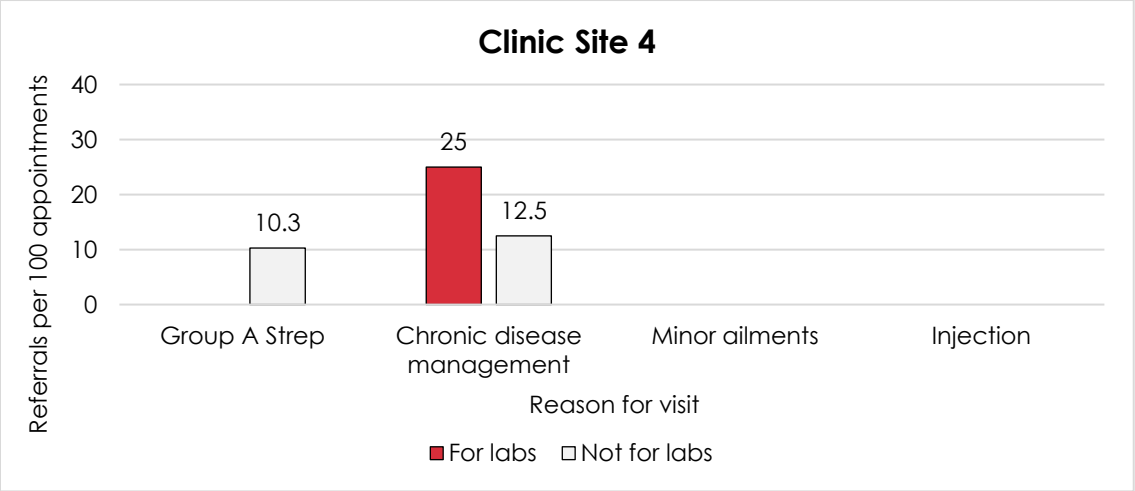


Figure 33e. Clinic Site 5

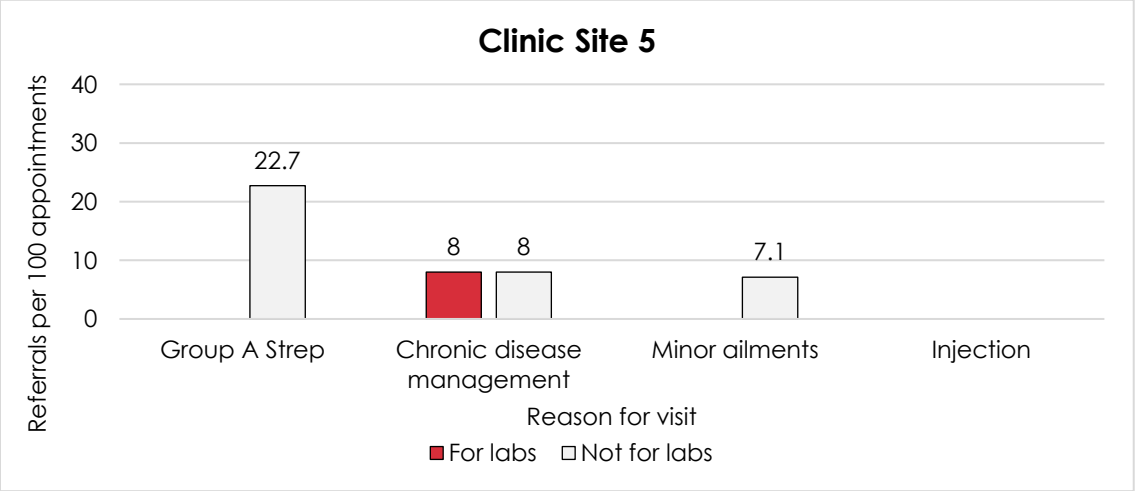
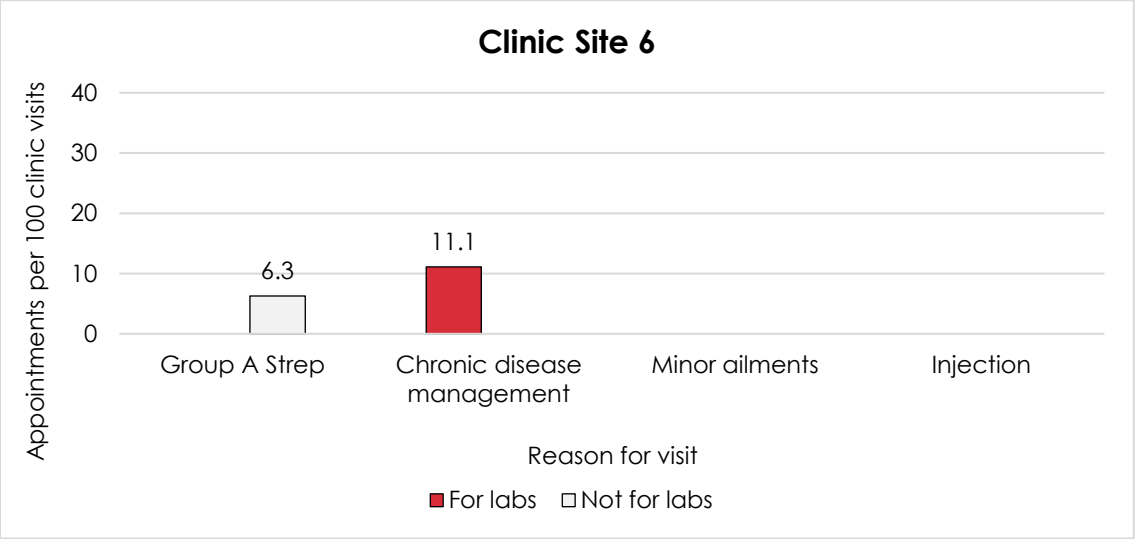


Figure 33f. Clinic Site 6



Client survey

Description of survey population

Overall

Characteristics

Among the 409 clients who completed the survey, 78% were aged between 19 and 64 (Mean = 44.9 years, SD = 17.3 years). Most participants (76%) responded to the survey by referring to their own experience at the clinic, and 88% completed the questionnaire in English. Participants identified themselves as either women (68%) or men (31%), with a few identifying outside the binary gender or preferring not to answer (**Table 6**).

Clinic sites, health conditions and attachment to a primary care provider

The highest proportion of survey respondents received pilot services from Site 1 (30%), followed by Site 2 (19%) and Site 6 (18%). Most participants (71%) were treated for Group A Strep, about 20% received treatment for a chronic disease and less than 10% visited the clinic for other conditions not included in the pilot program (e.g., minor ailment, vaccination). Over two-thirds (66%) of participants had a primary care provider (i.e., family doctor or nurse practitioner) at the time of survey completion (**Table 6**).

Table 6. Description of the survey population (n = 409)

	n	(%)
Age range		
Under 19	23	(5.7)
19-64	318	(78.3)
65 and above	65	(16.0)
Missing	3	
Who is completing the survey?		
You (the client)	311	(76.0)
Family Member	72	(17.6)
Guardian	26	(6.4)
Gender		
Man	123	(30.5)
Woman	275	(68.3)
Non-binary/Other/Prefer not to answer[1]	5	(1.2)
Missing	6	
Survey language		
French	49	(12.0)
English	360	(88.0)
Number of participants who visited each Clinic		
Site 1	121	(29.6)
Site 2	79	(19.3)
Site 3	46	(11.2)
Site 4	45	(11.0)
Site 5	45	(11.0)
Site 6	73	(17.9)
Condition		
Group A Strep	288	(70.8)
Chronic disease		
Diabetes	37	(9.1)
Cardiovascular Disease (CVD)	35	(8.6)
Respiratory (Asthma and COPD)	9	(2.2)
Other	38	(9.3)
Missing	2	
Do you currently have a family doctor or nurse practitioner?		
Yes	268	(65.7)
No	140	(34.3)
Missing	1	

1. The options "Non-binary," "Other" and "Prefer not to answer" were combined to prevent low cell counts.

Differences observed by clinic site and condition

The characteristics of participants were generally consistent across clinic sites and conditions, with some differences observed, as highlighted below. The stratified results by clinic site and condition are presented in **Appendix B**, **Table 1a** and **Table 1b**, respectively.

Gender
Women were the predominant gender among participants when stratified by both clinic site and condition, except for respiratory conditions (i.e., asthma, COPD), where men formed a slight majority (56%) (data not shown).

Age
Participants with diabetes and CVD were generally older, with a mean age of 60.6 and 66.4 years, respectively (**Table 1b, Appendix B**). They also had a higher percentage of participants aged 65 and above (38% and 63%, respectively) (data not shown). In contrast, Group A Strep participants had an average age of 40.0 (**Table 1b, Appendix B**), with 87% between 19 and 64 years (data not shown). Almost all participants completed the questionnaire in English across clinic sites (91-100%), except in Site 5, where 80% completed it in French (**Table 1a, Appendix B**).

Condition
Group A Strep was the main reason to visit all clinic sites, ranging from 42% to 96% in each site, while respiratory conditions were the least-used service across all sites (0-7%) (data not shown).

Attachment to primary care provider
A high proportion of participants had a family doctor or a nurse practitioner (73-87%), except for those who visited Site 1 (53%) and Site 2 (44%) (**Table 1a, Appendix B**). The majority of patients (80%) who visited the clinics for Group A Strep or another condition (e.g., vaccination or minor ailments) had a primary care provider. In contrast, most participants (89%) visiting for a chronic disease *did not* have a primary care provider (**Table 1b, Appendix B).**

Appointment details and clinic use

Overall

New vs. ongoing health concern
Most participants (76%) visited the clinic for a new health concern rather than an ongoing one (**Table 7**).

Regular pharmacy
For over half of participants (62%), the clinic was *not* part of their regular pharmacy (**Table 7**).

Main reason for visit
When asked about the main reason for visiting a Pharmacist Care Clinic instead of another health care provider for their health concern, 42% reported "able to be seen quicker," and 30% reported, "I had no other option for care at this time." About 5% of participants reported having been "referred by another health-care provider" as their main reason for visiting the clinic (**Table**

7). The most reported healthcare providers were either their family doctor or nurse practitioner (35%) or another healthcare professional (30%) (data not shown).

Timeliness of care

Nearly half of participants were able to schedule their appointment on the same day after contacting the clinic, and 38% had their appointments scheduled for 1-2 days later. Only 15 participants waited more than 5 days for their appointment (**Table 7**).

In the open-ended question, many participants provided positive feedback regarding the timeliness of their clinic experience. This includes being able to get a same-day appointment, getting off a waitlist or experiencing overall efficiency with appointments (e.g., being in and out in less than an hour). Some participants explicitly compared and favoured the clinic to other available healthcare options (i.e., hospital ED, walk-in/after-hours clinics), specifically mentioning that getting into the clinic was faster than other options. Some respondents with a primary care provider appreciated that the clinic was available when their primary care provider was unavailable or when waiting times for an appointment were longer in their practice.

Table 7. Appointment details and clinic use (n = 409)

	n	(%)
Was the reason for your visit to the Clinic a new or ongoing health concern?		
New	306	(75.6)
Ongoing	99	(24.4)
Missing	4	
Was the Clinic you visited part of your regular pharmacy?		
Yes	154	(37.7)
No	254	(62.3)
Missing	1	
MAIN reason participant chose to go to the Clinic for their health concern instead of another health-care provider?		
I had no other option for care at this time	121	(29.6)
Already familiar with getting care at the pharmacy	22	(5.4)
More convenient	45	(11.0)
Able to be seen quicker	170	(41.5)
Prefer to be seen by a pharmacist for care	11	(2.7)
Referred by another health-care provider[1]	20	(4.9)
Other	20	(4.9)
How much time [in days] passed between contacting the Clinic for an appointment (either by telephone or online) and your actual appointment?		
Same Day	202	(49.6)
1 to 2 Days	153	(37.6)
3 to 5 Days	37	(9.1)
More Than 5 Days	15	(3.7)
Don't know/*Missing*	2	

1. Participants who chose this option were asked: *If you were referred to the clinic, what other health-care provider referred you?* Due to the small sample size, the data are not shown in the table.

Differences observed by clinic site and condition

Stratified results by clinic site and condition are presented in **Appendix B**, **Table 2a** and **Table 2b** respectively.

New vs. ongoing health concern
When stratified by condition, Group A Strep and another condition (e.g., vaccination or minor ailments) were the only conditions for which most participants (92%) visited the clinic for a new health concern. In contrast, most participants (89%) visiting for chronic disease conditions reported having an ongoing health concern (**Table 2b**, **Appendix B**).

Regular pharmacy
When stratified by clinic site, the clinic served as the regular pharmacy for the majority of participants at Site 2 (59%) and Site 5 (53%), while this was *not* the case for the majority at the other sites (59-100%). The clinic served as a regular pharmacy for most participants (62%) with a chronic disease, while this was true for only 32% of the participants visiting for Group A Strep or another condition **(Table 2b**, **Appendix B)**.

Main reason for visit
The main reason for consulting the clinic instead of another healthcare provider differs by clinic site and condition (data not shown in the stratified tables). Half of the participants from Site 3, Site 5 and Site 6 selected "able to be seen quicker" (50%, 56% and 53%, respectively), while the option "I had no other option for care at this time" was most reported by participants in Site 1, Site 2 and Site 4 (34%, 41% and 31%, respectively). More than half of the Group A Strep participants (53%) indicated "able to be seen quicker," while participants consulting for a chronic disease most often indicated "I had no other option for care at this time" as the main reason: diabetes (49%), CVD (63%) and respiratory condition (44%). Across all conditions and sites, a small percentage (0-10%) of participants reported that being referred by another healthcare provider was their main reason for visiting the clinic.

Timeliness of care
When stratified by clinic site and condition, most participants had their appointment within 2 days after contacting the clinic. Site 3 had the highest proportion of same-day appointments (87%) compared to the other sites (36-67%). This proportion was also higher for participants who visited the clinic for Group A Strep (62%) compared to the other conditions (14-37%) (data not shown).

Navigation in the healthcare system

Overall

Contact with other healthcare providers
Most participants (72%) did *not* contact another healthcare provider for the same health concern in the 14 days prior to their visit to the clinic and only sought care from the pharmacist (**Table 8**). Among those who contacted a healthcare provider, most contacted either their

family doctor (26%), a virtual clinic such as eVisitNB (25%) or a walk-in/after-hours clinic (18%) (**Table 8**).

Likelihood of receiving timely care without the clinic

When asked the likelihood of receiving timely care for their health concern if the clinic had not been available, about 60% of the participants responded either "very unlikely" or "unlikely," while another 30% indicated "uncertain" (**Table 8**).

Alternatives to the clinic

If the clinic was not available for the participants, the options most frequently considered by participants were: 1) trying to make an appointment at a walk-in / after-hours clinic (34%); 2) contacting their family doctor or nurse practitioner (21%) and 3) going to a hospital emergency department (18%) (**Table 8**). Overall, 92% of the participants reported that visiting the clinic had saved them from having to seek care from another healthcare provider (e.g., family doctor or nurse practitioner, a walk-in clinic or a hospital emergency department) (**Table 8**).

Table 8. Patient navigation in the healthcare system (n = 409)

	n	(%)
In the 14 days before your visit to the Clinic, did you contact another health-care provider for the same health concern that is the reason for your visit today?		
Yes	98	(24.0)
No	293	(71.6)
Unsure/not applicable	18	(4.4)
If "YES" [above], who did you contact (select all that apply)? (n=120)		
Your family doctor or nurse practitioner	31	(25.9)
Walk-in/after-hours clinic	22	(18.3)
Hospital Emergency Department	11	(9.2)
Virtual clinic such as eVisitNB	30	(25.0)
NB Health Link	6	(5.0)
Telecare 811	7	(5.8)
Other	13	(10.8)
Missing	2	
If the Clinic had not been available, how likely is it that you would have received timely care for your health concern?		
Very Unlikely	124	(30.3)
Unlikely	123	(30.1)
Uncertain	123	(30.1)
Likely	20	(4.9)
Very Likely	19	(4.6)
Mean (SD)[1]	2.23	(1.08)
What would you have done if the Clinic was not available to you?		
Contacted my family doctor or nurse practitioner	85	(20.9)
Tried to make an appointment at a walk-in/after-hours clinic	137	(33.8)
Visited a Hospital Emergency Department	74	(18.2)

	n	(%)
What would you have done if the Clinic was not available to you? (continued…)		
Tried to make an appointment with eVisitNB	56	(13.8)
Contacted NB Health Link	19	(4.8)
Called Telecare (811)	8	(1.9)
I would not have tried contacting anyone else for help	20	(4.9)
Other	7	(1.7)
Missing	3	
Did visiting the Clinic save you from having to seek care from another health care provider, such as your family doctor or nurse practitioner, a walk-in clinic or a hospital emergency department?		
Yes	377	(92.2)
No	22	(5.4)
Unsure	10	(2.4)

SD: Standard Deviation
1. Likert scale responses were converted into numeric values to compute a score: Very likely=5, Likely=4, Uncertain=3, Unlikely=2, Very unlikely=1.

Differences observed by clinic site and condition

The responses regarding navigation in the healthcare system were generally consistent across sites and conditions. For instance, most of the participants across sites (73-97%) and conditions (78-95%) indicated that the visiting the clinic saved them for having to seek care from another healthcare provider (data not shown). Details on the results stratified by clinic site and condition are provided in **Table 3a** and **Table 3b** in **Appendix B**, respectively.

Perceived clinic effectiveness and impact on health

Overall

Confidence in pharmacist's care and clinic's impact on health
After their visit to the clinic, participants were asked to indicate the extent to which they agreed with five statements documenting their confidence in the pharmacist's care and the clinic's impact on their health and accessibility to healthcare (see **Table 9**).

For this question, a score was calculated using the Likert scale, with a score of 5 indicating strong agreement. About 90% of the participants strongly agreed that they felt confident in the pharmacist's ability to provide the care they received (Mean = 4.89, SD = 0.34). When a medication was prescribed, there was a high level of agreement that the pharmacist helped them understand why they needed it (Mean = 4.74. SD= 0.54).

Almost 90% of the participants strongly agreed or agreed that their knowledge has improved (Mean = 4.5, SD = 0.67) and that they felt more confident about managing their health concern (Mean = 4.57, SD = 0.65). Two-thirds of the participants strongly agreed that they have more confidence in the accessibility of healthcare after receiving care at the clinic (Mean = 4.56, SD = 0.73).

Based on some participants' comments in the client survey, a few perceived the clinic to have a positive impact on their health – such as relieved symptoms and/or feeling better in general – while others speculated that their visit to the clinic potentially mitigated adverse health effects related to their chronic disease.

Table 9. Confidence in pharmacist's care and Clinic's impact on health

Thinking about your appointment at the Clinic, please rate how much you agree with the following statements:	Mean (SD)*
I felt confident in the pharmacist's ability to provide the care I received (n=407).	4.89 (0.34)
My knowledge about my health concern has improved (n=404).[1]	4.51 (0.67)
If medication was prescribed by the pharmacist, they helped me to understand why I need it (n=407).[2]	4.74 (0.54)
I feel more confident about managing my health concern (n=405).[3]	4.57 (0.65)
I have more confidence in the accessibility of health care after receiving care at the Clinic (n=407).[4]	4.56 (0.73)

SD: Standard Deviation
1. Not applicable: n=23
2. Not applicable: n=124
3. Not applicable: n=16
4. Not applicable: n=6
* Likert scale responses were converted into numeric values to compute a score: Strongly agree=5, Agree=4, Neither agree nor disagree=3, Disagree=2, Strongly Disagree=1. The participants who selected the response option "Not applicable" were not included in the mean/SD calculation.

Clinic care effectiveness and referral to another healthcare provider

Participants were asked to reflect on the effectiveness of the care provided to the clinic by the pharmacist and to indicate if they were referred to another healthcare provider during their visit (see **Table 10**).

About 93% said that the pharmacist was able to provide care for their health concern. Among the 30 participants who disagreed, 43% planned to seek help elsewhere. About 88% of participants were *not* referred by the pharmacist to another healthcare provider during the clinic visit. For the participants who were referred, the healthcare providers to which they were most frequently referred were: 1) a family doctor / nurse practitioner or a walk-in / after-hours clinic (25% each); 2) NB Health Link (23%) and 3) a virtual clinic such as eVisitNB (14%). For more information, see **Table 10**.

In the open-ended questions, many participants praised the program, with some highlighting the function of the clinic as reducing the burden on the New Brunswick healthcare system. Similarly, many appreciated being able to be tested/treated and having the option to pick up their prescription from the same location.

Table 10. Clinic care effectiveness and referral (n = 409)

	n	(%)
Was the pharmacist able to provide the care for your health concern?		
Yes	378	(92.6)
Partially /No/Unsure	30	(7.4)
Missing	1	
If you DID NOT answer "YES" [above], do you plan to seek care elsewhere? (n = 30)		
Yes/partially	13	(43.3)
No	12	(40.0)
Unsure	5	(16.7)
Did the pharmacist refer you to another health-care provider during your Clinic visit?		
Yes	49	(12.1)
No	357	(87.9)
Missing	3	
If "YES" [above], what other health-care provider were you referred to? (n = 49)		
Your family doctor or nurse practitioner	12	(24.5)
Walk-in / after-hours clinic	12	(24.5)
Virtual clinic such as eVisitNB	7	(14.3)
NB Health Link	11	(22.4)
Other/ Hospital Emergency Department / Telecare 811[1]	7	(14.3)

1. The options "Other", "Hospital Emergency Department" and "Telecare 811" were combined to prevent low cell counts.

Differences observed by clinic site and condition

Participants showed high levels of agreement with statements about their confidence in the pharmacists' care and the clinic's impact on their health and healthcare accessibility, with consistent results across all clinic sites and conditions. More information on the results stratified by clinic site and condition is available in **Table 4a** and **Table 4b** in **Appendix B.**

In terms of the participants' perceptions of the effectiveness of the care provided at the clinic, the results were similar across sites and conditions (see **Table 5a** and **Table 5b**, **Appendix B**). Most participants were *not* referred to another healthcare provider by the pharmacist, but a higher proportion of participants (25%) who consulted for a chronic disease were referred compared to participants treated for Group A Strep or another conditions (9%) (**Table 5b**, **Appendix B**). For more details on the results stratified by clinic site and condition, refer to **Table 5a** and **Table 5b** in **Appendix B.**

Client satisfaction

Overall

Clinic satisfaction

Participants were asked to indicate the extent to which they were satisfied with four statements documenting their visit to the clinic on a Likert scale, where a score of 5 indicates that they were "very satisfied" (see **Table 11**).

Nearly all participants were "satisfied" or "very satisfied" with the following: "ability to make an appointment" (Mean = 4.87, SD = 0.37), "the time between contacting the clinic for an appointment and the actual appointment" (Mean = 4.83, SD = 0.40) and the pharmacist's explanation of your health concern & treatment options" (Mean = 4.86, SD = 0.37). For the item "follow-up plan to monitor the effectiveness of any medication prescribed", the level of satisfaction was high (Mean = 4.73, SD = 0.52); however, it was *not* applicable for 67 participants (16.5%).

Table 11. Clinic satisfaction

Thinking about your appointment at the Clinic, how satisfied were you with the following:	Mean (SD) *
Ability to make an appointment (n=409).	4.87 (0.37)
The time between contacting the Clinic for an appointment and the actual appointment (n=409).	4.83 (0.40)
The pharmacist's explanation of your health concern & treatment options (n=407).	4.86 (0.37)
Follow-up plan to monitor the effectiveness of any medication prescribed (n=406).[1]	4.73 (0.52)

SD: Standard Deviation
1. Not applicable: n=67
* Likert scale responses were converted into numeric values to compute a score: Very satisfied=5, Satisfied=4, Neither satisfied nor dissatisfied=3, Dissatisfied=2, Very dissatisfied=1. The participants who selected the response option "Not applicable" were not included in the mean/SD calculation.

Overall satisfaction, future use and recommendation of the clinic

The participants' overall level of satisfaction with health services received at the clinic was measured using a 10-point Likert scale, with a score of 10 corresponding to the highest level of satisfaction. The level of satisfaction was high, with a mean score of 9.77 (SD = 0.71). Out of the 407 participants who responded, 404 of them (99%) said they would use the Pharmacist Care Clinic again in the future. In addition, all respondents (100%) indicated they would recommend the Pharmacist Care Clinic to their family and friends (data not shown).

In their comments at the end of the client survey, many participants expressed their appreciation for the service being available, included positive feedback or expressed their satisfaction with the care they received and/or the experience in general. Some participants specifically mentioned the pharmacist and/or staff, offering general praise (e.g., the pharmacist was excellent), while others specifically complimented their friendly and professional demeanor and/or their knowledge, explanations and/or helpfulness.

Clinic accessibility and ease of access were commented on by many clients, and even more endorsed the program itself, commenting that the clinics should continue and/or be offered in more pharmacies across the province. Similarly, many responses included support for pharmacists to expand their scope of practice within the clinics to treat more ailments, order bloodwork and/or prescribe.

Differences observed by clinic site and condition

No notable differences were observed between levels of satisfaction obtained from participants' four statements regarding their visit to the clinic. The level of satisfaction was high for each statement across all clinic sites and conditions. For more information on the stratified results by clinic site and condition, refer to **Table 6a** and **Table 6b** in **Appendix B**.

The levels of satisfaction with the health services received at the clinic were similar across sites (mean range: 9.69-9.89) and across conditions (mean range: 9.71-10.00) (data not shown). The proportion of participants that would use the clinic again was similar across sites (98-100%) and across conditions (97-100%). When stratified by clinic site and condition, the proportion of respondents that would recommend the clinic to family and friends remained the same (100%) (data not shown).

Discussion and Conclusions

Clinic operations

Clinic open hours
The number of clinic hours offered and the proportion of store open hours during which clinic services were offered varied widely by clinic site, with some sites offering clinic services during a substantially lower proportion of store open hours than other sites. This may indicate that some sites were required to limit availability of clinic services due to lack of capacity or resources. Exploration of the reasons underlying the limited availability of clinic services at these sites may provide valuable insights into key operational challenges faced by the clinics – a potentially important consideration if clinics are to be expanded on a wider scale.

Pharmacist overtime hours
Of the 2349 hours worked by clinic pharmacists across all sites during the observation period, 63 (2.7%) were overtime hours that occurred outside of clinic open hours. These overtime hours may be a result of after-hours service requests and/or pharmacists needing additional time to finish tasks initiated during regular open hours. Overall, the prevalence of overtime hours was relatively low – a sign that clinic pharmacists were generally efficient in completing clinic tasks within the designated clinic open hours.

Administrative staffing
At three of the clinic sites, clinic administrative staff worked for a small fraction of the clinic open hours, while at the remaining sites administrative staff hours met or even exceeded the number of clinic open hours. The proportion of clinic open hours worked by administrative staff did not appear to correlate directly with the number of open hours offered by the clinic. For example, Site 5 offered the second highest number of clinic hours but had the lowest proportion of open hours worked by administrative staff.

It is not clear why some sites were able to operate with substantially fewer administrative staff hours than others, but this discrepancy warrants further exploration. It is possible that the highly staffed sites may have been able to operate with fewer administrative hours, or that the sites with lower staffing levels may have encountered operational issues that could have benefitted from additional administrative staffing. Examination of administrative staffing and practices at each site, and consideration of how these relate to each site's operational efficiency, may help to optimize administrative staffing levels and identify best practices to be implemented at future clinic sites.

Appointment booking
The overall combined proportion of available appointments booked was 83%, and this proportion varied substantially by site, with some sites booking 100% of their available appointments and others having a substantial number of unbooked appointments. This difference between sites may reflect differences in demand for appointments and/or differences in practice at the sites. For example, promotional practices for clinical services may have differed between sites, and some sites may have intentionally limited bookings during

periods of reduced capacity. Under-booked sites should be examined to identify and address the causes of under-booking in order to achieve and maintain a high proportion of booked appointments. Higher booking percentage is desirable to ensure that resources invested in offered clinic services are used effectively. Setting a benchmark goal for booking percentage and scaling appointment availability accordingly may be advisable.

Missed and cancelled appointments

The overall rate of missed or cancelled appointments was relatively low at 12% across all clinics, but variability between sites was substantial, with nearly 30% of booked appointments missed or cancelled at Site 5. Most (82%) missed/canceled appointments were the result of the patient missing their appointment, with the remaining 18% resulting from the site cancelling the appointment due to capacity issues. Variability in missing/cancellation rates between sites may be explained by differences in patient behaviour and/or site-specific factors such as operational efficiency, capacity and scheduling practices (e.g., the utilization of an effective appointment reminder system). Examination of the reasons underlying this variability is warranted to identify strategies to minimize missed or cancelled appointments.

Attachment of clients to primary care provider

The majority (62%) of clinic clients were attached to a primary care provider, but the proportion of attached clients is lower than the estimated proportion of individuals attached to a primary care provider in the general population (79% according to the 2023 New Brunswick Health Council Primary Care Survey [New Brunswick Health Council, 2024]). This disparity suggests that the clinic is selectively visited by individuals without a primary care provider. The proportion of provider attachment varied by clinic site, which may reflect differences in geographic access to providers – an important consideration when considering locations for future clinics.

After-hours service requests

The volume of after-hours service requests varied by site and did not appear to directly correlate with the number of available clinic hours. One possible explanation is that sites with high after-hours request volumes did not offer clinic hours that aligned with patient needs (for example, if clinics were only offered during hours when most local clients were at work). In general, a high number of after-hours service requests may indicate an issue with accessibility, and exploration of the underlying causes is warranted to understand how clinic hours can be tailored to maximize access to care.

Group A Strep assessment

Raw assessment volumes and assessment rates (clinic open hours per point of care test conducted) for Group A Strep were similar across all clinic sites with the exception of Site 5, for which they were substantially lower. The lower testing frequency at Site 5 may be a function of patient demand and/or site-specific factors (e.g., promotion of services; decisions regarding which services are prioritized; capacity issues, etc.). Exploration of factors underlying Site 5's reduced testing frequency may provide insights into challenges associated with point-of-care testing and may help to identify solutions that could enhance service delivery at present and future clinic sites.

Limitations
A key limitation of the clinic operational data was the truncated observation window. Early problems with establishing data collection procedures across the clinic sites resulted in the observation window being shorter than the intended one-year pilot period. This limited the amount of data that was included in the evaluation and may have affected the observed service distribution since the data collection window (January - May 2024) was co-incident with a period of high Group A Strep activity in the community.

Another important limitation is that the accuracy of the clinic operational data collected was dependent on the diligence, consistency and accuracy of the data collection and reporting practices at the individual sites. Deficiencies in these practices may have skewed certain results, and variability in these practices between sites may have contributed in part to the observed inter-site variability associated with certain clinic parameters. To maximize data fidelity, future evaluations should employ data collection practices that do not rely on self-reporting by clinic staff.

Clinic services

Appointment and unique client volumes
The total number of completed service appointments nearly doubled in the pilot period compared to the pre-pilot period – likely a reflection of the increased variety of services and dedicated clinic time offered during the pilot. The number of unique clients served also increased substantially during the pilot period. The increased service volumes during the pilot period are indicative of the demand for pharmacy clinical services and suggest that clients will take advantage of these services when they are made available.

The number of appointments and unique clients served during the pilot period varied substantially by site – a reflection of inter-site variability in clinic open hours and appointment bookings, as observed in clinic operations data and discussed above.

Appointments by attachment of clients to primary care provider
Examination of reported service PINs showed that 74.8% of appointments were with clients attached to a primary care provider. This is only slightly lower than the 79% attachment rate for the general population reported in the 2023 NBHC Primary Care Survey (New Brunswick Health Council, 2024), suggesting that clinics may be selectively visited by individuals without a primary care provider, but only to a minor degree.

The 74.8% attachment rate evident in the service PINs data is notably higher than the 62% attachment rate observed in the clinic operations data. This disparity is likely the result of differences in the respective sampling periods and methods of data collection. Operations data were reported weekly by clinic staff based on clients seen in the previous week, and covered the period from January to May 2024, while clinic service data drew on reported service PINs captured from August/September 2023 to March 2024. Notably, the method for recording patient attachment via service PINs involved clinic staff entering a PIN indicating ‘unattached

patient' if the client was unattached. If the 'unattached' PIN was not entered, the client was assumed to be attached. This approach risks overestimating the number of attached patients, since clients would be classified as 'attached' by default in cases where clinic staff neglected to inquire about or report provider attachment. Future evaluations should require entry of a PIN for both attached and unattached clients.

Clinic services by service category

The most common services rendered during the pilot were prescription renewal and adaptation. These represented over double the service volume of any other service category, indicating a high demand for these services. Among pilot-exclusive services, chronic disease management services were more common than services for Group A Strep across all sites combined – although, on a per-site basis, chronic disease services outnumbered Group A Strep services at only half of the sites, while the reverse was true at the remaining sites. At Sites 3 and 4, Group A Strep services outnumbered all other service categories by a substantial margin. Further investigation would be required to understand the reasons underlying this observation, but it is likely the result of differences in demand combined with site-specific prioritization of service offerings. PharmaCheck services were the least common, which may reflect prioritization of clinic resources to meet patient demand for other services (i.e., patients are probably less likely to request a PharmaCheck than services such as prescription renewal or Strep assessment).

Service volumes across all service categories were substantially higher during the pilot period compared to the pre-pilot period, which is expected since the pilot introduced new services, dedicated time for clinical services and recording via PIN of services that were previously not recorded.

Clinic services by scope of practice and funding status

When categorized by scope of practice and funding status, funded services were more common than non-funded and pilot-exclusive services at most clinic sites, although pilot-exclusive services were most common at two sites. The elevated prevalence of funded services may reflect prioritization by clinics of offering or advertising services for which they are reimbursed, although it is probably largely driven by prescription renewals – a funded service for which there is high patient demand. Examination of whether service utilization patterns change in response to changes in reimbursement status would be an interesting topic for future research.

Clinic services by attachment to primary care provider

Service distribution varied according to provider attachment. Overall and at most sites, unattached clients were more likely to use chronic disease management services than Strep services, while the reverse was true for attached clients. A similar pattern was noted in the client survey data, discussed below. This observation may reflect an increased level of unmet need for chronic disease management services among unattached patients relative to attached patients. The preferential use of Strep services by attached clients may be explained by the need for timely care when Strep is suspected (i.e., attached clients are seeing their primary care provider for less acute matters such as chronic disease management but are relying on the pharmacy clinics for more acute issues such as Strep). This explanation is supported by the results of the client survey (discussed below) and is consistent with the notion that the pharmacy clinics can improve timely access to care even for patients with a primary care provider. It is not clear

why clinic use for Strep services was relatively uncommon among unattached patients, as these patients would presumably also have a need for timely care for Strep. Possible explanations could include reduced likelihood of unattached (relative to attached) patients seeking care for suspected Strep, or lower risk of Strep infection among unattached patients.

Prescription renewal and adaptation were more common among attached patients, which may reflect that the attached population is more likely to have a prescription to be renewed or adapted due to their relationship with a primary care provider.

Prescriptions and OTC recommendations

A large number of prescriptions were written by pharmacists during the pilot, with prescriptions written in 60% of encounters that had the option to report a written prescription via service PIN. Pharmacist prescribing was far more common at some clinic sites than others, which may reflect differences in patient characteristics (e.g., health needs, patient preferences) and/or differences in practice between pharmacists. Interestingly, although the raw number of prescriptions written increased in the pilot period compared to the pre-pilot period (likely a reflection of increased service availability), the proportion of encounters resulting in a prescription decreased. This may be the result of increased availability, utilization and reporting of services that are less likely to result in a prescription (e.g., services for certain minor ailments).

Changes in therapy and OTC recommendations were less common than pharmacist prescribing, and the frequency of these interventions varied substantially between clinic sites. The fact that pharmacist prescribing was the most common type of intervention among those reported indicates that there is ample patient demand for services that may include pharmacist prescribing, and that patients are taking advantage of these services when they are offered. The willingness of patients to embrace these novel, more advanced clinical services speaks to the potential for expansion of pharmacist scope of practice to meaningfully impact patient care.

One-time and repeat clinic users

While the majority of clinic clients were one-time clinic users, 21.6% were repeat users (i.e., visited the same clinic for service within the same service category more than once). The relatively short duration of the observation window may have limited the opportunity to observe repeat visits, possibly resulting in an underestimation of the true potential frequency of repeat users at the population level. Future work should employ a longer time horizon to more accurately assess the frequency of follow-up care.

The proportion of repeat users varied by clinic site and was especially low at Sites 3 and 4. Possible explanations for this variability include differences in patient characteristics and/or patient demand for services, differences between practitioners regarding approach to follow-up care or differences between clinic sites in terms of accessibility of follow-up appointments. Client survey results (discussed below) show uniformly high satisfaction rates across all sites, suggesting that differences in the proportion of repeat users cannot be attributed to differences in patient satisfaction.

Repeat users were more common among clients unattached to a primary care provider, suggesting that these patients may have had an unmet need for continuity of care that the pharmacy clinics may have helped to address.

When clinic services were examined by service category, repeat users were most commonly associated with prescription renewal/adaptation and vaccination/injection services, which likely reflects the high demand for these types of services. Among pilot-exclusive services, repeat users were more commonly associated with chronic disease management services than with Strep services. This observation is expected given the need for ongoing management of chronic disease.

Initial and follow-up appointments for chronic disease management

Among appointments for chronic disease management, 22.8% were flagged by service PINs as follow-up appointments, which is comparable to the proportion of repeat clinic users discussed above and indicates that several clients were taking advantage of the opportunity for ongoing disease management provided by the clinics. Both initial and follow-up appointments were most commonly associated with cardiovascular disease, suggesting an especially high need for services among this patient population – an important consideration for scope of practice and funding decisions and when planning for future pharmacy clinics. Frequency of follow-up appointments varied substantially by clinic site, mirroring what was observed for frequency of repeat clinic users (discussed above).

Referrals

Clinic pharmacists referred patients to other healthcare providers relatively frequently, with nearly 10% of clinic appointments resulting in referrals. Nearly half of these referrals were for the purpose of laboratory tests (i.e., to have a physician or nurse practitioner order a necessary lab test, since pharmacists are not able to do so within their scope of practice). If pharmacists were permitted to order laboratory tests as part of their scope of practice, the need for referral would likely be reduced (by up to as much as 50%, in theory), allowing for more efficient patient care and saving time for other providers. Referral rates and the proportion of referrals due to laboratory tests varied by clinic site, which could be the result of differences in patient factors and/or differences in practice patterns between pharmacists.

Referrals were most often associated with minor ailments and chronic disease management. The majority of referrals for chronic disease management were for the purpose of laboratory tests, suggesting that referrals of chronic disease management clients would drop substantially if pharmacists were permitted to order lab tests. In this sense, the ability to order lab tests may be a key missing piece that, if granted, would enable pharmacists to provide seamless chronic disease medication management services for at least some of their patients. Most minor ailments referrals were for reasons other than laboratory tests, demonstrating that collaborative care (e.g., referral of complex cases for physician assessment) remains a necessity in some circumstances and was sought accordingly by clinic pharmacists. Referrals of Group A Strep clients were relatively less frequent, and never for the purpose of laboratory tests, indicating that pharmacists more often feel able to manage these clients effectively on their own, without the need for consulting other providers.

Our observations from the clinic service (PINs) data regarding referral, including the overall rate of referral and increased prevalence of referrals among chronic disease management clients, align with the findings from the client survey (discussed below).

Limitations

The validity of clinic service data is dependent on accurate reporting of PINs describing services rendered by the clinic sites. There is a risk that reporting was not consistently accurate or complete, especially when PINs were not required for billing. For example, some PINs were introduced as part of the evaluation for the purpose of tracking and were not otherwise an established part of the pharmacy workflow. It is possible that such PINs were more easily forgotten on occasion for this reason. Future evaluations should implement a means of PIN recording that incorporates automation or forced functions to reduce reliance on manual input by clinic staff.

Client survey

Client survey population vs. clients served

The number of client survey respondents (n=409) represents approximately 5% of the total unique clients served at the clinics (n=7800). However, the participation rate could not be calculated because the total number of individuals invited to participate is unknown. Therefore, only the proportion of respondents and clients served, or services provided by condition (based on the PINs), can be compared.

In general, the number of client survey respondents at each clinic site mirrors the overall number of clients served at each site. For instance, most respondents are from Sites 1 and 2, which aligns with these sites having the highest number of unique clients served.

Most clients who completed the client survey visited the clinic for services associated with Group A Strep, while this condition accounted for about 15% of the total service PINs reported during the pilot program. A possible explanation for this over-representation of Group A Strep participants could be that Group A Strep patients had to wait a certain amount of time in the pharmacy for the test results. This may have led to staff members being more inclined to propose the client survey and patients being more likely to take the time to fill it out.

Fewer than 10% of the survey respondents received clinic services that were not exclusive to the pilot program (i.e., services for minor ailments, prescription renewal and adaptation, PharmaCheck, vaccination and injection), although these services constituted the majority of reported service PINs. These services could be offered at any time in the pharmacy, whereas services exclusive to the pilot program (i.e., services for Group A Strep and chronic disease medication management) were offered only during clinic hours. The under-representation of non-pilot-exclusive services among survey respondents could be explained by the possibility that the client survey was more likely to be offered during clinic hours, when more designated staff were generally on hand to distribute the survey. In addition, it is possible that staff members could have been more inclined to offer the client survey to patients who received pilot-exclusive services.

Increased primary care access

The client survey's quantitative findings show that most participants felt more confident in healthcare accessibility after receiving care at the clinic, demonstrating that the Pharmacist Care Clinic pilot program successfully achieved its goal. The clinics offered timely services, with most participants reporting being seen on the same day or within 1-2 days after contacting the clinic. The findings suggest that the clinic has improved access for both new health concerns, which were mainly reported by participants receiving Group A Strep services and those receiving services not exclusive to the pilot, and for ongoing health concerns, which were reported most frequently by participants consulting for chronic conditions (i.e., CVD, respiratory condition and diabetes).

Participants visiting the clinic for chronic conditions more frequently reported not having a primary care provider, which explained their reliance on the clinic. Conversely, most Group A Strep participants had a primary care provider but frequently chose the clinic for its quicker access. The preference for the clinic's faster access was also highlighted in the qualitative findings, with participants favouring it over other healthcare options, including their primary care providers. This suggests that the clinic has improved access to care for both patients with a primary care provider and without a primary care provider, but for different reasons. It can be stated that having a primary care provider does not necessarily ensure easy and timely access to care.

Most participants indicated that visiting the clinic saved them from seeking care from another healthcare provider, such as their family doctor or nurse practitioner, a walk-in clinic or a hospital emergency department. It is also noteworthy that the majority of participants did not seek care elsewhere for the same issue in the 14 days prior to their clinic visit, and the high levels of satisfaction reported suggest that many participants may not have needed to seek care elsewhere after their visit (though this should be confirmed in future studies). These findings suggest that the pharmacy clinic was the first option for care chosen by most patients, that the pharmacy clinics are not duplicating existing services but rather are serving a need that may have otherwise gone unmet, and that the clinics have the potential to reduce burden on other elements of the healthcare system.

Clinic is effective and clients report high satisfaction with the clinic experience and care received

The survey results suggest that the Pharmacist Care Clinic pilot program was effective. Almost all participants said that the pharmacist was able to provide the care for their health concern and expressed confidence in the pharmacist's ability to provide care. Additionally, only 12% of the survey participants were referred by the pharmacist to another healthcare provider during their clinic visit, suggesting that pharmacists were able to manage the majority of cases among survey respondents without the need for referral. Notably, a higher percentage of participants seeking chronic disease management were referred compared to those who were consulting for Group A Strep services or other services (e.g., vaccination), mirroring the findings based on clinic service record data. Many of the chronic disease-related referrals were likely for the purpose of laboratory tests, as observed in the results of the clinic service record analysis,

The pilot program appeared to have a positive impact on participants' health, increasing their knowledge about their health concern and boosting their confidence in managing it. The results also indicate that clients were highly satisfied with the health services received at the clinic. This includes the accessibility and timeliness of appointments, as well as the pharmacist's explanations regarding their health concerns and treatment options or medications. This satisfaction is also reflected in the high likelihood of participants using the clinic again in the future and recommending it to their friends and family. The qualitative results further suggest the clinic's effectiveness and participants' satisfaction. Participants' comments highlighted the importance of maintaining access to clinics in the province and recognizing the expanded role of pharmacists.

Limitations

It is important to consider some limitations when interpreting the results of the client survey. First, the low sample size impacted the presentation of some stratified analyses. Second, the interpretation of quantitative results is based on general trends rather than statistical outcomes. Consequently, the predictive or inferential power of the quantitative analysis is limited, and results should be cautiously interpreted. For example, it is not possible to understand the reasons behind the observed differences between locations or conditions, or to determine if these differences are statistically significant. Third, the population of survey participants may not accurately represent the overall client population, possibly overrepresenting some conditions and underrepresenting others.

References

Government of New Brunswick. (2023, July 26). *Pilot project to offer management of certain chronic diseases at select pharmacies.* https://www2.gnb.ca/content/gnb/en/news/news_release.2023.07.0374.html

March, M. J., & Norris, D.A. (1988). *Disclosure avoidance techniques in the Canadian Census of Population and Agriculture*. Statistics Canada. Retrieved September 1, 2024, from https://publications.gc.ca/site/eng/9.837445/publication.html

New Brunswick Department of Health. (2021). *Stabilizing health care: An urgent call to action*. Government of New Brunswick. https://www2.gnb.ca/content/dam/gnb/Departments/h-s/pdf/Stabilizing-health-care.pdf

New Brunswick Health Council. (2024). Access to primary care in New Brunswick. https://nbhc.ca/surveys/access-primary-care-new-brunswick

Appendix A – Pilot Program Criteria

Criteria for clinic sites:

1. The clinic must have a designated area in a separate space with ability to ensure privacy such as a consultation room (services are not to be offered as part of the dispensary workflow).

2. The clinic space will be adequately equipped to perform patient assessments, including access to handwashing facilities immediately before and after a patient consultation.

3. The clinic will be staffed with dedicated pharmacists, as well as designated administrative staff to support scheduling, follow-up, data entry and data sharing.

4. Work must be supported by an electronic system where files may be uploaded and available for researchers (monitoring and auditing).

5. Assessment and treatment processes must be evidence based.

6. The clinic space must have computer access to view laboratory results using the EHR (electronic health records).

7. Assessment, treatment, monitoring and follow-up, as well as documentation, must be in accordance with approved scope of practice and code of conduct, including required training/competencies as per the standards set out by the New Brunswick College of Pharmacists.

8. The pharmacy must agree to collaborate with the University of New Brunswick and the New Brunswick Institute for Research, Data and Training (NB-IRDT) and abide by data sharing agreements to ensure the delivery model is studied for feasibility and scalability, patient outcomes and monitoring of patient and pharmacist satisfaction.

9. The pharmacist will notify the patient's physician or nurse practitioner when one exists of the result of the assessment. If one does not exist, the pharmacist will provide the patient with a copy of this notification.

10. The clinic will be self-funded during the pilot phase (12 months).

11. Fees for established publicly funded minor ailments and services may be billed as per usual process.

12. The pharmacy must have a Quality Management Program that captures errors or near misses related to these new services.

Appendix B – Client Survey Tables Stratified by Clinic Site and Condition

Table 1a. Participant demographics by site (n = 409)

	Site					
	1 (n=121)	2 (n=79)	3 (n=46)	4 (n=45)	5 (n=45)	6 (n=73)
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
Age (years)[1]						
Mean (SD)	43.7 (19.5)	49.1 (17.5)	43.5 (13.5)	41.9 (12.3)	45.0 (17.6)	45.3 (17.4)
Missing	3					
Condition						
Chronic disease	28 (23.3)	32 (40.5)	5 (5.5)		16 (13.7)	
Group A Strep/Other	92 (76.7)	47 (59.5)	86 (94.5)		101 (86.3)	
Missing	2					
Who is completing the survey						
You (the client)	85 (70.3)	69 (87.4)	27 (58.7)	75 (83.3)		55 (75.3)
Family Member/Guardian	36 (29.8)	10 (12.6)	19 (41.3)	15 (16.7)		18 (24.7)
Survey language						
French	5 (2.5)		8 (8.8)		36 (80.0)	0
English	195 (97.5)		83 (91.2)		9 (20.0)	73 (100.0)
Do you currently have a family doctor or nurse practitioner?						
Yes	64 (52.9)	34 (43.6)	40 (87.0)	37 (82.2)	33 (73.3)	60 (82.2)
No	57 (47.1)	44 (56.4)	6 (13.0)	8 (17.8)	12 (26.7)	13 (17.8)
Missing	1					

SD: Standard Deviation

1. Age range is not reported due to low cell counts across some sites.

Note: Due to small sample size, data on gender are not shown in the table. Some sites were also combined to prevent low cell counts.

Table 1b. Participant demographics by condition (n = 407)

	Condition				
	Diabetes (n=37)	**CVD (n=35)**	**Respiratory (n=9)**	**Group A Strep (n=288)**	**Other (n=38)**
Age (years)[1]					
Mean (SD)	60.6 (11.6)	66.4 (10.1)	50.7 (20.7)	40.0 (14.4)	44.7 (21.7)
Missing	3				
	Chronic disease (n=81)			**Group A Strep/Other (n=326)**	
	n (%)			**n (%)**	
Who is completing the survey					
You (the client)	75 (92.6)			234 (71.8)	
Family Member/Guardian	6 (7.4)			92 (28.2)	
Survey language					
French	9 (11.1)			40 (12.3)	
English	72 (88.9)			286 (87.7)	
Number of participants who visited each Clinic					
Site 1	28 (34.6)			92 (28.2)	
Site 2	32 (39.4)			47 (14.4)	
Site 3/Site 4	5 (6.2)			86 (26.4)	
Site 5/Site 6	16 (19.8)			101 (31.0)	
Do you currently have a family doctor or nurse practitioner?					
Yes	9 (11.1)			259 (79.7)	
No	72 (88.9)			66 (20.3)	
Missing	1				

CVD: Cardiovascular Disease, SD: Standard Deviation
1. Age range is not reported due to low cell counts across some sites.
Note: Due to small sample size, data on gender is not shown in the table.

Table 2a. Appointment details and clinic use by site (n = 409)

	Site					
	1 (n=121	2 (n=79)	3 (n=46)	4 (n=45)	5 (n=45)	6 (n=73)
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
Was the reason for your visit to the Clinic a new or ongoing health concern?						
New	86 (71.7)	49 (62.8)	40 (88.9)	70 (77.8)		61 (84.7)
Ongoing	34 (28.3)	29 (37.2)	5 (11.1)	20 (22.2)		11 (15.3)
Missing	4					
Was the Clinic you visited part of your regular pharmacy?						
Yes	40 (33.1)	46 (59.0)	19 (41.3)	0	24 (53.3)	25 (34.2)
No	81 (66.9)	32 (41.0)	27 (58.7)	45 (100.0)	21 (46.7)	48 (65.8)
Missing	1					

Note: Due to the small sample size, data on the main reason for participants to choose to go the clinic instead of another healthcare provider and the time between contacting the clinic for an appointment and the actual appointment are not shown in the table. Some sites were also combined to prevent low cell counts.

Table 2b. Appointment details and clinic use by condition (n = 407)

	Condition	
	Chronic disease (n=81)	Group A Strep /Other (n=326)
	n (%)	n (%)
Was the reason for your visit to the Clinic a new or ongoing health concern?[1]		
New	9 (11.3)	296 (91.6)
Ongoing	71 (88.8)	27 (8.4)
Missing	4	
Was the Clinic you visited part of your regular pharmacy?[2]		
Yes	50 (61.7)	103 (31.7)
No	31 (38.3)	222 (68.3)
Missing	1	

Note: Due to the small sample size, data on the main reason for participants to choose to go the clinic instead of another healthcare provided and the time between contacting the clinic for an appointment and the actual appointment are not shown in the table.

Table 3a. Patient navigation in the healthcare system by site (n = 409)

	Site					
	1 (n=121)	**2 (n=79)**	**3 (n=46)**	**4 (n=45)**	**5 (n=45)**	**6 (n=73)**
	n (%)	**n (%)**	**n (%)**	**n (%)**	**n (%)**	**n (%)**
In the 14 days before your visit to the Clinic, did you contact another health-care provider for the same health concern that is the reason for your visit today?						
Yes [1]	34 (28.1)	21 (26.6)	9 (19.6)	11 (24.4)	7 (15.6)	16 (21.9)
No/Unsure/Not applicable[2]	87 (71.9)	58 (73.4)	37 (80.4)	34 (75.6)	38 (84.4)	57 (78.1)
Did visiting the Clinic save you from having to seek care from another health care provider, such as your family doctor or nurse practitioner, a walk-in clinic or a hospital emergency department?						
Yes	114 (94.2)	74 (93.7)	85 (93.4)		104 (88.1)	
No /Unsure[3]	7 (5.8)	5 (6.3)	6 (6.6)		14 (11.9)	
If the Clinic had not been available, how likely is it that you would have received timely care for your health concern?						
Mean (SD)[4]	2.37 (1.14)	2.19 (1.12)	2.37 (1.08)	2.11 (1.13)	2.44 (0.99)	1.92 (0.88)

SD: Standard Deviation

1. Participants who answered "Yes" were asked the following question: *Who did you contact (select all that apply)?* Due to the low sample size, the data are not shown in the table.
1. The options "No," "Unsure" and "Not applicable" were combined to prevent low cell counts.
2. The options "No" and "Unsure" were combined to prevent low cell counts.
3. Likert scale responses were converted into numeric values to compute a score: Very likely=5, Likely=4, Uncertain=3, Unlikely=2, Very unlikely=1.

Note: Due to the small sample size, the data on what participants would have done if the clinic was not available are not shown in the table. Some sites were also combined to prevent low cell counts.

Table 3b. Patient navigation in the healthcare system by condition (n = 407)

	Chronic disease (n=81)			Group A Strep/Other (n=326)	
	n (%)			n (%)	
In the 14 days before your visit to the Clinic, did you contact another health-care provider for the same health concern that is the reason for your visit today?					
Yes [1]	13 (16.0)			85 (26.1)	
No/Unsure/Not applicable[2]	68 (84.0)			241 (73.9)	
Did visiting the Clinic save you from having to seek care from another health care provider, such as your family doctor or nurse practitioner, a walk-in clinic or a hospital emergency department?					
Yes	70 (86.4)			305 (93.6)	
No/Unsure[3]	11 (13.6)			21 (6.4)	
	Diabetes (n=37)	**CVD (n=35)**	**Respiratory (n=9)**	**Group A Strep (n=288)**	**Other (n=38)**
If the Clinic had not been available, how likely is it that you would have received timely care for your health concern?					
Mean (SD)[4]	2.19 (1.00)	2.26 (0.95)	2.33 (1.12)	2.18 (1.08)	2.71 (1.21)

SD: Standard Deviation

1. Participants who answered "Yes" were asked the following question: *Who did you contact (select all that apply)?* Due to the low sample size, the data are not shown in the table.
2. The options "No," "Partially" and "Unsure" were combined to prevent low cell counts.
3. The options "No" and "Unsure" were combined to prevent some cell counts.
4. Likert scale responses were converted into numeric values to compute a score: Very likely=5, Likely=4, Uncertain=3, Unlikely=2, Very unlikely=1.

Note: Due to the small sample size, the data on what participants would have done if the clinic was not available are not shown in the table.

Table 4a. Confidence in pharmacist's care and Clinic's impact on health by site

Statement	Site Mean (SD)*					
	1 (n=121)	2 (n=79)	3 (n=46)	4 (n=45)	5 (n=45)	6 (n=73)
I felt confident in the pharmacist's ability to provide the care I received (n=407).	4.87 (0.37)	4.89 (0.36)	4.85 (0.42)	4.96 (0.21)	4.91 (0.36)	4.90 (0.30)
My knowledge about my health concern has improved (n=381).	4.48 (0.70)	4.42 (0.76)	4.41 (0.73)	4.65 (0.53)	4.62 (0.63)	4.57 (0.58)
If medication was prescribed by the pharmacist, they helped me to understand why I need it (n=283).	4.79 (0.44)	4.66 (0.64)	4.69 (0.47)	4.78 (0.42)	4.85 (0.44)	4.68 (0.76)
I feel more confident about managing my health concern (n=389).	4.58 (0.73)	4.53 (0.70)	4.56 (0.55)	4.58 (0.54)	4.63 (0.66)	4.59 (0.60)
I have more confidence in the accessibility of health care after receiving care at the Clinic (n=401).	4.52 (0.85)	4.54 (0.78)	4.56 (0.62)	4.44 (0.72)	4.69 (0.56)	4.65 (0.56)

SD: Standard Deviation

* Likert scale responses were converted into numeric values to compute a score: Strongly agree=5, Agree=4, Neither agree nor disagree=3, Disagree=2, Strongly Disagree=1. The participants who selected the response option "Not applicable" were not included in the mean/SD calculation.

Table 4b. Confidence in pharmacist's care and Clinic's impact on health by condition

Statement	Condition				
	Diabetes (n=37)	CVD (n=35)	Respiratory (n=9)	Group A Strep (n=288)	Other (n=38)
I felt confident in the pharmacist's ability to provide the care I received (n=405).	4.95 (0.23)	4.80 (0.41)	5.00 (0.00)	4.89 (0.36)	4.92 (0.28)
My knowledge about my health concern has improved (n=380).	4.60 (0.60)	4.21 (0.74)	4.75 (0.71)	4.56 (0.63)	4.17 (0.85)
If medication was prescribed by the pharmacist, they helped me to understand why I need it (n=281).	5.75 (0.44)	4.5 (0.73)	4.88 (0.35)	4.78 (0.51)	4.64 (0.64)
I feel more confident about managing my health concern (n=387).	4.77 (0.49)	4.41 (0.71)	4.78 (0.67)	4.57 (0.66)	4.5 (0.68)
I have more confidence in the accessibility of health care after receiving care at the Clinic (n=399).	4.57 (0.87)	4.29 (0.89)	4.89 (0.33)	4.57 (0.69)	4.59 (0.70)

CVD: Cardiovascular Disease, SD: Standard Deviation

* Likert scale responses were converted into numeric values to compute a score: Strongly agree=5, Agree=4, Neither agree nor disagree=3, Disagree=2, Strongly Disagree=1. The participants who selected the response option "Not applicable" were not included in the mean/SD calculation.

Table 5a. Clinic care effectiveness and referral by site (n = 409)

	Site					
	1 (n=121)	**2 (n=79)**	**3 (n=46)**	**4 (n=45)**	**5 (n=45)**	**6 (n=73)**
	n (%)	**n (%)**	**n (%)**	**n (%)**	**n (%)**	**n (%)**
Was the pharmacist able to provide the care for your health concern?						
Yes [1]	112 (92.6)	72 (91.1)	46 (100.0)	148 (91.4)		
Partially /No/Unsure[2]	9 (7.4)	7 (8.9)	0	14 (8.6)		
Missing	1					
Did the pharmacist refer you to another health-care provider during your Clinic visit?						
Yes [3]	19 (15.7)	10 (12.7)	9 (10.0)	11 (9.5)		
No	102 (84.3)	69 (87.3)	81 (90.0)	105 (90.5)		
Missing	2					

1. Participants who did not answer "Yes" were asked the following question: *Do you plan to seek care elsewhere?* Due to the low sample size, the data are not shown in the table.
2. The options "No," "Partially" and "Unsure" were combined to prevent low cell counts.
3. Participants who answered "Yes" were asked the following question: W*hat other health-care provider were you referred to?* Due to the low sample size, the data are not shown in the table.
Note: Some sites were combined to prevent low cell counts.

Table 5b. Clinic care effectiveness and referral by condition (n = 407)

	Condition	
	Chronic disease (n=81)	Group A Strep/Other (n=326)
	n (%)	n (%)
Was the pharmacist able to provide the care for your health concern?[1]		
Yes[1]	75 (92.6)	301 (92.6)
Partially /No/Unsure	6 (7.4)	24 (7.4)
Missing	1	
Did the pharmacist refer you to another health-care provider during your Clinic visit?		
Yes[2]	20 (25.0)	29 (9.0)
No	60 (75.0)	295 (91.0)
Missing	2	

1. Participants who did not answer "Yes" were asked the following question: *Do you plan to seek care elsewhere?* Due to the low sample size, the data are not shown in the table.
2. Participants who answered "Yes" were asked the following question: W*hat other health-care provider were you referred to?* Due to the low sample size, the data are not shown in the table.

Table 6a. Clinic Satisfaction by site

	Site Mean (SD)*					
Statement	**1 (n=121)**	**2 (n=79)**	**3 (n=46)**	**4 (n=45)**	**5 (n=45)**	**6 (n=73)**
Ability to make an appointment (n=409).	4.87 (0.34)	4.91 (0.29)	4.85 (0.36)	4.80 (0.46)	4.87 (0.50)	4.88 (0.33)
The time between contacting the Clinic for an appointment and the actual appointment (n=409).	4.84 (0.37)	4.85 (0.36)	4.85 (0.36)	4.73 (0.50)	4.82 (0.53)	4.88 (0.33)
The pharmacist's explanation of your health concern & treatment options (n=407).	4.86 (0.37)	4.90 (0.29)	4.71 (0.50)	4.91 (0.29)	4.89 (0.32)	4.82 (0.39)
Follow-up plan to monitor the effectiveness of any medication prescribed (n=340).	4.71 (0.53)	4.83 (0.48)	4.61 (0.59)	4.70 (0.53)	4.73 (0.50)	4.74 (0.48)

SD: Standard Deviation
* Likert scale responses were converted into numeric values to compute a score: Very satisfied=5, Satisfied=4, Neither satisfied nor dissatisfied=3, Dissatisfied=2, Very dissatisfied=1. The participants who selected the response option "Not applicable" were not included in the mean/SD calculation.

Table 6b. Clinic Satisfaction by condition

	Condition Mean (SD)*				
Statement	**Diabetes (n=37)**	**CVD (n=35)**	**Group A Strep (n=288)**	**Respiratory (n=9)**	**Other (n=38)**
Ability to make an appointment (n=407).	4.95 (0.23)	4.91 (0.28)	4.84 (0.40)	5.00 (0.00)	4.92 (0.27)
The time between contacting the Clinic for an appointment and the actual appointment (n=407).	4.81 (0.40)	4.80 (0.41)	4.84 (0.40)	5.00 (0.00)	4.79 (0.41)
The pharmacist's explanation of your health concern & treatment options (n=405).	4.92 (0.28)	4.80 (0.41)	4.85 (0.38)	5.00 (0.00)	4.84 (0.37)
Follow-up plan to monitor the effectiveness of any medication prescribed (n=338).	4.85 (0.36)	4.69 (0.58)	4.70 (0.54)	5.00 (0.00)	4.73 (0.52)

CVD: Cardiovascular Disease, SD: Standard Deviation

* Likert scale responses were converted into numeric values to compute a score: Very satisfied=5, Satisfied=4, Neither satisfied nor dissatisfied=3, Dissatisfied=2, Very dissatisfied=1. The participants who selected the response option "Not applicable" were not included in the mean/SD calculation.