RUPRI Center for Rural Health Policy Analysis
Rural Policy Brief

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Update: Independently Owned Pharmacy Closures in Rural America, 2003-2013

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Key Findings

- From March 2003 to December 2013, there was a loss of 924 (12.1%) independently owned rural pharmacies in the United States. The most drastic loss occurred between 2007 and 2009. From 2010-2013, the trend has been for more closures, although the decline is not as pronounced or clear as in earlier years.
- Four hundred ninety rural communities that had one or more retail pharmacy (including independent, chain, or franchise pharmacy) in March 2003 had no retail pharmacy in December 2013.

Introduction

In addition to providing prescription and nonprescription medications, rural pharmacists report providing clinical services such as blood pressure checks, diabetes counseling and blood glucose testing, and immunizations, and providing educational classes or participating in health fairs. Rural pharmacists also frequently oversee administration of medications to nursing homes and hospitals, and provide patient consultation.[1] Loss of pharmacists in rural areas, particularly in areas where there was only one pharmacist in the community, can have serious implications for health care provision. Independent pharmacists (i.e. those that are not affiliated with a chain or franchise) are of particular concern as they are more likely to operate in underserved and rural areas[11] and face additional business challenges from their limited ability to negotiate with pharmacy benefit managers, drug wholesalers, and health plans.

Background

Past RUPRI Center analysis has documented the decline in the number of independently owned pharmacies in rural areas.[2-5] The period of this decline coincides with the implementation of two major policies related to payment for prescription medications. Medicare prescription drug discount cards (introduced January 1, 2004) were offered by Medicare-approved private companies (primarily large pharmacy chains and insurance groups) to Medicare Part A and B participants and offered modest discounts on outpatient prescription drugs[10]. The Medicare prescription drug benefit (Medicare Part D, began January 1, 2006) makes prescription drug coverage available to everyone with Medicare. This policy brief provides additional follow-up data examining the number of independently owned pharmacies in rural areas.

Methods

Monthly data from March 2003 through December 2013 were obtained from the National Council for Prescription Drug Programs (NCPDP) and included the location of, and other information on, the more

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than 70,000 pharmacies in the United States. Using NCPDP's categorization of pharmacies, we created subsets of those pharmacies meeting the following criteria (in order of use):

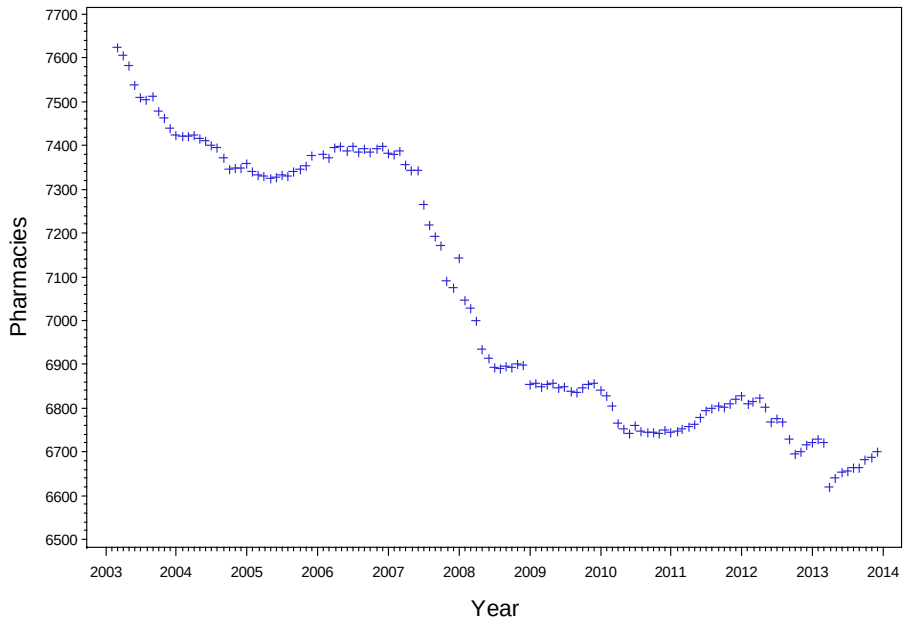
- retail, independently owned (including franchised pharmacies), using NCPDP's definition of an independent pharmacy;[6]
- rural, using the Federal Office of Rural Health Policy's definition of rural;[7] and
- the only independent pharmacy in the community.

Sole community independent pharmacies were identified by first excluding pharmacies in any ZIP code with more than one pharmacy.[8] Next, any remaining pharmacy in the same city as another retail pharmacy was excluded. Finally, only independent pharmacies were retained in the data set. Pharmacy closure is identified when the provider number ceases to be included in the monthly data set or when a specific closure date was specified.

Findings

The number of independently owned rural pharmacies declined by 12.1 percent (from 7,624 to 6,700) between March 2003 and December 2013 (Figure 1). While the overall trend during this period was downward, the sharpest decline occurred between 2007 and 2009, when the number of these pharmacies declined by 7.2 percent (from 7,383 in January 2007 to 6,853 in January 2009). There was fluctuation between January 2009 and January 2012 (from 6,853 to 6,827, with a high of 6,857 in February and December 2009 and a low of 6,742 in November 2010). Since January 2012, the number of independently owned rural pharmacies has continued to decline, but the general trend is not very clear. The number of retail pharmacies that were the only pharmacy in the community declined fairly steadily between March 2003 and May 2009 (from 2,063 to 1,767) but has remained relatively unchanged since then, with 1,773 such pharmacies in December 2013 (Figure 2).

Figure 1. Monthly Count of Rural Independently Owned Pharmacies, 2003-2013

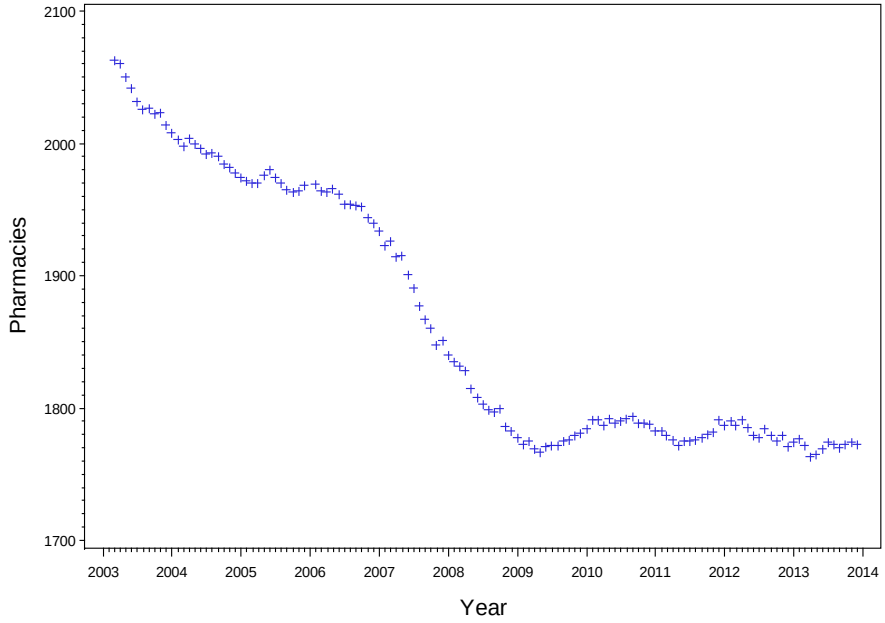


Notes: "Pharmacies" included only independent pharmacies in a retail setting (community/retail, grocery, or department store) in 50 states and the District of Columbia. Consistent with the definition that the Federal Office of Rural Health Policy (ORHP) uses for program eligibility, we define "rural" as ZIP codes classified as Rural Urban Commuting Area (RUCA) codes 4-10.6 inclusive, including those that are within metropolitan areas. Since we are using ZIP codes in this analysis, we have not extended the definition of rural to include "Census Tracts within metropolitan areas with RUCA codes 2 and 3 that are larger than 400 square miles and have population density of less than 30 people per square mile," which ORHP also considers rural (http://ruralhealth.hrsa.gov/funding/eligibilitytestv2.asp).

In March 2013, the NCPDP completed an audit of their database and determined that a number of pharmacies were providing insufficient data to continue to be validated as "open." Following additional efforts to contact these sites, they were purged from the database. Overall, this resulted in the loss of approximately 344 pharmacies, of which 101 were rural independently owned.

With the overall loss in the number of independently owned rural pharmacies, and the early decline in the number of pharmacies that were the only pharmacy in the community, it is not surprising that 369 rural communities lost all local pharmacy service between March 2003 and May 2009. But in spite of the recent slowing of the decline in independently owned rural pharmacies—both overall and where the pharmacy was the only one in the community—the number of rural communities that lost all local pharmacy services continued to increase since May 2009. Between May 2009 and December 2013, an additional 121 communities went from having one or more retail pharmacies to having no retail pharmacy of any kind (Tables 1 and 2, shown on page 4).

Figure 2. Monthly Count of Rural Independently Owned Pharmacies That Were the Only Pharmacy in a Community, 2003-2013



Note: "Pharmacies" included only independent pharmacies in a retail setting (community/retail, grocery, or department store) in 50 states and the District of Columbia. Consistent with the definition that the Federal Office of Rural Health Policy (ORHP) uses for program eligibility, we define "rural" as ZIP codes classified as Rural Urban Commuting Area (RUCA) codes 4-10.6 inclusive, including those that are within metropolitan areas. Since we are using ZIP codes in this analysis, we have not extended the definition of rural to include "Census Tracts within metropolitan areas with RUCA codes 2 and 3 that are larger than 400 square miles and have population density of less than 30 people per square mile," which ORHP also considers rural (http://ruralhealth.hrsa.gov/funding/eligibilitytestv2.asp).

Discussion

The challenges to rural pharmacies of Medicare Part D were documented in an earlier RUPRI Center policy briefs. These included increased administrative effort (including management of formularies from multiple drug plans), payment timeliness, and low reimbursement levels. The effects of Medicare Part D were likely felt most sharply and directly in the early years of implementation (2005-2008). Lingering effects may be felt as part of overall financial stress on independently owned retail pharmacies and may contribute to closure. However, past research by the RUPRI Center[9] has shown that the precipitating reasons for closure without replacement include other factors, such as retirement and difficulties recruiting a successor. Residents of communities that have lost their only pharmacy may adapt by driving farther to another pharmacy, using mail order, or getting courier service from another location, but access is a concern for individuals with limited mobility. Thus, while the slowing trends in closure of independent pharmacies and loss of only pharmacy in the community reported in this brief are somewhat encouraging for maintaining the current level of access to pharmaceutical services in rural places, continued closures due to local circumstances will not be unexpected, and the trend warrants continued surveillance.

Notes and References

1. Radford A, Richardson I, Mason M, Rutledge S (2009). The Key Role of Sole Community Pharmacists in Their Local Healthcare Delivery Systems (Findings Brief 88). Chapel Hill, NC: North Carolina Rural Health Research & Policy Analysis Center; Omaha, NE: RUPRI Center for Rural Health Policy Analysis.

2. Boyle K, Ullrich F, Mueller K (2011). Independently Owned Pharmacy Closures in Rural America, 2003–2010 (Policy Brief 2011-5). Iowa City, IA: RUPRI Center for Rural Health Policy Analysis.

3. Boyle K, Ullrich F, Mueller K (2012). Independently Owned Pharmacy Closures in Rural America (Policy Brief 2012-4). Iowa City, IA: RUPRI Center for Rural Health Policy Analysis.

4. Xu L, Ullrich F, Mueller K (2009). Loss of Community Pharmacies Since 2006: State Experiences (Policy Brief 2009-3). Omaha, NE: RUPRI Center for Rural Health Policy Analysis.

5. Klepser D, Xu L, Ullrich F, Mueller K (2008). Independently Owned Pharmacy Closures in Rural America (Policy Brief 2008-2). Omaha, NE: RUPRI Center for Rural Health Policy Analysis.

6. NCPDP defines an independent pharmacy as one to three pharmacies under common ownership.

7. Consistent with the definition that the Federal Office of Rural Health Policy (ORHP) uses for program eligibility, we define "rural" as ZIP codes classified as Rural Urban Commuting Area (RUCA) codes 4-10.6 inclusive, including those that are within metropolitan areas. Since we are using ZIP codes in this analysis, we have not extended the definition to include "Census Tracts within metropolitan areas with RUCA codes 2 and 3 that are larger than 400 square miles and have a population density of less than 30 people per square mile," which ORHP also considers rural (http://ruralhealth.hrsa.gov/funding/eligibilitytestv2.asp).

8. We realize that we may need to exclude a small number of isolated pharmacies in communities embedded in geographically large ZIP codes with this method; however, this method assures that we will not include two pharmacies in neighboring communities because each is in a separate community. Thus, this is a conservative estimate of total pharmacies that are the only ones in their communities.

9. Todd K, Westfall K, Doucette B, Ullrich F, Mueller K (2013) Causes and Consequences of Rural Pharmacy Closures: A Multi-Case Study (Policy Brief 2013-11). Iowa City, IA: RUPRI Center for Rural Health Policy Analysis.

10. Centers for Medicare & Medicaid Services. Guide to Choosing a Medicare-Approved Drug Discount Card http://royce.house.gov/uploadedfiles/11062.pdf

11. National Community Pharmacists Association Analysis of National Council for Prescription Drug Programs Data. Cited in 2/4/2011 letter to U.S. Department of Health and Human Services Secretary Kathleen Sebelius. http://www.ncpanet.org/pdf/leg/aug11/sebelius_re_medicaid_savings.pdf

Table 1. Number of Rural ZIP Codes, by State, Going from 1 or More Pharmacy to None, or from More than 1 to only 1, 2003-2009.

March 2003 – May 2009							
State	1 to 0	>1 to 1	>1 to 0	State	1 to 0	>1 to 1	>1 to 0
AK	0	1	0	MT	9	7	0
AL	12	8	0	NC	9	10	0
AR	8	4	1	ND	3	5	0
AZ	5	3	0	NE	11	3	0
CA	12	3	0	NH	1	4	1
CO	9	5	0	NJ	0	0	0
CT	5	0	1	NM	3	1	0
DC	0	0	0	NV	1	0	0
DE	0	0	0	NY	8	5	0
FL	5	1	0	OH	11	6	0
GA	14	3	1	OK	14	10	1
HI	0	0	0	OR	4	5	0
IA	8	2	0	PA	12	5	0
ID	4	3	0	RI	0	0	0
IL	9	6	0	SC	1	1	1
IN	14	4	0	SD	6	5	0
KS	7	6	0	TN	5	2	0
KY	13	5	0	TX	27	15	0
LA	14	3	0	UT	3	0	0
MA	0	1	0	VA	8	5	1
MD	1	1	0	VT	4	2	0
ME	5	4	1	WA	6	4	0
MI	17	10	0	WI	15	3	0
MN	11	10	0	WV	9	4	0
MO	8	4	0	WY	0	2	1
MS	8	4	1	**Total**	**359**	**195**	**10**

Table 2. Number of Rural ZIP Codes, by State, Going from 1 or More Pharmacy to None, or from More than 1 to only 1, 2003-2013.

March 2003 – December 2013							
State	1 to 0	>1 to 1	>1 to 0	State	1 to 0	>1 to 1	>1 to 0
AK	0	1	0	MT	10	8	1
AL	14	9	0	NC	16	8	0
AR	9	7	1	ND	5	6	0
AZ	9	4	0	NE	13	8	1
CA	14	4	0	NH	2	5	1
CO	10	5	0	NJ	0	0	0
CT	4	1	1	NM	4	1	0
DC	0	0	0	NV	2	0	0
DE	1	0	0	NY	11	6	0
FL	6	2	0	OH	18	8	0
GA	16	3	1	OK	16	12	1
HI	1	1	0	OR	7	4	1
IA	16	7	0	PA	12	9	0
ID	5	4	1	RI	0	0	0
IL	14	11	0	SC	2	3	1
IN	16	8	0	SD	10	5	0
KS	8	10	1	TN	5	1	0
KY	13	8	0	TX	32	18	0
LA	15	6	0	UT	3	0	0
MA	0	1	0	VA	13	4	1
MD	2	1	0	VT	3	2	0
ME	7	2	1	WA	11	6	0
MI	24	11	0	WI	18	7	1
MN	26	13	0	WV	9	3	1
MO	8	6	0	WY	2	1	1
MS	9	6	3	**Total**	**471**	**256**	**19**