PRACTICE BRIEF

PEER-REVIEWED

Case finding: The missing link in chronic disease management

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Introduction

The practice of pharmacy is moving from dispensing to patient-centred care.[1] One component of this transition for pharmacists is involvement in chronic disease management (CDM). CDM is characterized by interventions designed to prevent or manage one or more chronic conditions using a community-wide, systematic and structured multidisciplinary approach.[2] Indeed, there are numerous trials and a high level of evidence for the efficacy of pharmacist-led CDM.[3-5]

The "missing link" in most CDM programs is identification of patients who could benefit from the intervention. For example, a dyslipidemia program, no matter how elegantly designed, will be useless if pharmacists cannot systematically find those patients who have dyslipidemia. While pharmacists may participate in the traditional screening method approach for CDM, the yield is generally very poor, leading to frustration and poor uptake of clinical pharmacy services (and an unrealized potential for improving patient outcomes). In this paper we discuss strategies to improve CDM through a focused approach — *case finding*.

A case study

You are starting a hypertension management program in your pharmacy. Your goal over the next few weeks is to find as many patients as you can who have uncontrolled blood pressure. You start by placing signs advertising "Free Blood Pressure Measurements" throughout the pharmacy. Some patients (but not very many) ask for their blood pressure to be measured. However, all the readings performed in these patients have been at target. You then begin to individually approach some patients to measure their blood pressure. A few agree, but many are not interested. You also speak to the physicians in the clinic next door who seem interested, but you have yet to receive any referrals. You then set up a table at the local farmer's market. Although many people stop to have their blood pressure measured, the majority have excellent blood pressure control.

Assessment

• The case was mostly structured around a general screening approach, which resulted in a low yield. While the overall population prevalence of hypertension in Canada is about 22% in those over 20 years of age,[6] your initial approach ignored age and other known risk factors for hypertension (see below).

• The majority of patients had good control. Patients who readily volunteer for screening are generally more health conscious, so this should not be surprising.

• The approach taken was mostly passive and depended on patients to self-identify or physicians to refer. Because hypertension is an asymptomatic condition, many patients who have it do not know they have it (and therefore would not know to get their blood pressure measured). The general public's knowledge of the dangers of hypertension is still remarkably poor.[7] Physicians may not think to measure blood pressure (especially for patients presenting with an unrelated chief complaint) and/or may not think referral to you is necessary. Furthermore, patients who visit a physician regularly are more likely to have good control of their BP. But what about patients who don't visit a physician regularly?

Case finding vs screening

Case finding uses demographics, risk factors and/or symptoms at an individual level to decide whether to apply a test or proceed with further testing.[8] On the other hand, screening applies tests to entire populations to determine prevalence or probability that an individual will have a disease *regardless* of the presence or absence of risk factors. This distinction is important when applied to CDM, because the yield in screening is very low when compared to case finding.

Why is case finding important for chronic disease management (and pharmacy practice)?

The objective of CDM is to improve patient outcomes. A "formula" for improving patient outcomes includes 2 important components:

- **The intervention**: The care provided (patient assessment, education, referrals, drug therapy management, etc.).
- **Case finding:** Identifying patients who could benefit from the intervention.

As such, the "formula" for improving patient outcomes can be thought of as:

Patient care intervention × case finding = Improved outcomes

As with any multiplication formula, if either component is low or zero, the product is "low," resulting in little improvement in outcomes. Stated another way, even the best-designed patient care intervention will not improve outcomes if the clinician cannot find patients who can benefit from the intervention. Currently, most CDM programs focus on the intervention only, yet case finding is equally if not more important. Just as we have developed intervention tools for pharmacists, we need to also develop case finding strategies for pharmacists.

Case finding — How to do it

Case finding for individuals who could benefit from an intervention consists of 2 major components:

- **Prevalence:** Proportion of patients who have a condition of interest (e.g., proportion of Canadians with diabetes). Although one cannot control the population prevalence, when case finding, the yield will be much higher if the focus is on those who are more likely to have the disease.
- **Risk factors:** Factors that may indicate the presence of disease, poor disease control or suboptimal treatment.

When designing a case finding strategy for a CDM program, it is helpful to write down the factors that increase prevalence and are associated with poor control. For example, if screening for type 2 diabetes, create a table of factors that increase prevalence (such as age, high body mass index, South Asian descent, cardiovascular disease) and factors that increase the likelihood of poor control or suboptimal treatment (such as poor adherence to medication or lifestyle changes).

Case finding needs to be *proactive*, not passive. Pharmacists are typically passive in their practice[9] and this simply does not work for case finding. Pharmacists cannot assume that patients will self-refer or that physicians will identify and refer patients. A good case finding strategy will require *actively seeking* patients who can benefit from the intervention.

This is an important niche for pharmacists, who are more accessible than physicians and interact with many patients who do not see a physician regularly. This is an opportunity for patient care to which pharmacists can uniquely contribute.

Bottom line

The future of pharmacy lies in improving patient outcomes through provision of patient-centred care, which includes CDM. Such programs need to incorporate an *active* recruitment strategy, focusing on populations that have a *higher prevalence* of the condition and with *risk factors* that are associated with poor control or inadequate treatment. ■

Return to the case study: Solution

Case finding approach: Focus on groups with a higher prevalence of high blood pressure (patients over 60 years of age, diabetics). The prevalence of hypertension increases to over 40% in those 60 years of age, and over two-thirds in those 75 years of age.[6] Three-quarters of people with diabetes have hypertension.[6] Other associations also exist, as around 50% of those receiving statins also have hypertension because of a clustering of these risk factors.[10]

- Focusing on patients likely to have poor blood pressure control: These include those without a regular family physician, those with poor refill adherence and those with diabetes (recent data have shown that while two-thirds of hypertensive patients are controlled, two-thirds of patients with diabetes and hypertension are *not* controlled[11]).
- A more active approach: This means searching pharmacy records for older patients and those receiving antihyperglycemic agents (e.g., metformin) or statins. An active approach would target patients identified above as having a high likelihood of hypertension and poor control and contacting them directly to make appointments for a proper clinical assessment.

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