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Rural Policy Brief

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Independently Owned Pharmacy Closures in Rural America, 2003 – 2010

Kaitlin Boyle, BS; Fred Ullrich, BA; Keith Mueller, PhD

Introduction

The purpose of this policy brief is to provide policy makers, researchers, and stakeholders with information about the closure of rural independently owned pharmacies, including pharmacies that are the sole source of access to local pharmacy services, from 2003 through 2010. This period coincides with the implementation of two major policies related to payment for prescription medications: Medicare prescription drug discount cards were introduced on January 1, 2004, and the Medicare prescription drug benefit began on January 1, 2006. In this brief, we focus on rural pharmacy closure because of the potential threat such closures present to access to *any* local pharmacy services in a community. Those services include providing medications as needed (not waiting for mail order), overseeing administration of medications to nursing homes and hospitals, and patient consultation.

Key Findings

- The total number of independently owned rural pharmacies that were the only pharmacy in a community declined from 2,060 in March 2003 to 1,759 in December 2010.
- A total of 268 rural communities with a single retail pharmacy in May 2006 had no retail pharmacy in December 2010, and nine communities with more than one pharmacy in May 2006 had none in December 2010.
- An additional 176 rural communities went from having more than one retail pharmacy in May 2006 to only one retail pharmacy in December 2010.

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RUPRI Center for Rural Health Policy Analysis, University of Iowa College of Public Health, Department of Health Management and Policy,
105 River Street, N200 CPHB, Iowa City, IA 52242, (319) 384-3830
http://www.public-health.uiowa.edu/rupri
E-mail: cph-rupri-inquiries@uiowa.edu

Background

Rural independently owned pharmacies experienced financial difficulties with the advent of Medicare Part D. A news story in October 2006 reported rural independently owned pharmacies closing in Wyoming, North Dakota, and North Carolina. That story quoted a member of the Wyoming State Board of Pharmacy saying that closures in towns with only one pharmacy could be a big problem for access (Paul 2006). The financial difficulties rural independently owned pharmacies now face may have existed before Medicare Part D, due to changes in Medicaid pricing and pricing strategies of commercial insurance, which are mimicked in the Part D program. Pharmacies generally are paid more for prescription medications by cash-paying customers than by insured patients, and cash-paying customers subsidize some of the cost of the insured patients. Covering the fixed costs of staying in business as an independently owned pharmacy in a remote location is difficult if nearly all the pharmacy's customers are enrolled in an insurance plan that limits payments (Stratton 2001). Previous publications by the North Carolina and RUPRI rural health research centers have reported the cash flow concerns of rural independent pharmacies located at least 10 miles from the nearest alternative since the introduction of the Medicare Part D program (Radford et al. 2006, 2007). This policy brief continues tracking rural retail pharmacy closures, updating our July 2008 policy brief.

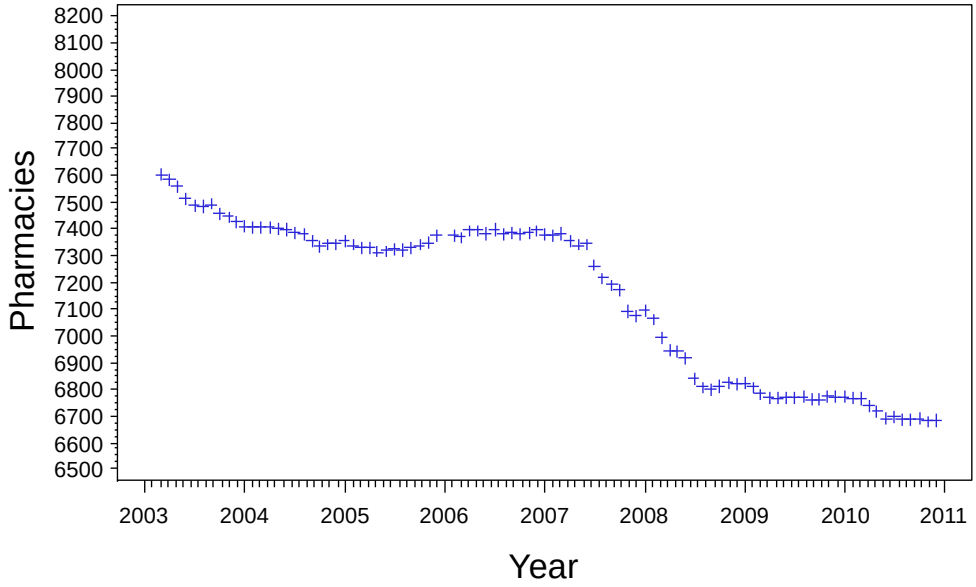
Methods

Monthly data from January 2003 through December 2010 were obtained from the National Council for Prescription Drug Programs (NCPDP) that included the location and other information on the more than 70,000 pharmacies in the United States. Using NCPDP's definitions, a data set of retail and independently owned (including franchised) pharmacies[1] was created. Rural areas were identified using the Federal Office of Rural Health Policy's definition of rural.[2] Sole community independent pharmacies were identified by first excluding any ZIP code with more than one pharmacy.[3] Remaining pharmacies in the same city as another retail pharmacy were excluded. Finally, only independent pharmacies were retained in the data set. Pharmacy closure was identified when the provider number ceased to be included in the monthly data set.[4]

Findings

The number of rural independently owned pharmacies in the United States was relatively constant from 2003 to 2006, peaking around May 2006. During this period, Medicare prescription drug discount cards were introduced and the Part D program began operating. From May 2006 through September 2008, the number of rural independently owned community pharmacies declined rapidly, from 7,395 to 6,799 (Figure 1). This 8.1% drop in the number of pharmacies took place after the introduction of the Medicare Part D program until September 2008. September 2008 through December 2010 saw a 1.7% decline in rural pharmacies, so while the number of rural pharmacies continued to decrease, it was at a slower pace. the number of rural pharmacies continued to decrease, but at a slower pace, 1.7%. There was a net loss of 922 rural independent retail pharmacies from March 2003 through December 2010. In communities most vulnerable to loss of access to pharmacy services, the decrease in the number of independently owned pharmacies was slightly greater (Figure 2). The number of pharmacies serving communities in which they were the only pharmacy in the community dropped by 10.4% between May 2006 and December 2010: from 1,965 to 1,759. Between 2006 and 2010, rural communities in 45 US states went from having at least one community pharmacy to having none (Table 1).

Figure 1. Monthly Count of Rural Independently Owned Pharmacies, 2003-2011



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).

Figure 2. Monthly Count of Rural Independently Owned Pharmacies that Were the Only Pharmacy in a Community, 2003–2011

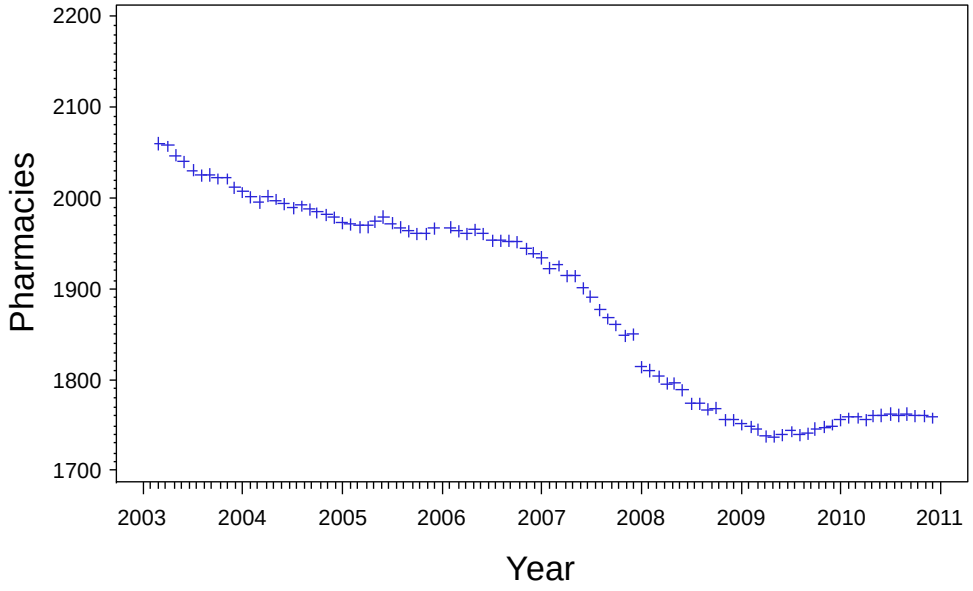


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Table 1. Number of Rural ZIP Codes, by State, Going from 1 or More Pharmacy to None, or from More than 1 to only 1, 2006-2010

State	1 in 5/06, 0 in 12/10	>1 in 5/06, 1 in 12/10	>1 in 5/06, 0 in 12/10
Total	268	176	9
AK	0	0	0
AL	10	7	0
AR	4	4	0
AZ	2	2	0
CA	10	5	0
CO	6	3	0
CT	3	0	1
DE	0	0	0
FL	7	1	0
GA	5	7	0
HI	1	2	0
IA	9	7	1
ID	2	2	0
IL	7	8	0
IN	12	4	0
KS	4	8	1
KY	11	5	0
LA	13	3	0
MA	0	0	0
MD	1	0	0
ME	6	2	0
MI	13	8	0
MN	10	9	0
MO	2	7	0
MS	7	9	1
MT	3	4	0
NC	7	6	1
ND	3	5	0
NE	9	5	1
NH	2	4	1
NJ	0	0	0
NM	3	1	0
NV	1	0	0
NY	6	5	0
OH	9	5	0
OK	9	2	0
OR	4	3	0
PA	10	7	0
RI	0	0	0
SC	2	1	0
SD	6	3	0
TN	4	2	0
TX	18	9	0
UT	4	0	0
VA	3	4	0
VT	2	1	0
WA	4	1	0
WI	8	3	0
WV	5	1	0
WY	1	1	2

Discussion

The sharp decline in independently owned retail pharmacies in rural communities was associated with the implementation of Medicare Part D (Klepser et al. 2011). There is evidence that the rate of decline in the number of independently owned rural pharmacies slowed significantly around September 2008 (at 6,799 pharmacies). Although the rate of closure slowed, the number of independently owned rural pharmacies continued to decline. This trend indicates that maintaining retail pharmacy businesses remains challenging in many rural places (for multiple reasons, including the effects of the recession in the past two years). The data presented in this policy brief lead to two questions. First, what are the consequences to the delivery of all health services in rural communities that have lost their only retail pharmacy? Second, should we anticipate access issues in those places that now have only one retail pharmacy?

Notes

1. NCPDP defines an independent pharmacy as one to three pharmacies under common ownership.
2. 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).
3. 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.
4. Pharmacy numbers remain active after the retail business closes, so there is a lag effect between closure and being defined as a closed pharmacy. That effect is not expected to differ across time, so the trends reported herein are assumed to be valid.

References

Klepser DG, Xu L, Ullrich F, and Mueller KJ. (2011). Trends in community pharmacy counts and closures before and after the implementation of Medicare Part D. *Journal of Rural Health,* 27(Spring), 168-175.

Paul R. (2006, October 23). Medicare Part D leaving independents stranded. *Drug Topics.* Retrieved June 20, 2008, from http://www.drugtopics.com/drugtopics/article/articleDetail.jsp?id=379879&searchString=leaving%independents%stranded

Radford A, Mason M, Richardson I, Rutledge S, Poley S, Mueller K, & Slifkin R. (2007). One year in: Sole community rural independent pharmacies with Medicare Part D (Findings Brief). A joint publication of the North Carolina Rural Health Research & Policy Analysis Center and the RUPRI Center for Rural Health Policy Analysis. Chapel Hill, NC: North Carolina Rural Health Research & Policy Analysis Center.

Radford A, Mason M, Richardson I, Rutledge S, Poley S, Mueller K, & Slifkin R. (2006). The experience of sole community rural independent pharmacies with Medicare Part D: Reports from the field (Policy Paper P-2006-3). A joint publication of the North Carolina Rural Health Research & Policy Analysis Center and the RUPRI Center for Rural Health Policy Analysis. Omaha, NE: RUPRI Center for Rural Health Policy.

Stratton TP. (2001). The economic realities of rural pharmacy practice. *Journal of Rural Health,* 17(2), 77-81.