

Exploring the formation of patient satisfaction in rural community telepharmacies

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Abstract

Objectives: To apply a previously validated patient satisfaction questionnaire within rural community telepharmacies in an effort to identify the underlying factors determining satisfaction with those services and to assess whether the latent structure(s) of patient satisfaction varies depending on delivery mode or community-specific factors.

Design: Descriptive, nonexperimental, cross-sectional study.

Setting: Eight rural community telepharmacy sites (seven in North Dakota and one in Minnesota) in fall 2005.

Patients: 400 potential participants in rural communities (response rate 24% [n = 96]) whose primary community pharmacy is a telepharmacy site.

Intervention: Patients visiting a pharmacy to have at least one prescription filled were asked to complete a survey and mail responses to the investigators. The survey contained 37 questions, the first 20 of which were adapted from a well-established, validated survey instrument.

Main outcome measure: Patient satisfaction with rural community telepharmacy services; patient responses to 20 questions in the survey were used as main outcome variables.

Results: Applying factor analysis to the data yielded a single dimension of patient satisfaction.

Conclusion: A previous application of this instrument in a traditional community pharmacy setting yielded two interrelated latent constructs ("friendly explanation" and "managing therapy"). Our analysis suggests that the formation of patient satisfaction in rural community telepharmacies is much simpler in that patients form a single construct exhibiting high mean and median values. Anecdotal evidence from the literature suggests that the formation of a single construct reflects patients' desire to retain a point of access to health care in their communities.

Keywords: Telepharmacy, factor analysis, health care services, rural setting.

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A considerable portion of the recent social and administrative sciences literature has attempted to identify those aspects of pharmaceutical care that patients value.¹⁻⁵ The practical value of this work to pharmacists, pharmacy administrators, and pharmaceutical entrepreneurs is both extensive and straightforward. Patient satisfaction (which is often highly correlated with, and in some cases equivalent to, the quality of care) is a highly subjective and multifaceted phenomenon.^{6,7} It is also a primary determinant of repeat purchases and/or use by customers and, by extension, a crucial determinant of a company's long-term financial viability.^{8,9} Thus, understanding the global themes that guide the formation of satisfaction and adapting current practices to meet those demands are crucial to the survival of the firm and, from a pharmaceutical policy perspective, crucial to providing high-quality care. This is especially true for community pharmacies operating on very slim profit margins, which are usually between 2% and 4%.¹⁰ For these businesses, financial viability can only be attained by using the volume of new and repeat patients to offset these low margins.

Community pharmacies operating in rural areas face even

greater challenges in generating volume and thus require an even greater understanding of patient satisfaction. The small (and often declining) population base^{11,12} makes these pharmacies more reliant on repeat purchases, which are almost exclusively tied to patient satisfaction. Many younger residents in rural communities may "bypass" the local pharmacy and seek those same services in larger, more distant communities by bundling activities (e.g., combining shopping and recreational activities with the need to fill medications) as a means to justify the extra travel costs.¹³ Finally, recent changes in Medicare Part D policies have resulted not only in decreased pharmacy reimbursement but also encouraged some older residents to use mail order prescription services as opposed to patronizing the local community pharmacy.¹⁴ This combination of forces, in conjunction with other factors, such as the ability to attract young pharmacists to work in rural communities, has resulted in dozens of rural community pharmacy closures during the previous few years.^{11,12} Without an understanding of the factors that form patient satisfaction, many more community pharmacies will continue to lose customers and ultimately be forced out of business.

Researchers typically use questions from validated survey instruments to capture various facets of patient satisfaction and exploratory factor analysis (EFA)^{1,3} to identify whether and how those facets are related by reducing these facets to a smaller number of characteristics. One of the most well-known patient satisfaction surveys for pharmaceutical services was developed by Larson and MacKeigan.^{1,3,5} During the previous 2 decades, numerous studies have validated this survey in a variety of community practice settings, including traditional community pharmacies and pharmacies with mail order service.^{1,4} The vast majority of these studies have come to two general conclusions. First, most components of patient satisfaction, especially in a community pharmacy setting, can be reduced to a small number of latent factors (usually between two and five).^{1,7} Second, the number and composition of these factors have been found to vary slightly depending on the type of services offered. While the survey's content is generally considered valid, applying the survey within the context of specific practice settings, in order to fully understand the nuances associated with the formation of patient satisfaction, is important.

To date, one aspect of patient satisfaction with pharmacy services that has not been developed is community telepharmacy. Community telepharmacy is defined as a full-service community pharmacy, providing all aspects of traditional community pharmaceutical care using distance communication technology.¹⁵ Despite this relatively straightforward definition, a number of different ways to provide community telepharmacy services exist. In this study's application of telepharmacy, licensed pharmacists work at a "central site," which is typically a community pharmacy in a rural and/or a medically underserved area. Pharmacists use audio and visual computer equipment to supervise licensed technicians at other rural locations, which are known as "remote sites" and are usually located in very small communities between 30 to 75 miles from the central site.¹⁵⁻¹⁸

Several characteristics of patient satisfaction in community

At a Glance

Synopsis: A total of 96 patients of eight rural community telepharmacy sites (seven in North Dakota and one in Minnesota) responded to a survey assessing patient satisfaction. Most patients were very satisfied with the level of telepharmacy service. Exploratory factor analysis of survey data revealed a single dimension of patient satisfaction, which was defined as "telepharmaceutical care," suggesting that the formation of patient satisfaction in rural community telepharmacies is much simpler compared with "traditional" community pharmacy settings in that patients form a single construct exhibiting high mean and median values.

Analysis: Previous research identified two related components of patient satisfaction in a traditional community pharmacy setting (i.e., "friendly explanation" and "managing therapy"). This study's findings implied that determining patient satisfaction is much simpler in the context of community telepharmacy, as only one latent factor was observed. Assuming that patients behave in a manner consistent with their values and that other challenges (including declining reimbursement and a shortage of available pharmacists) can be met successfully, telepharmacies have the potential to remain profitable enterprises. One study estimated that the total economic effect of telepharmacies in North Dakota was approximately \$7.5 million. These telepharmacies have the potential to accumulate \$500,000 in economic activity in towns of 1,000 people or fewer. Therefore, as long as patients continue to be satisfied with and use these telepharmacies, the communities in which they exist will also continue to flourish.

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