



Mapping Georgia Community Pharmacies and Safety-net Clinics: An Evaluation of Healthcare Utilization and Care Access Points

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Background

- Ambulatory care sensitive conditions (ACSC) contribute to mortality and higher healthcare cost in the United States
- The ratio of overall patient to primary care provider is 1,529:1 in the state of Georgia
- Nationally, 90% of Americans live within five-miles of a community pharmacy
- Many studies have demonstrated the pharmacist role in improving patient care quality
- Collaborative Drug Therapy Management (CDTM) involving community pharmacists in direct patient care under contracted provider in rural areas can enhance optimal care, clinical outcome, and patient satisfaction

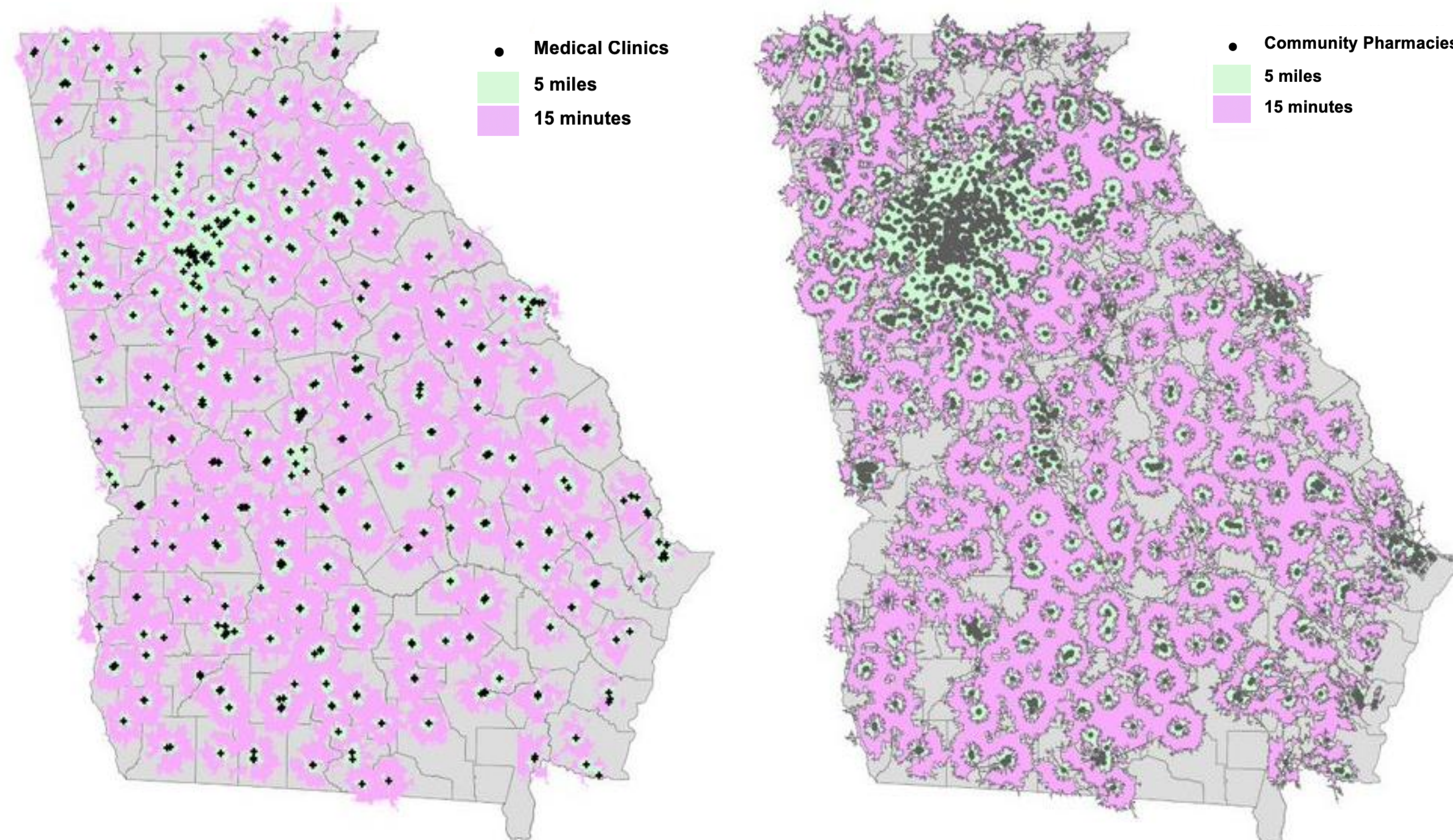
Purpose

- To evaluate Georgia patient care access points, compare county health outcome and factor rankings to ACSC hospital discharges and ER visits, and determine if access to care improves if community pharmacies were to provide services for ACSC

Methods

- Health outcome and ranking data for Georgia counties were extracted from the 2020 County Health Ranking Report by the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute collaboration
- ER visits and hospital discharge data were extracted from the Georgia Department of Public Health Data Warehouse
- The geographic information system (GIS) librarian generated maps and evaluated care access utilizing ArcGIS Online's Create Drive-Time Areas analysis tool and the 2019 census block group data
- The statistician analyzed access to safety-net clinics (Rural Health Clinics, Federally Qualified Health Center, or Department of Health) versus community pharmacies in rural and urban counties in Georgia
- Care access point difference was analyzed using a two-sample t-test and health outcomes were evaluated using ordinary least square regression analysis
- Statistical analysis was completed using STATA version 14.2

Results



- More patients live within a 5-mile driving distance ($p < 0.001$) or a 15-minute drive time ($p < 0.05$) to a community pharmacy vs. a safety net clinic in the state of Georgia
- Counties in the top 50% vs. bottom 50% for health outcome ranking are associated with lower ACSC ER visits ($p < 0.05$) and lower hospital discharges ($p < 0.01$) prevalence regardless of poverty status
- Counties in the top 50% vs. bottom 50% for health factor ranking are associated with lower ACSC ER visit ($p < 0.01$) and hospital discharge ($p < 0.05$) prevalence, when excluding poverty as a control variable
- Counties with higher percentage female vs. male populations are associated with higher ACSC ER visits and hospital discharges ($p < 0.001$), regardless of poverty status, health outcome ranking, or health factor ranking
- Counties with a higher percentage non-white population vs. white population have a lower ACSC ER visit ($p < 0.05$) and hospital discharge prevalence ($p < 0.01$), regardless of poverty status, health outcome ranking, or health factor ranking

	5-mile driving distance (%)	15-minute drive time (%)
Pharmacies	77.81%	95.07%
Safety-net clinics	47.004%	82.92%

ACSC composite: angina, asthma, chronic obstructive pulmonary disease, heart failure, diabetes mellitus, diabetes mellitus with ketoacidosis or coma, diabetes mellitus with unspecified complications, Grand Mal or other epileptic conditions, and hypertension



Conclusion

- Community pharmacies are well-positioned to address ACSC that lead to increased healthcare resource utilization such as ER visit due to community pharmacy accessibility
- Leveraging Georgia pharmacists to provide primary care services is one approach to address current access to care issues in the state, improve quality of care, and decrease preventable healthcare resource utilization, especially in rural areas
- Community pharmacists may enter state CDTM protocols to deliver primary care services, and by doing so would increase care access points and potentially address health disparities seen in Georgia

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