

### 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 chronic diseases and underuse of prescription medications in areas with low pharmacy access.

### METHODS

#### Study Design

- Retrospective, longitudinal

#### Data Sources

- Datasets of active community pharmacies & closures in 2009-2021 acquired from the Illinois Department of Financial & Professional Regulation.

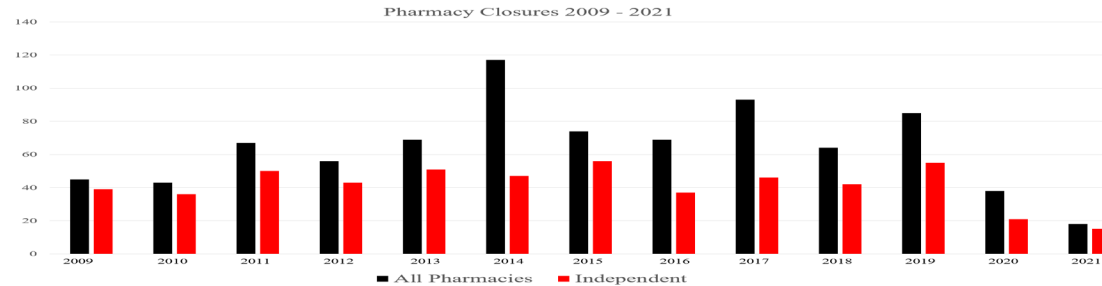
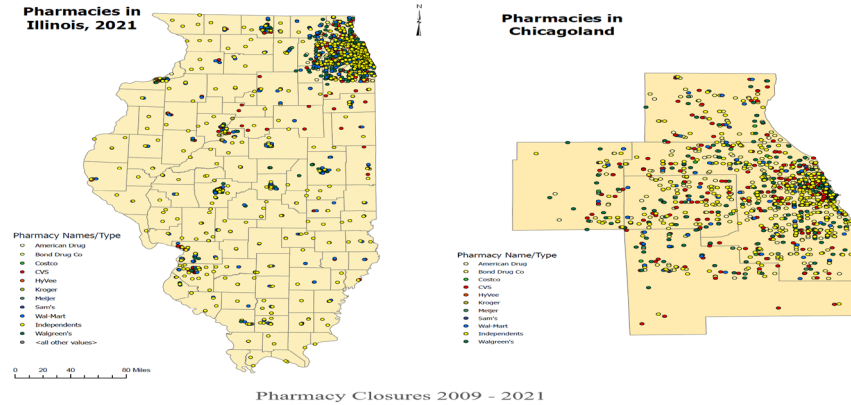
#### Demographic data

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

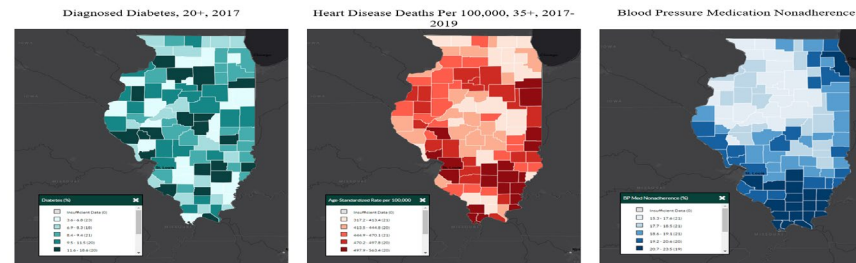
#### Data Analysis

- 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

- 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

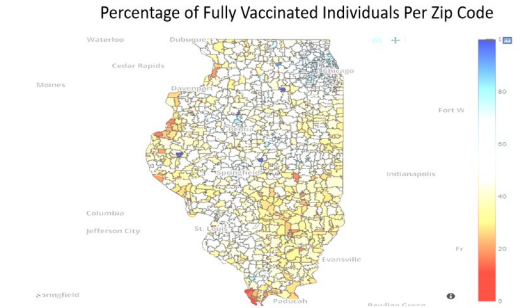


- High prevalence of treatable chronic disease
- Decrease medication adherence



### RESULTS

- Areas classified as pharmacy deserts also have below state average (55.2%) COVID-19 vaccination rates (as of Nov. 2021)
  - As low as 27.4% in some areas



### CONCLUSION

- Pharmacy closures continue to increase, and pharmacy deserts are present in low socioeconomic status communities and in counties with high rates of residents living below the poverty level
- 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)
- Increased burden on hospitals due to lack of consistent medical care

### 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