

Analysis of Current Pharmacy Deserts in Illinois

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ABSTRACT

Purpose

During the COVID-19 pandemic, health disparities have been spotlighted as certain populations living in medically underserved areas have not received necessary medical care. More than 838 pharmacies in the state of Illinois permanently closed over the past 12 years, but it is not known which communities have been affected by the closures. The goal of this study was to map the locations of operating pharmacies in Illinois, identify where pharmacy deserts are located within the state.

Methods

This study used the United States Department of Agriculture definition of food deserts in urban and rural areas and applied it to define pharmacy deserts in Illinois. Geographical information system mapping of pharmacies active during a time frame 2009 to present was performed with data obtained from Illinois Department of Financial and Professional Regulation. Demographic data obtained from the Health Resources and Services Administration, Centers for Disease Control and Prevention, and United States Census Bureau were analyzed to identify populations affected by desert formation.

Results

From January 2009 to August 2021, at an average rate of 70 pharmacy closures per year, a total of 838 pharmacies have closed in Illinois. Low-income urban and rural areas are the communities most classified as pharmacy deserts and are most at-risk. Regardless of income level, data indicate that over 73% of the counties in Illinois fit the definition of pharmacy desert, with the northwest and southeast regions of the state showing some of the greatest distances between pharmacies and other healthcare facilities. These communities are in “double desert” areas living at least 10 miles from the nearest healthcare facility. The pharmacy desert regions also have the highest concentration of residents who have an average age above 40, along with high prevalence of treatable chronic diseases. Rates of COVID-19 vaccination in the southeast region are well below the state average of 55.24%, with rates of full vaccination as low as 27.4%.

Conclusion

The data show that pharmacy deserts continue to increase in the state of Illinois, specifically in low-income communities and in counties below the poverty-line. The lack of medication coverage for these areas can be linked to above average mortality rates to treatable chronic diseases (i.e., cardiovascular disease, diabetes, hypertension). Decreased reimbursement rates and a lack of Pharmacy Benefit Manager practice regulations are only increasing the rate of pharmacy closures in Illinois, leading to more hospitalization, and putting a greater burden to the states hospital systems.