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BACKGROUND

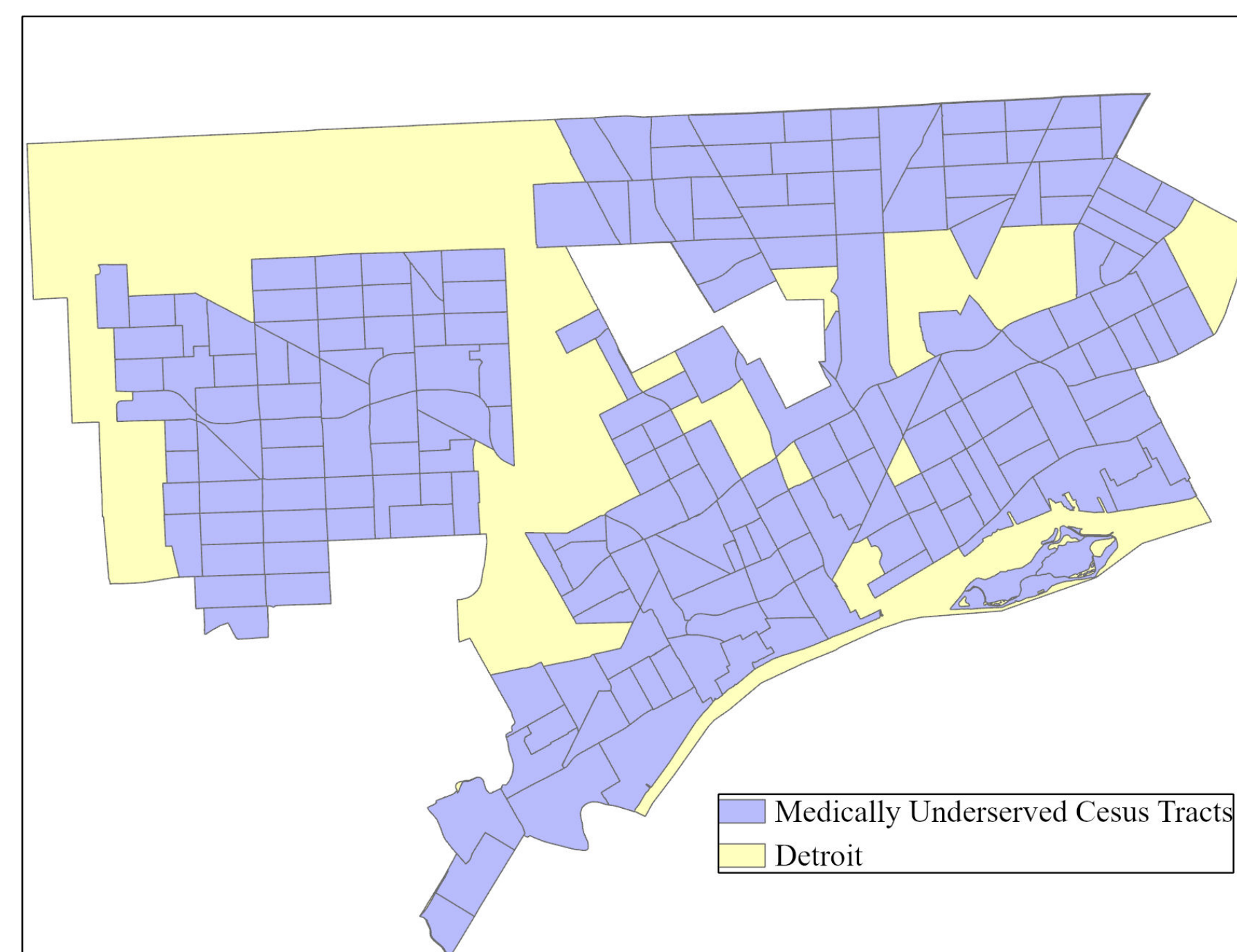
Over 630,000 Michiganders have a substance use disorders (SUD) and about 80% are not receiving care.¹ The rate of unmet need for SUD care in the Detroit-Dearborn-Livonia is 81%.¹ Shortages of providers, financial concerns, and lack of transportation may serve as barriers in patient access to SUD program services. Geographic placement of facilities in neighborhoods should consider community need and accessibility. This geographic analysis investigates current SUD program facility locations in Detroit and their surrounding area community demographics.

METHODS

- ArcGIS Pro, a geographic information systems application, was used to visualize and analyze data by creating 2D maps and tables.
- Data on licensed substance use disorder (SUD) programs, medically underserved areas, and zip codes was retrieved from the State of Michigan's and City of Detroit's GIS Open Data portals.
- 2019 Census tract data was used to run statistical summaries of demographics.
- Location analysis was conducted using 1-mile buffers.
- Criteria for medically underserved areas/populations (MUA/Ps) set by HRSA Office of Rural Health Policy and based on Index of Medical Underservice (IMU). Four criteria: population to provider ratio; percent of the population below the federal poverty level; percent of the population over age 65; and infant mortality rate.²

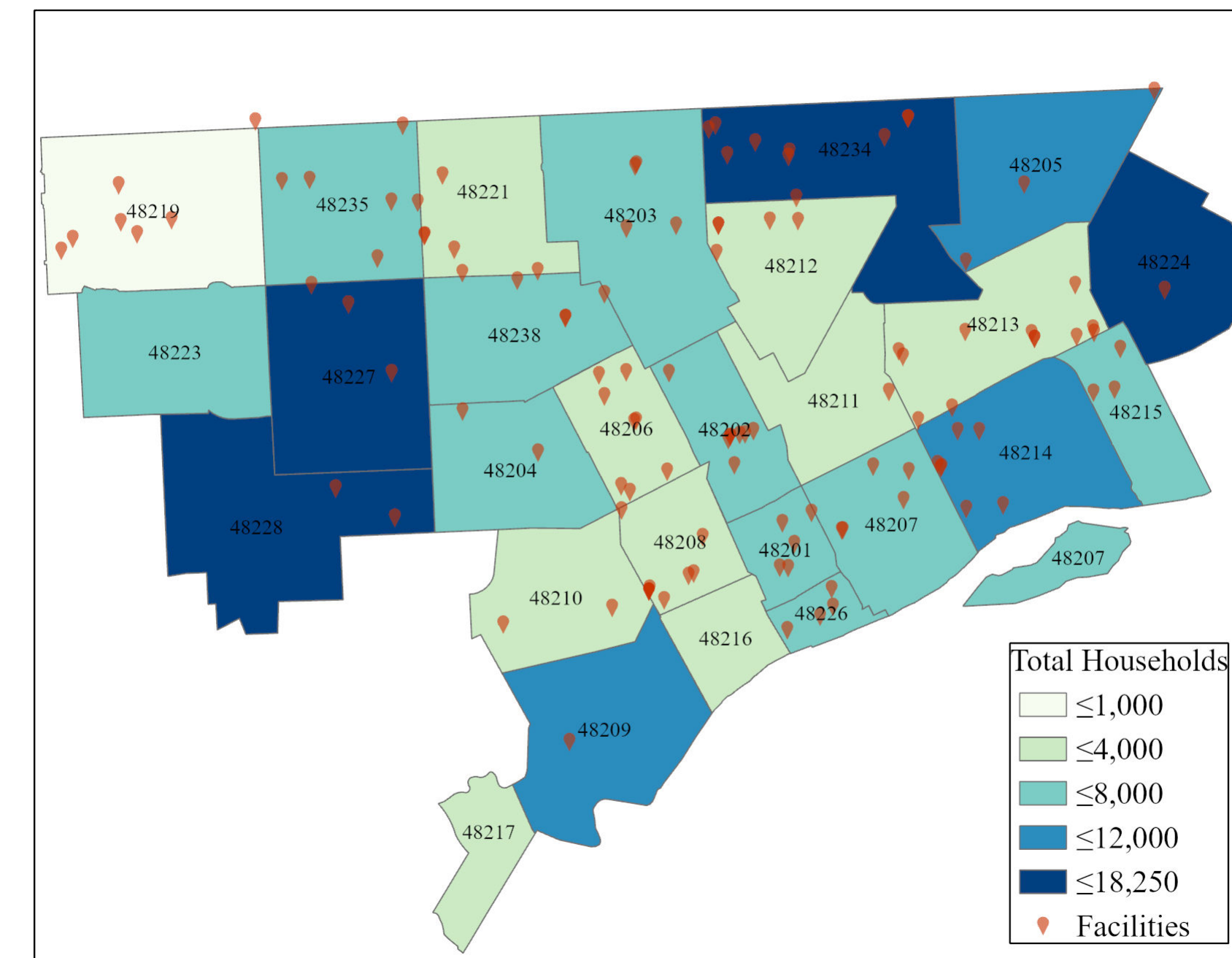
MAPS

Medically Underserved Areas

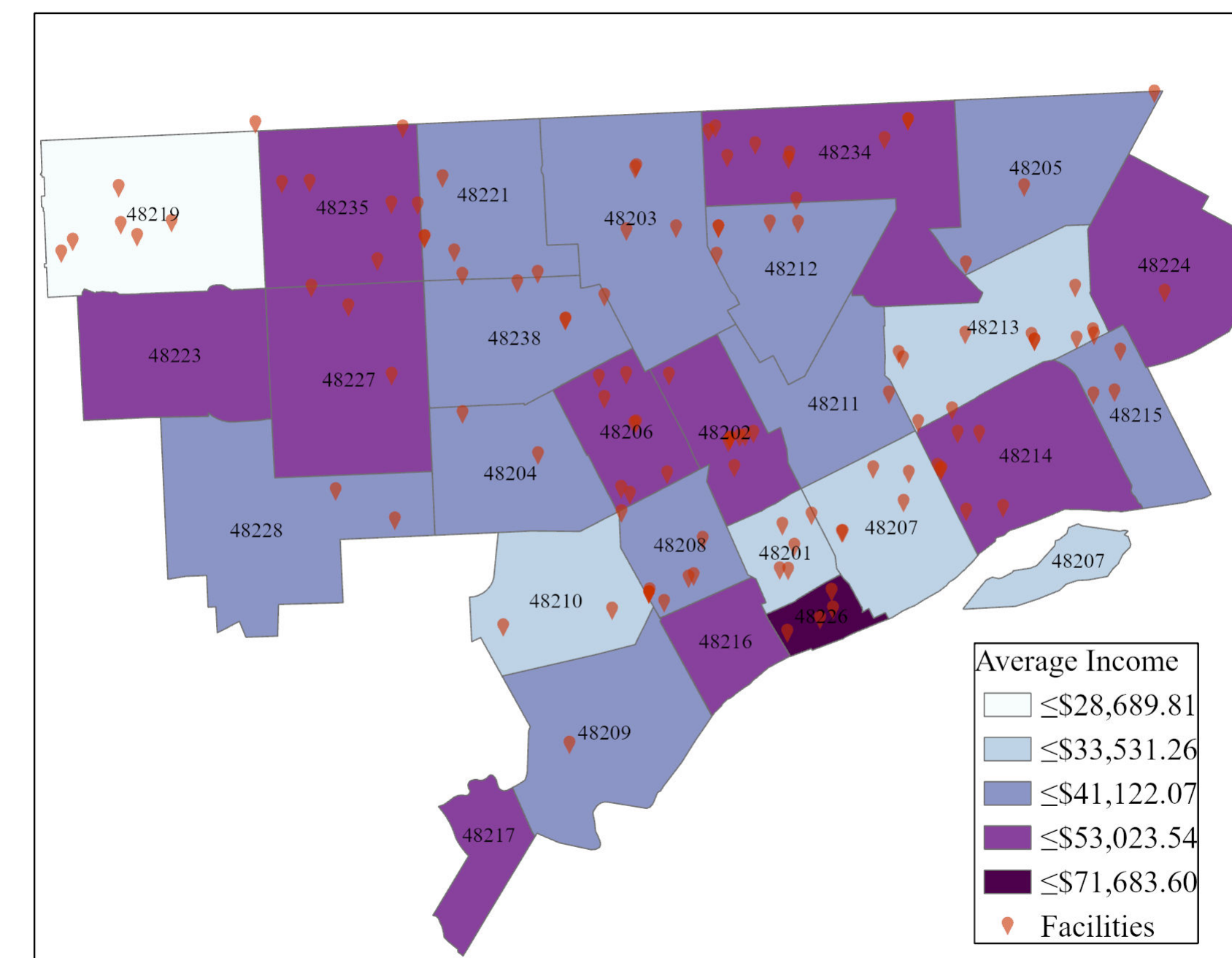


MAPS CONT'D

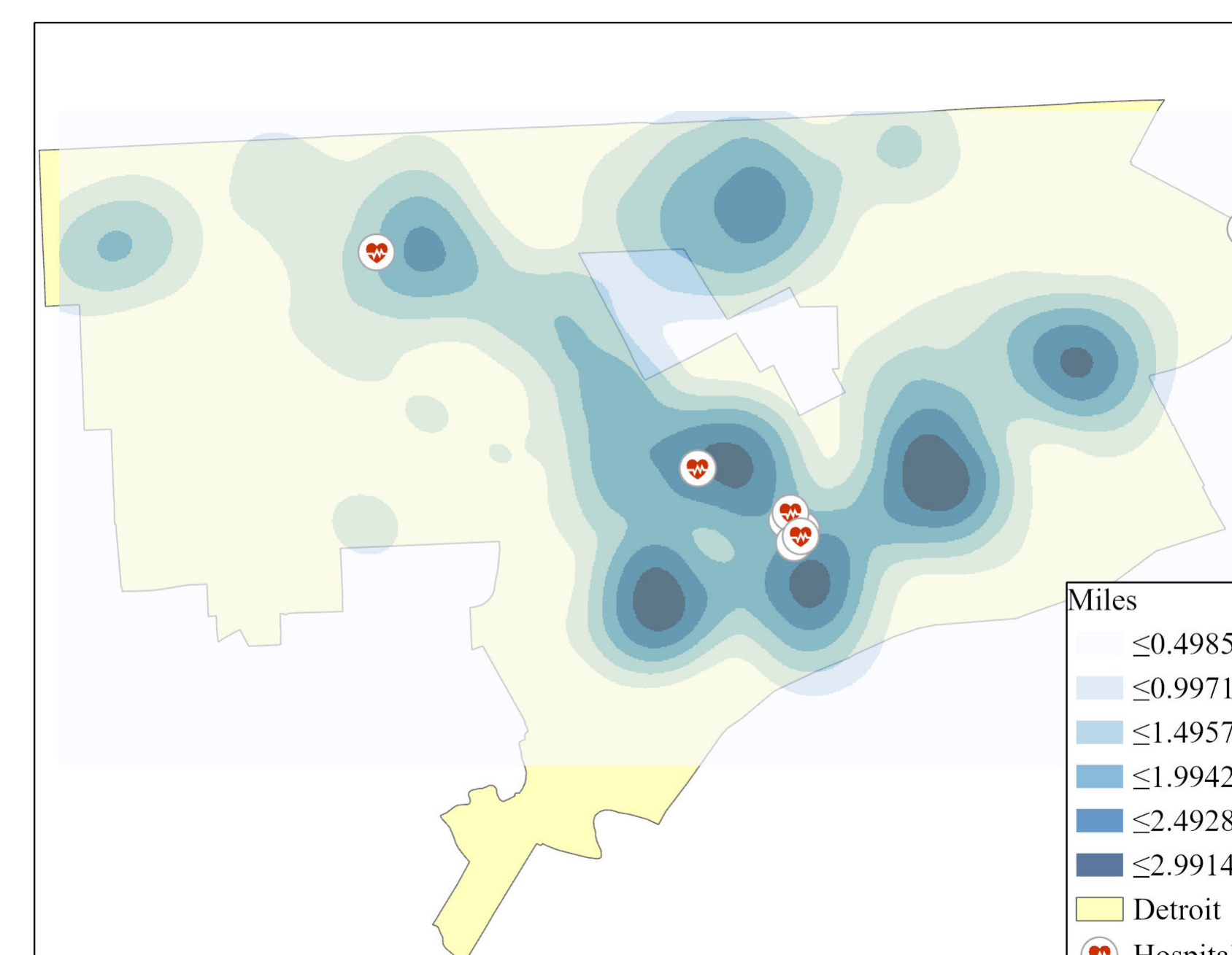
Total Households by Zip Code



Average Income by Zip Code



Density of SUD Facilities in Detroit



TABLES

Underserved Zip Code Demographics						
Zip Code	Total Population	Total Household	Child Population	Workage Population	Senior Population	Average Household Income
48201	13,120	7,320	1,481	9,727	1,912	\$30,508
48202	13,564	6,501	2,274	9,281	2,009	\$41,168
48203	13,697	5,820	3,173	8,326	2,198	\$39,576
48204	12,089	4,956	2,796	7,213	2,080	\$40,433
48205	33,216	10,639	9,875	20,482	2,859	\$40,547
48206	7,773	2,934	1,721	4,627	1,425	\$44,899
48207	11,642	5,311	2,622	6,836	2,184	\$33,127
48208	7,998	3,331	1,765	5,195	1,038	\$37,958
48209	30,573	9,503	10,195	18,011	2,367	\$39,915
48210	5,444	1,924	1,497	3,276	671	\$30,451
48211	5,153	1,749	1,428	3,023	702	\$37,830
48212	12,046	3,265	2,834	7,933	1,279	\$34,999
48213	10,525	3,882	2,520	6,138	1,867	\$32,295
48214	21,030	9,683	3,891	12,439	4,700	\$42,189
48215	12,094	4,784	2,801	7,133	2,160	\$35,810
48216	5,247	2,243	1,122	3,381	744	\$50,400
48217	6,536	2,723	1,334	3,911	1,291	\$41,716
48219	677	367	118	389	170	\$21,099
48221	4,558	1,755	1,067	2,651	840	\$39,661
48223	17,892	6,706	4,500	10,916	2,476	\$44,710
48224	36,112	12,254	9,933	22,428	3,751	\$49,058
48226	6,562	4,422	413	4,942	1,207	\$71,684
48227	40,649	15,211	9,698	24,399	6,552	\$43,081
48228	50,899	18,138	14,073	30,813	6,013	\$41,122
48234	32,494	12,078	8,076	19,813	4,605	\$41,387
48235	10,876	4,086	2,417	6,344	2,115	\$45,184
48238	16,687	6,652	3,981	9,844	2,862	\$39,375

1 Mile Buffer Demographics around SUD facilities				
Name*	Average Household Income	Total Population	Total Households	
Abundant Community Recovery Services	\$ 36,544	38,215	15,441	
Agape Connections International	\$ 43,736	20,121	8,029	
Alkebu-lan Anti-D.O.P.E. Building Positive Leaders Prevention Program	\$ 34,147	8,441	3,037	
All Well-Being Services	\$ 47,818	14,670	7,609	
Alternatives for Girls	\$ 35,802	13,407	4,745	
American Indian Health & Family Services of SE MI	\$ 37,075	14,954	4,129	
Arab-American and Chaldean Council	\$ 37,308	9,821	4,115	
Arab American & Chaldean Council Detroit Drug Prevention Project	\$ 37,308	9,821	4,115	
Ascension Eastwood Behavioral Health	\$ 49,737	8,259	2,945	
BABES World	\$ 38,148	10,197	3,701	
Beginning New	\$ 35,548	13,859	5,568	
Black Caucus Foundation of Michigan	\$ 43,630	20,920	8,328	
Black Family Development	\$ 35,098	22,015	9,229	
C.O.P.E. X-ITCARE	\$ 49,189	21,107	7,330	
Capuchin Soup Kitchen	\$ 52,409	12,202	6,473	
CareFirst Community Health Services	\$ 43,449	10,430	4,243	
Center for Urban Youth & Family Development	\$ 43,084	20,392	7,729	
Center for Youth and Families	\$ 36,525	16,027	7,572	
Century Living	\$ 43,257	10,371	3,763	
Chalmers Clinic #3	\$ 38,456	13,854	4,757	
Chance For Life Organization	\$ 59,513	10,778	7,432	
Changing Lives and Staying Sober	\$ 40,578	14,841	5,780	
Chemical Dependency - Detroit	\$ 37,194	14,295	7,143	
Cherry Street Services	\$ 32,977	8,414	3,011	
Childrens Center - Substance Abuse Program	\$ 35,637	21,001	10,818	
Choice	\$ 45,306	20,040	11,467	
Community Health Awareness Group	\$ 63,642	6,489	4,375	
Community Programs	\$ 35,563	16,942	5,068	
Community Social Services of Wayne County	\$ 43,289	14,270	5,656	
Creating a Healthy Community Program	\$ 31,980	10,190	3,487	

* Full table (n=100) not included

CONCLUSIONS

- Zip codes 48227 and 48228 have a population greater than 40,000 and an average household income less than \$43,100. These zip codes also have fewer SUD program facilities and are further away from other SUD program facilities.
- SUD program facilities are generally accessible in Detroit. Most of them are located around the eight hospitals in the city, which are in central and east Detroit.
- The west side of the city makes up a large portion of the city's population; however, there are fewer SUD program facilities in this area.
- Community health services and SUD programs may consider expanding their services to the west side of the city to improve patient accessibility.

REFERENCES

1. Rhyan C, Turner A, Ehrlich E, Stanik C. Access to Behavioral health Care in Michigan: Final Report. https://altarum.org/sites/default/files/uploaded-publication-files/Altarum_Behavioral-Health-Access_Final-Report.pdf. Published July 2019. Accessed December 11, 2020.
 2. City of Detroit. Medically Underserved Areas Population. City of Detroit Open Data Portal. https://data.detroitmi.gov/datasets/3f782b4894ec46ca5eb76907529de83_0. Published May 2019. Accessed December 11, 2020