Analysis of Current Pharmacy Deserts in Illinois
Kevin B Caguitla, PharmD Candidate
Jennifer Rosselli, PharmD, BCACP, BCPS, CDCES
Stacey Brown Amilian, PhD Geography
Garth K. Reynolds, BSPharm, RPh, MBA

BACKGROUND
- Decreased reimbursement rates and a lack of Pharmacy Benefit Manager practice regulations only adds further financial burden to existing local pharmacies
- During the COVID-19 pandemic, health disparities have been spotlighted as certain populations living in medically underserved areas have not received necessary medical care

Definition for Pharmacy Desert
- Urban: Low-income community that either has low vehicle access and is more than half a mile from a pharmacy or is more than a mile from a pharmacy regardless of vehicle access
- Rural: Populations greater >500 that are at least 10 miles from a pharmacy or hospital

OBJECTIVES
- Identify current pharmacy deserts in the state of Illinois
- Assessing for the co-occurrence of health disparities such as treatable chronic diseases and underuse of prescription medications in areas with low pharmacy access.

METHODS

Study Design
- Retrospective, longitudinal

Data Sources
- Demographic data:
  - Health Resources & Service Administration (HRSA)
  - U.S. Census Bureau
  - Center for Disease Control & Prevention (CDC)
  - Illinois Department of Public Health

Data Analysis
- Geographic Information System (GIS) Mapping used to identify pharmacy deserts
- Simple regression analysis to assess trend of closures for time frame
- Excel algorithms to compute statistics to determine percentages

RESULTS
- A total of 838 pharmacies have closed in Illinois from 2009-2021
- Average of 70 pharmacies closures per year
- 73% of counties in Illinois fit the definition of pharmacy desert
- High prevalence of treatable chronic disease
- Decrease medication adherence

CONCLUSION
- 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 access for these areas may be associated to above average mortality rates to treatable chronic diseases (i.e., cardiovascular disease, diabetes, high cholesterol)

FUTURE AREA FOR PHARMACISTS
- Pharmacy deserts hold unlimited potential for pharmacist involvement
  - Utilization of full scope of practice
- Changes to the governmental definition of qualified healthcare provider to include pharmacists are needed to allow sustainable billing models for pharmacist-delivered care.
- Regulation of Pharmacy Benefit Manager practices are needed to ensure fair medication pricing to consumers and reimbursement to pharmacies