A de novo Pharmacist-family Physician Collaboration Model in a Family Medicine Clinic

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INTRODUCTION

- The World Health Organization (WHO) defines collaborative practice in health-care as "multiple health workers from different professional backgrounds provide comprehensive services by working with patients, their families, carer and communities to deliver the highest quality of care across settings(1)
- This practice has proven to be an effective and efficient way in the management of chronic diseases.(2)
- Evidence has shown that pharmacist-led services such as health screenings, smoking cessation, vaccine administration and comprehensive medication review can improve patient outcome and reduce medical costs.(3-6)
- Pharmacists in Canada have the training and competency to provide direct patient care through collaboration with physicians. Pharmacists across Canada are expanding their roles to optimize patient care.(7)
- This study describes a de novo collaborative practice between a pharmacist and a family physician in a family medicine clinic.

DESIGN

Objectives:

1) The primary objective of the study is to describe the collaboration model between a pharmacist and family physician in a family medicine clinic.
2) The secondary objectives are to describe the workload for the pharmacist.

Inclusion criteria

1. Any patient with at least one encounter with the pharmacist was included in the study.
2. An encounter is defined as a clinic visit, or a prescription written.
3. Clinic visits are divided into independent or shared visit.
4. An independent visit is defined as the pharmacist saw the patient without the consultation with the family physician, and shared visit is defined as a visit where the pharmacist saw the patient together or in consultation with the family physician.

METHODS

- A prospective chart review.
- The pharmacist examined the records of the listed patients for documentation of encounters with the pharmacist between April 2014 and March 2020, using Connectcare®, eClinician® and Netcare®/PIN
- Each progress note from every patient was reviewed.
- If the progress note included, "patient seen with Dr. X" and or there is an addendum from the family physician, it is considered a shared visit. Otherwise, the visits are considered independent visits.
- The number of prescriptions were extracted from the Pharmaceutical Information Network (PIN), which is a comprehensive provincial database that contains all prescriptions actually dispensed for a patient in Alberta.

RESULTS

- The Kaye Edmonton Family Medicine Clinic is part of the Edmonton West Primary Care Network.
- The clinic has 10 family physicians, 1 FTE nurse, 1 FTE chronic disease management nurse, a 0.1 FTE dietician, a 0.1 FTE social worker, and a 0.4 FTE pharmacist.
- Three of the family physicians and the pharmacist are Faculty Members of the University of Alberta, Department of Family Medicine.
- The rest of the family physicians is private practitioners.
- The family physician Faculty Members are compensated by Alberta Health through an Alternate Relationship Plan, a negotiated contract.
- The pharmacist salary is paid by the University of Alberta.
- Both the pharmacist and the participating family physician allocated four half days a week (40%) of their time in the clinic.
- As of June 8, 2020, the family physician had 389 patients who listed him as their general practitioner.
- A total of 90 patients were inactive, which means they have not seen the family doctor for at least 5 years, 37 patients were under 18 years old and 11 patients were between 40 and 65 who only came to the clinic for physical exams.
- Between April 2014 and March 2020, the pharmacist had at least one encounter with 159 out of 251 eligible patients.

Figure 1. Age-Sex Distribution

RESULTS

Demographics	
Patients	159
Age range	19 – 94
Average age	62
Male	76
Female	83
Past Medical History	
HTN	57
Mental Health	32
DM	22
Chronic pain	22
Hypothyroidism	17
Dyslipidemia	14

Table 1. Patient Characteristics

Visit	2014	2015	2016	2017	2018	2019	2020	Total
Independent (%)	41(61)	21(21)	15(25)	20(25)	31 (30)	74(51)	18(69)	220(38)
Total visits	67	101	61	80	105	143	26	583
Prescriptions	97	121	162	207	282	353	139	1361
Prescription/ visit	1.4	1.2	2.7	2.6	2.7	2.5	5.3	2.3

Table 2. Number of visits and prescriptions

DISCUSSIONS

- The partnership was possible for many reasons. First,
  - The family physician is not reimbursed by fee for service and the pharmacist was paid by the University of Alberta.
  - The major barrier of forming a collaborative practice between the family physician and pharmacist is the lack of a reimbursement model.
  - The pharmacist in this study received a Doctor of Pharmacy degree and a Primary Care Specialty residency post-doctorate. Furthermore, the pharmacist had over 25 years of practice experience in diverse settings such as the intensive care, hospital pharmacy, community pharmacy, and poison control centre.
- The family physician had both experience of and a very good professional relationship with the health care team and community pharmacists while practicing in the UK.

CONCLUSIONS

- It is feasible to establish a family physician-pharmacist collaboration that involves both providing direct patient care independently and in shared consultation.
- The pharmacist had at least one encounter with 159 patients between April 2014 and March 2020.
- During that time, the pharmacist completed 583 visits with 220 independent visits.
- There was a total of 1361 prescriptions written by the pharmacist.

LIMITATIONS

The limitations of this study include:

- This is a retrospective patient chart review conducted by the pharmacist.
- Any patients passed away, transferred or moved out of the province prior to June 8, 2020 were not accounted for

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CONFLICT OF INTEREST

Both authors have no conflict of interest to declare.