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## RESEARCH NOTES

## Influences on the frequency and type of community pharmacy services

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## ABSTRACT

**Objectives:** To describe services provided by community pharmacies and to identify factors associated with services being provided in community pharmacies.

**Design:** Cross-sectional national mail survey.

**Setting and participants:** Pharmacists actively practicing in community pharmacies (independent, chain, mass merchandisers, and supermarkets).

**Outcome measures:** Frequency and type of pharmacy services available in a community pharmacy, including medication therapy management, immunization, adjusting medication therapy, medication reconciliation, disease state management, health screening or coaching, complex nonsterile compounding, and point-of-care testing.

**Results:** With a 48.4% response rate, the survey showed that community pharmacies offered on average 3 of the 8 services studied. Pharmacy chains and supermarket pharmacies reported providing significantly more services than did mass merchandise pharmacies. The number of pharmacy services provided was positively associated with involvement in an interprofessional care team, innovativeness, and perceived workload. The number of pharmacy services was negatively correlated with having 3.5 or more pharmacy technicians on duty.

**Conclusion:** Pharmacy chains and supermarkets are providing the most pharmacy services among community pharmacy settings. The number of services provided was associated with innovativeness, technician staffing, and perceived workload. Also, involvement with an interprofessional care team supported greater service delivery. Community pharmacies vary in their provision of services beyond dispensing.

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Community pharmacists have been evolving the services delivered to their patients throughout the past decade, with many moving beyond a traditional primary role of dispensing to include services such as immunizations and medication therapy management.<sup>1–3</sup> Several factors have contributed to this practice evolution. One influence has been reduced dispensing reimbursement levels, which have led some pharmacies to focus on reduced costs and high prescription volumes and others to follow a strategy of developing new pharmacy services to yield new revenue streams.<sup>4</sup> When

Medicare Part D was implemented in 2006, it included provisions for pharmacists to be paid to provide medication therapy management (MTM) services, offering incentive and stimulus for expanded pharmacist roles. A second contributor to expanded community pharmacy practice has been changes in health care delivery and policies. For example, the Affordable Care Act has affected how hospitals and health systems are paid, making them more interested in how they can keep patients out of the hospital.<sup>5</sup> Such providers, facing value-based payment approaches, have been open to exploring new relationships and services with progressive community pharmacies.<sup>6,7</sup> Although the potential for new community pharmacy services has been promising, there have been few published comprehensive assessments of the services that pharmacists offer or systematic evaluation of factors that foster service delivery in community pharmacies.

A study using 2004 data reported that fewer than 10% of community pharmacies were providing MTM services.<sup>4</sup> The pharmacy services offered in that study included

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immunization, smoking cessation, disease state management, MTM, and health screening, as well as several other dispensing and information services. With the changing health care environment, new services, such as point-of-care testing, are being brought to markets by community pharmacies.<sup>8</sup> Given these developments over the past decade, it would be informative to study the types of services being delivered in community pharmacies as well as factors associated with them.

## Objectives

The objectives of the present study were:

- 1) To describe services provided among community pharmacies.
- 2) To identify factors associated with services being provided in community pharmacies.

## Conceptual model

The number and types of services that a community pharmacy might provide can be affected by multiple variables and factors. Fundamentally, organizations with different ownership structures or business types can differ in philosophies about their organization's mission, how they operate, and decision making about their business. For independent pharmacies, prescription dispensing and professional pharmacist services often dominate their business. In other pharmacy settings, the prescription department and pharmacist services are complementary aspects of their business models, competitive strategies, and positioning in the market. Thus, various pharmacy business strategies can be affiliated with different mixes of services.

In addition to pharmacy type, a pharmacy's service mix is also likely to relate to its innovativeness, or tendency to perform activities that develop and bring new services into its markets.<sup>4,9</sup> A variety of pharmacy services have been established as regular offerings to patients, although payment for some has been limited. Examples of established services include immunizations, complex nonsterile compounding, MTM services, adjusting medication therapy, and disease state management. Some services, such as medication reconciliation and point-of-care testing, are relatively new to community pharmacy and early in their life cycle, not yet having gained much popularity among patients.<sup>3,10,11</sup> Pharmacies that place an emphasis on innovation have been shown to use it as a way to develop and sustain a competitive business strategy. For example, in the constantly evolving profession of pharmacy, entrepreneurial characteristics such as innovativeness allow pharmacies to readily adapt to the needs of the market.<sup>12</sup> It would be expected that pharmacies would use health service offerings differently in their business strategies. For example, grocery stores could readily integrate nutrition into pharmacy services.

To successfully provide these services, pharmacies should have the capacity to manage and sustain service delivery.<sup>13</sup> Staffing, availability of adequate resources, workload, and involvement in an interprofessional team are important variables when considering the service capacity of a pharmacy. Staffing refers to the number of pharmacists and pharmacy technicians on duty. These individuals should

be knowledgeable and possess the skills necessary to deliver care services, which may include new types of patient interactions and use of new technology. Resources such as skills to market services, resources to obtain payment, and financial resources to implement these services are all potential obstacles for community pharmacies to expand their practice service offerings. In today's evolving health care environment, a community pharmacy's involvement in an interprofessional team facilitates communication between pharmacists and providers in different settings and supports service delivery.<sup>14</sup>

## Methods

Data for this study were taken from the 2014 National Pharmacist Workforce Survey.<sup>15</sup> The pretested survey was sent to a random sample of 5200 licensed pharmacists via mailed questionnaires with a 4-contact approach. The pharmacists were randomly selected by Redi-Data, a company that maintains an updated list of licensed pharmacists in each state. In 2014, there were 250,652 licensed individuals on the list. Responses from actively practicing pharmacists reporting they practiced in a community pharmacy setting (independent, chain, mass merchandiser, or supermarket pharmacies) were analyzed. The pharmacy that the respondent practiced in was the focus of the analyses. The survey contained measures of factors considered to be potential influences on the prevalence of pharmacy services offered in community pharmacies. The 8 services were MTM, immunization, adjusting medication therapy, medication reconciliation, disease state management, health screening or coaching, complex nonsterile compounding, and point-of-care testing. The dependent variable was a summative index ranging from 1 to 8, depending on the number of services offered in the respondent's practice site.

The independent variables included variables associated with pharmacy services in previous research: staffing variables, involvement in interprofessional teams, innovativeness, adequacy of resources, and perceived workload.<sup>4,16–18</sup> Three questions measured pharmacy innovativeness with the use of a 5-point Likert scale: whether the pharmacy is known as an innovator, whether it promotes new services, and whether it provides leadership for new services (see Appendix 1 online for survey items). Adequacy of resources was measured as a sum of 5 items rated on a 5-point scale from poor to excellent: skills to provide services, financial resources to implement, expertise, resources to obtain payment, and skills to market services. Perceived workload was rated by means of a single item with the use of a 5-point scale from excessively low to excessively high. Responses were expected to vary among community pharmacy types based on their business models. Using these data, an ordinary least squares (OLS) multiple regression was conducted with the service index as dependent variable. This study was approved by the University of Minnesota's Institutional Review Board.

## Results

Of the 5053 surveys that were presumably delivered to licensed pharmacists, 2445 (48.4%) were returned. Data from respondents reporting that their pharmacy performed one or more services other than dispensing were included for

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