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Causes and Consequences of Rural Pharmacy Closures: A Multi-Case Study

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Introduction

Local rural pharmacies provide essential pharmacy and clinical services to their communities. Pharmacists play a critical role in the continuum of care for rural residents, and the loss of a local pharmacy may impact access to prescription drugs and clinical care. This policy brief identifies factors that contributed to the closing of six pharmacies and describes how the affected communities adapted to losing locally based services.

Key Findings

- Five out of the six pharmacies studied closed due to retirement and/or difficulties in recruiting a successor.
- In five of the six communities, residents now either drive to the nearest pharmacy or use mail-order to receive their prescriptions and, in some instances, receive their prescriptions through a courier service from a pharmacy in a nearby town.
- Access to pharmacy services in these communities is of most concern for individuals with limited mobility and those who lack a support system that can pick up and deliver their prescriptions (e.g., the elderly and people with acute conditions).

Background

Rural pharmacies play an integral role in managing and coordinating care for rural residents. In a community with limited health care options, such as communities in many rural or remote areas, the local pharmacist ensures access to important health care services other than dispensing medications.¹ Pharmacists administer important community-based clinical care including medication therapy management, blood pressure checks, diabetes counseling and blood glucose testing, immunizations, and educational classes or participation in health fairs.² Additionally, pharmacists often collaborate with one or more health care organizations within the community, serving as a prescription drug dispensary and a consultative contact point for rural residents. Some rural residents also rely on having their medications delivered to their home as a source of access to prescription drugs.² Losing a sole community pharmacy may reduce access to prescription drugs and clinical pharmacy services for rural residents, specifically for individuals who are less mobile, such as the elderly.



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Methodology

Monthly data from the National Council for Prescription Drug Programs were used to compile the list of all retail pharmacies (58,889 in 2006) in the United States, and to track their presence over time. We identified 47 communities that had lost their only retail pharmacy in 2007 and where the nearest pharmacy was located at least 10 miles away. One community per Census region was selected, with an additional site in Iowa selected as a "training case" and one additional site from the West region. Within each region, three rules were used to subset the cases:

1. The community had to have a primary care provider (physician, or other primary care provider in a rural health clinic).
2. The community had to be located in a county that had a hospital (this requirement was waived to select the Northeast region community).
3. The community ZIP code had to have a population of at least 1,500 (this requirement was waived for the Iowa community).

Target communities were selected at random from those meeting these criteria.

Qualitative data were collected by telephone interview of key local informants from each community or a nearby community. Key informants were identified through Internet searches and local referrals using telephone calls. Infinite Conferencing system was used to record the interviews. Key informants included the owner of the closed pharmacy, state pharmacy association staff, hospital administrators, civic leaders, health care providers, and a nursing home administrator. The cases differed in the types of key informants interviewed (e.g., some owners of closed pharmacies had died, or no health care provider was available to be interviewed). Though the cases differed somewhat in the specific types of informants interviewed, the same questions were asked about the factors affecting the closure and the community's response to the closure. The interviews were coded by independent judges to identify themes of closure and adaptation strategies post pharmacy closing.

Communities

The six communities studied share similarities in population and health care resources, despite their geographic dispersion. For example, the average population of these communities is 1,152, with the smallest community population being 628 and the largest 2,006. The proportion of the population aged 65 years and older ranges from 10.3% to 25.5%, with an average of 17.2%. Residents from these communities must travel between 15.7 and 26.6 miles to reach the nearest pharmacy. The travel time required to reach the nearest pharmacy is between 19 and 34 minutes. Table 1 lists further details about these communities.

Results

Causes of Pharmacy Closure. While the six communities each have their own unique characteristics, such as availability of economic resources and community engagement, the causes of pharmacy closure tended to be similar, and not mutually exclusive. The most common proximate cause of pharmacy closure was pharmacist retirement. In four of the six communities, the last owner of the closed pharmacy was a resident of the community, had owned the pharmacy since its inception or continued operating a family business, and managed the pharmacy until retirement. Upon the pharmacist's retirement, these communities were unable to recruit a successor, and the pharmacy was forced to close.

The second most common cause of closure reported was financial difficulty, including reduced demand due to mail order or competing nearby pharmacies as well as inadequate insurance reimbursement levels. Many larger pharmacies in nearby towns have the capacity to provide conveniences such as 24-hour access to pharmacy services and home delivery. However, if the nearest pharmacy does not have the capacity to provide these services and they are located greater than 15 to 20 miles away, this further reduces access and may increase adverse health outcomes.

Two of the six communities experienced unique causes of closure. In one case, the pharmacy closed because the pharmacist was a poor fit with the community's norms and culture, and the community was unable to find a replacement. In the second case, the pharmacy was redesignated and now operates as an Indian Health Service pharmacy, seeing IHS patients only.

Challenges to Maintaining Pharmacy Services. The challenges that these communities faced in maintaining a local pharmacy were multifaceted. Recruiting a successor when a pharmacist in a rural community retires was difficult. Factors such as increased workload, financial risk in owning an independent pharmacy in a low-volume setting, and providing competitive salaries contributed to the difficulty. Further, long-term care facilities reported frequently using a regional or national pharmacy that specializes in long-term care pharmacy services, thus reducing the demand for local access to pharmaceutical products for this clientele.

Rural Community Adaptation to Pharmacy Closure. Residents in these communities have adjusted to the closing of their local pharmacy through various methods. Driving to the nearest pharmacy and mail-order were the most commonly reported methods (five out of six cases). We also found that insurance is increasingly covering, and even favoring through financial incentives, mail-order of prescription drugs. Pharmacies in nearby towns also often provide a courier service to communities with no pharmacy. While the communities we studied have adapted to losing their pharmacy, residents reported a preference for a local pharmacy for easier access to pharmacy consultation and other clinical pharmacy services.

Discussion

Rural residents rely on local pharmacies to provide pharmacy and clinical care management and coordination. The absence of a pharmacy may be disproportionately felt by the rural elderly, who often have a greater need for access to medications and medication management services. Informants from one community specifically reported a decline in population post pharmacy closure due to older residents moving to nearby towns for greater access to health care resources. Increased distance to the nearest pharmacy may result in decreased access to pharmacy services for this population. Access to medications may be maintained through mail-order, delivery, or telepharmacy; however, providing clinical and in-person consultative services to remote populations may be a challenge.

We found that residents of rural communities with no local pharmacy obtain access to prescription drugs and clinical pharmacy services in a variety of ways, including traveling to the nearest pharmacy, arranging for home delivery, receiving prescriptions by mail-order, and long-term care facilities contracting with regional- or national-based pharmacies specialized in meeting their needs. On average, residents drive 19.7 miles one way to the next nearest pharmacy, with 15.7 miles being the shortest distance to the nearest pharmacy and 26.6 miles being the longest distance. This distance exceeds the TriCare mileage standard of 15 miles. Pharmacy redesignation, as occurred in one of the communities studied, may be an example of retaining pharmacy services for a particular vulnerable population. However, further research is needed on reasons to change pharmacy designation, relevant state and federal regulations, and effectiveness in meeting community/population needs. Some communities may adopt strategies that rebuild and/or sustain local pharmacies. Specifics may include the use of telepharmacy and the development of critical access pharmacies that are assured of payment or other revenues to sustain a retail business, and programs (including loan repayment) to improve recruitment. Helping communities to pursue such strategies will require more research (e.g., identifying successful business models, determining metrics to define critical access) and perhaps policy changes that facilitate use of other modalities of service delivery, such as telepharmacies.

References

¹ Klepser D, Lampman M, Radford A, Richardson I, and Rutledge S. (2009). Workforce Issues Among Sole Community Pharmacies (Findings Brief). A joint publication of The North Carolina Rural Health Research and Policy Analysis Center and The RUPRI Center for Health Policy Analysis.

² Radford A, Richardson I, Mason M, and Rutledge S. (2009). The Key Role of Sole Community Pharmacists in Their Local Health Care Delivery Systems (Findings Brief). A joint publication of The North Carolina Rural Health Research and Policy Analysis Center and The RUPRI Center for Rural Health Policy Analysis.

Table 1. Locations of Selected Case Studies Where the Only Community Retail Pharmacy Closed in 2007, and the Nearest Pharmacy Was More Than 10 miles Away

State	City	County	RUCA	Driving Distance ¹	Driving Time ²	Primary Care Providers ³	County Hosp. Beds	Hospital Distance	City Pop.	County Pop.	County Pop. 65+	Part D Enrolled ⁴
IN	Wolcott	White	10.4	16.1	19	1	25	13.2	1,001	24,643	4,230	2,573
IA	Bancroft	Kossuth	10.6	17.1	24	1	22	22.1	732	15,543	3,399	2,497
NY	Harrisville	Lewis	10.6	20.2	22	3	0	13.9	628	27,087	4,076	2,080
TX	Morton	Cochran	10.5	26.6	26	4	18	0.3	2,006	3,127	465	352
ID	Plummer	Benewah	10.3	15.7	19	6	19	15	1,044	9,285	1,699	959
CA	Julian	San Diego	10.1	22.8	34	0	6,400	27.9	1,502	3,095,313	351,425	104,440

Sources: National Council for Prescription Drug Programs data (December 2006 through January 2008); Area Resource File (ARF) 2009-2010; American Hospital Association (AHA) 2007 annual survey; 2010 decennial US Census; Medicare Part D State/County Penetration data (Centers for Medicare and Medicaid Services); driving time data obtained from Google Maps.

¹Driving distance is in miles.

²Driving time is in minutes.

³Includes physicians, physician assistants, and nurse practitioners.

⁴Does not include Medicare beneficiaries who obtain creditable coverage from other sources.