## "Assessing Risk for Loss of Rural Pharmacy Services"

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*Objective:* To (1) prospectively identify rural one-pharmacy communities most at risk for loss of medication access and pharmacist services and (2) identify and characterize the number of rural patients potentially impacted by the closure of a community's only pharmacy.

Methods: One pharmacy communities in nine states with rural populations were identified from board of pharmacy databases and mailed a survey to assess the pharmacy's business viability and potential community impact of closure. Service area mapping of one pharmacy towns was completed based on half-way distance to the nearest pharmacy utilizing a road network developed from ESRI Streetmap. Service areas were overlayed with census block data points to identify population and age-related characteristics.

Results: Of 571 rural one-pharmacy towns, 214 responded to the survey. Only 12% of pharmacies were chain pharmacies. The average pharmacy owner age was 53.3 years. Seventy-five owners wish to transition ownership in less than six years. An average of 129 prescriptions are dispensed at each pharmacy daily and 71 pharmacies report greater than 95% of their revenue generated by prescriptions. Staff pharmacist recruitment was reported as very or moderately difficult by the majority of pharmacies. On average, the distance to the nearest pharmacy was 19.4 miles. Over 90% of communities also have a medical clinic, 50% have a nursing home and 25% have a hospital. The combined service area population of the 571 pharmacies was over 3.6 million people with one million over 50 years. Service area population was over three times the population of communities in which the pharmacy is located.

Implications/Conclusions: Most rural one-pharmacy communities are serviced by independent pharmacies with an aging owner workforce. The impact to rural health care may extend beyond local medication access. Greater populations than anticipated based on market area analysis may be impacted by potential closure.