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Rural Policy Brief

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Rural Pharmacy Closures: Implications for Rural Communities

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Introduction

Retail pharmacies provide essential services to residents of rural areas and serve many communities as the sole provider of pharmacist services. Losing the only retail pharmacy within a rural community (census designated city), and within a 10 mile radius based on driving distance ("sole community pharmacy"), may affect access to prescription and over-the-counter drugs and, in some cases, leave the community without proximate access to any clinical provider. This policy brief documents the closure of local retail pharmacies in which the pharmacist was the only clinical provider available in the community at the time the pharmacy closed. Characteristics of the community and the retail pharmacy are described. The findings may suggest future policy actions to minimize the risk or mitigate the negative consequences of pharmacy closures.

Key Findings

- Between May 1, 2006, and October 31, 2010, 119 sole community pharmacies closed.
- Of those 119 pharmacies, 31 were located in rural communities with no other health professionals or clinical providers.
- In 16 states, at least 1 community lost a sole community retail pharmacy, and there was no other pharmacy within 10 miles (actual driving distance).
- Of the 31 pharmacy closures in communities with no other providers, 17% were located in remote rural areas designated with a Rural-Urban Commuting Area (RUCA) score of 10 or higher. Such a score means that, on average, 60 minutes of travel time is required to reach an urbanized area, and 40 minutes is required to reach a large urban cluster of 20,000 population or more.[1]

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The Pharmacies

Data from the National Council for Prescription Drug Programs were used to compile the list of pharmacy closures from May 1, 2006, through October 31, 2010 (see Appendix). This time frame was chosen because we wanted to examine closures and impacts after the enactment of the Medicare Part D program, a significant source of prescription drug coverage for rural residents. Each pharmacy was designated as being in a community with a RUCA score of 3 or higher, indicating that it was located in an area in a metropolitan county with low commuting to the urban core (RUCA score of 3), a non-metropolitan area (RUCA score of 4-10), or a remote rural area (RUCA score 10 and greater).[1]

Among the 119 rural retail pharmacies that closed between May 1, 2006, and October 31, 2010, 6 were part of chains. Generally, community retail pharmacies include independent pharmacies, chain pharmacies (e.g., Walgreens), supermarket pharmacies, or mass merchandiser pharmacies (e.g., Wal-Mart) that are licensed as a pharmacy and dispense medications at retail prices.[2] Just over one-quarter (31) were located in a community where, with the loss of the pharmacist, there was no other primary care, specialist, or mid-level (e.g. physician assistant or nurse practitioner) provider present, and where the next nearest pharmacy was 10 miles or farther away (see Appendix). Among this group, 2 were chain pharmacies.

The Communities

Characteristics of the 31 communities that lost their only retail pharmacy and had no other health professional or clinical provider can be found in Table 1, using both ZIP codes and counties as geographic units of analysis. Highlights of those characteristics include the following:

- After their local retail pharmacy closed, residents had to travel, on average, 20 miles or 27 minutes to reach the nearest pharmacy.
- Populations in communities that lost their sole pharmacy ranged from 163 to 1,996 residents.
- On average, the ZIP code of each of the communities formerly served by the pharmacy included about 307 residents aged 65 years or older.
- In three communities, residents had to drive between 52 and 81 miles, with expected travel time between 67 and 88 minutes, to the next nearest pharmacy.
- Three communities were located in counties in which a pharmacy closing left the county without a pharmacy.
- Three additional communities were left with only one (1) pharmacy in the county.

Discussion

Pharmacists play an increasingly integral role in providing health care services such as disease management, patient and clinical assessments, and the development of therapeutic plans.[3] In rural areas, pharmacists also provide a range of clinical services, including blood pressure checks; diabetes counseling and blood glucose testing; immunizations; educational classes; screening tests for osteoporosis, asthma, hearing, and cholesterol; and tobacco cessation programs.[4] Some services may continue to be provided in the absence of a pharmacist in the community; for example, prescriptions can be filled through mail-order. However, in at least some rural areas, the loss of a pharmacist represents the loss of the last source of clinical care. Next steps in policy development to minimize the risk or mitigate the negative consequences of pharmacy closures should include

research on how residents in communities without a pharmacy are receiving care and on the impact that these community retail pharmacy closures have on rural residents and the health care delivery system. The RUPRI Center is currently completing case studies addressing these questions, and a recent report from the Medicare Payment Advisory Commission used Medicare claims data and beneficiary surveys to describe how prescription drugs are acquired after the local pharmacy closes.[6] That work, and this *Policy Brief*, are elements of ongoing research tracking developments in the delivery of pharmacist services in rural places that began with case studies following the 2006 implementation of Medicare Part D, continue with tracking closure of rural pharmacies (latest report was in July 2012: http://cph.uiowa.edu/rupri/publications/policybriefs/2012/Updated%202012%20Independently%20Owned%20Pharm%20Closures%20071912.pdf), and studies of the role of pharmacists in health care delivery in rural areas. *Policy Briefs* and *Policy Papers* are accessible from the Center's web site (http://ruprihealth.org), and the trend in rural pharmacy closures as influenced by the implementation of Medicare Part D was published in 2011.[7]

References

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Table 1. Locations Where the Only Community Retail Pharmacy Closed, the Nearest Pharmacy Was More Than 10 miles Away, and the ZIP Code RUCA Was 3+, May 1, 2006, to October 31, 2010

State	City	County	Close Date	RUCA	EDist.[1]	Driving Distance	Driving Time	No. of County Pharms.	Place Pop.	ZIP Pop.[2]	County Pop.	Part D Eligible	Part D Enrolled	ZIP Pop. 65+[2]
IA	Armstrong	Emmet	07/01/2010	10.0	16.0	18.5	22	3	926	1,452	10,302	2,359	1,573	325
IA	Kanawha	Hancock	05/01/2009	10.0	11.1	15.4	26	3	652	1,081	11,341	2,503	1,621	262
IA	Pleasantville	Marion	07/01/2009	10.4	9.5	12.1	20	8	1,694	2,940	33,309	6,560	3,346	459
IL	Atlanta	Logan	03/01/2008	5.2	10.5	11.2	18	6	1,692	2,321	30,305	5,182	2,469	347
IN	Morocco	Newton	10/01/2008	10.4	12.0	12.9	22	1	1,129	1,949	14,244	2,380	1,354	351
KS	Attica	Harper	05/01/2008	10.0	12.3	16.9	20	2	626	856	6,034	1,567	950	214
KY	Ary	Perry	12/01/2008	8.0	6.8	12.0	20	21	---[3]	380	28,712	6,154	3,684	51
LA	Atlanta	Winn	12/01/2007	8.0	10.3	10.8	13	6	163	797	15,313	2,668	1,554	105
LA	Buras	Plaquemines	10/01/2007	7.3	20.8	19.2	31	7	945	2,381	23,042	2,818	624	255
LA	Cameron	Cameron	06/01/2007	10.4	25.8	52.4	67	0	406	962	6,839	930	421	105
LA	Glenmora	Rapides	01/01/2008	10.1	10.2	13.0	21	33	1,342	4,367	131,613	22,977	11,296	659
LA	Pleasant Hill	Sabine	05/01/2006	9.0	14.9	19.9	27	8	723	1,232	24,233	4,697	2,442	173
MI	White Pine	Ontonagon	08/01/2007	10.0	14.7	18.7	24	1	474	483	6,780	2,099	847	147
MN	Ashby	Grant	12/01/2006	10.5	10.5	15.0	23	4	446	1,185	6,018	1,553	820	266
MN	Blooming Prairie	Steele	04/01/2008	10.2	12.4	13.4	15	6	1,996	3,696	36,576	5,595	2,504	650
MN	Clara City	Chippewa	11/01/2009	10.5	13.1	16.0	22	3	1,360	1,984	12,441	2,428	1,195	446
MN	Hector	Renville	06/01/2009	10.5	13.5	14.2	17	4	1,151	2,015	15,730	3,292	1,877	391
MN	Heron Lake	Jackson	06/01/2007	10.5	10.9	18.9	24	4	698	1,149	10,266	2,207	1,435	227
MN	Truman	Martin	03/01/2010	10.5	12.1	12.8	18	6	1,115	1,946	20,840	4,891	2,567	432
MS	Shaw	Bolivar	10/01/2007	5.0	10.2	11.1	17	15	1,952	3,375	34,145	6,009	4,294	492
MT	Lincoln	Lewis and Clark	07/01/2007	10.2	38.1	80.7	88	12	1,013	1,286	63,395	9,803	3,314	299
NE	Adams	Gage	01/01/2008	6.0	16.3	24.0	27	7	573	1,466	22,311	5,130	3,385	271
NE	Gibbon	Buffalo	05/01/2008	5.0	12.6	15.5	20	11	1,833	2,945	46,102	6,034	3,719	411
NE	Sargent	Custer	05/01/2008	10.6	15.4	22.2	29	6	525	956	10,939	2,409	1,630	218
OK	Geary	Blaine	05/01/2006	10.4	11.4	13.8	19	5	1,280	1,976	11,943	1,960	1,219	320
OR	Wallowa	Wallowa	09/01/2010	10.0	15.5	17.3	28	3	808	1,383	7,008	1,819	1,086	314
SD	Kadoka	Jackson	05/01/2006	10.0	16.4	22.0	27	0	654	870	3,031	395	229	206
TX	Bogota	Red River	05/01/2008	10.5	12.8	14.6	18	3	1,153	2,456	12,860	3,071	1,675	542
TX	Booker	Lipscomb	04/01/2008	10.6	15.3	16.4	19	0	1,516	1,735	3,302	546	298	183
TX	Deport	Lamar	02/01/2008	5.0	14.2	15.0	19	10	578	1,185	49,793	9,470	4,946	231
WA	Inchelium	Ferry	05/01/2007	10.0	18.5	39.0	60	1	409	1,209	7,551	1,519	744	179

Sources: National Council for Prescription Drug Programs data (May 2006, and December 2010); January 2011 National Provider Identification data from the National Plan and Provider Enumeration System; 2010 decennial US Census; Medicare Part D State/County Penetration data (Centers for Medicare and Medicaid Services).

[1]Euclidean distance (i.e., "as the crow flies").

[2]ZIP code populations are based on ZIP Code Tabulation Areas (ZCTAs), which are produced by the U.S. Census Bureau and are a generalized areal representation of United States Postal Service ZIP code service areas.[5]

[3]In the 2010 census, Ary, Kentucky, was listed as "a populated place that is not a census designated or incorporated place having an official federally recognized name."

Appendix. Sole Rural Retail Pharmacy Closures, 2006-2010

Produced by the RUPRI Center for Rural Health Policy Analysis, 2012.
Cartography by Fred Ullrich.

Notes: Data was derived from the National Council for Prescription Drug Programs and includes only pharmacies that closed from May 1, 2006, through October 31, 2010, were designated with a RUCA score of 3 or higher, were in communities with no other clinical provider, and the next nearest pharmacy was 10 miles away or farther. Alaska and Hawaii were omitted from the map because no pharmacies closed in these states during this period.