

# DOES TELEHEALTH REDUCE GEOGRAPHIC BARRIERS TO BEHAVIORAL HEALTHCARE FOR CONNECTICUT'S MEDICAID BENEFICIARIES OF COLOR?

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## INTRODUCTION

**The onset of COVID-19 resulted in unprecedented changes in the preferred modality of health services delivery.** Safety concerns regarding in-person visits and risk of COVID-19 transmission led policymakers to fully embrace telehealth for clinical care delivery. The Centers for Medicare & Medicaid Services implemented a number of COVID-19 flexibilities and waivers to make telehealth visits more accessible for patients and providers.<sup>1</sup> Many states also implemented additional policies to further improve the availability of telehealth.

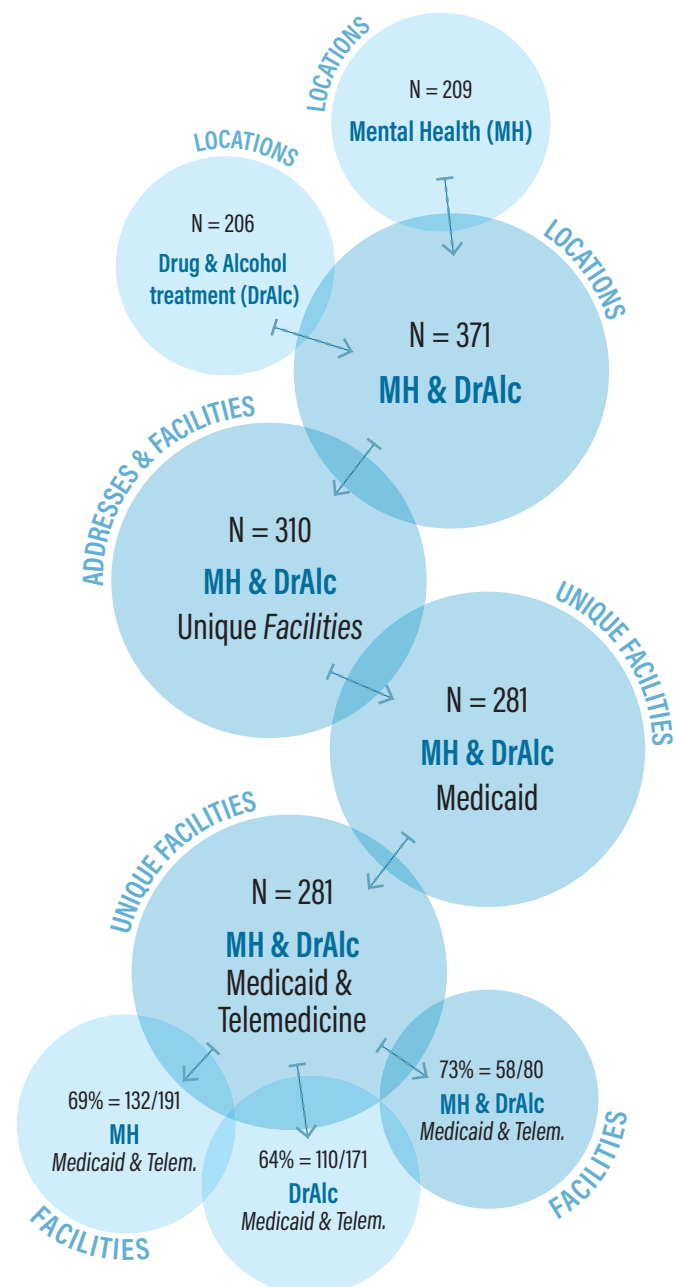
In Connecticut (CT), a series of executive orders were passed to expand telehealth access for CT's residents.<sup>2</sup> These executive orders relaxed laws regulating telehealth, which resulted in expansions in delivery methods (including audio-only) and the types of providers authorized to deliver telehealth services, temporary suspensions in requirements for provider licensure and certifications, and expanded Medicaid coverage for telehealth. On July 31, 2020, the CT State Senate passed H.B. No. 6001 "An Act Concerning Telehealth,"<sup>3</sup> which codified Governor Ned Lamont's executive orders and extended modifications to telehealth coverage laws through March 15, 2021. To

further extend legislative action to expand access to telehealth services, Governor Lamont passed Executive Order 10C<sup>4</sup> and Executive Order 11E<sup>5</sup>, the latter extending current modifications to telehealth coverage laws through May 20, 2021.

During this time, several bills were raised by the CT General Assembly to expand the provision of telehealth services in the State.<sup>6-8</sup> One of which is H.B. No. 6472, which proposes extending access to telehealth services for Medicaid recipients through June 30, 2023. The passing of H.B. No. 6472 would also require the Commissioner of Social Services to submit a report including:

whether the expansion of telehealth services pursuant has increased access to health care among Medicaid beneficiaries; regions of the state that have experienced an increase in access due to the expansion of telehealth services; any cost savings realized by the state for nonemergency transportation or other services related to the expansion of telehealth services; and recommendations concerning whether Medicaid beneficiaries would benefit from a permanent expansion of telehealth services.<sup>8</sup>

trauma-related symptomatology among non-Hispanic Black Americans resulting from direct and vicarious exposure to police-related killings, further stresses the importance of permanent legislation focused on removing barriers to healthcare access for CT's communities of color. While support for H.B. No. 6472 has focused on the impact of telehealth on observed reductions in



*Notes: Mental health and Drug and alcohol treatment facilities, which were combined in one dataset with unique behavioral health treatment facilities (i.e. same Mental health and Drug and alcohol treatment facilities providing services at the same address were not double-counted).*



socio-structural barriers to care such as transportation, reimbursement, and care continuity, to our knowledge, no studies have used geospatial visualization to demonstrate the impact of telehealth on geographic barriers HUSKY Health beneficiaries of color may experience when accessing behavioral healthcare services.

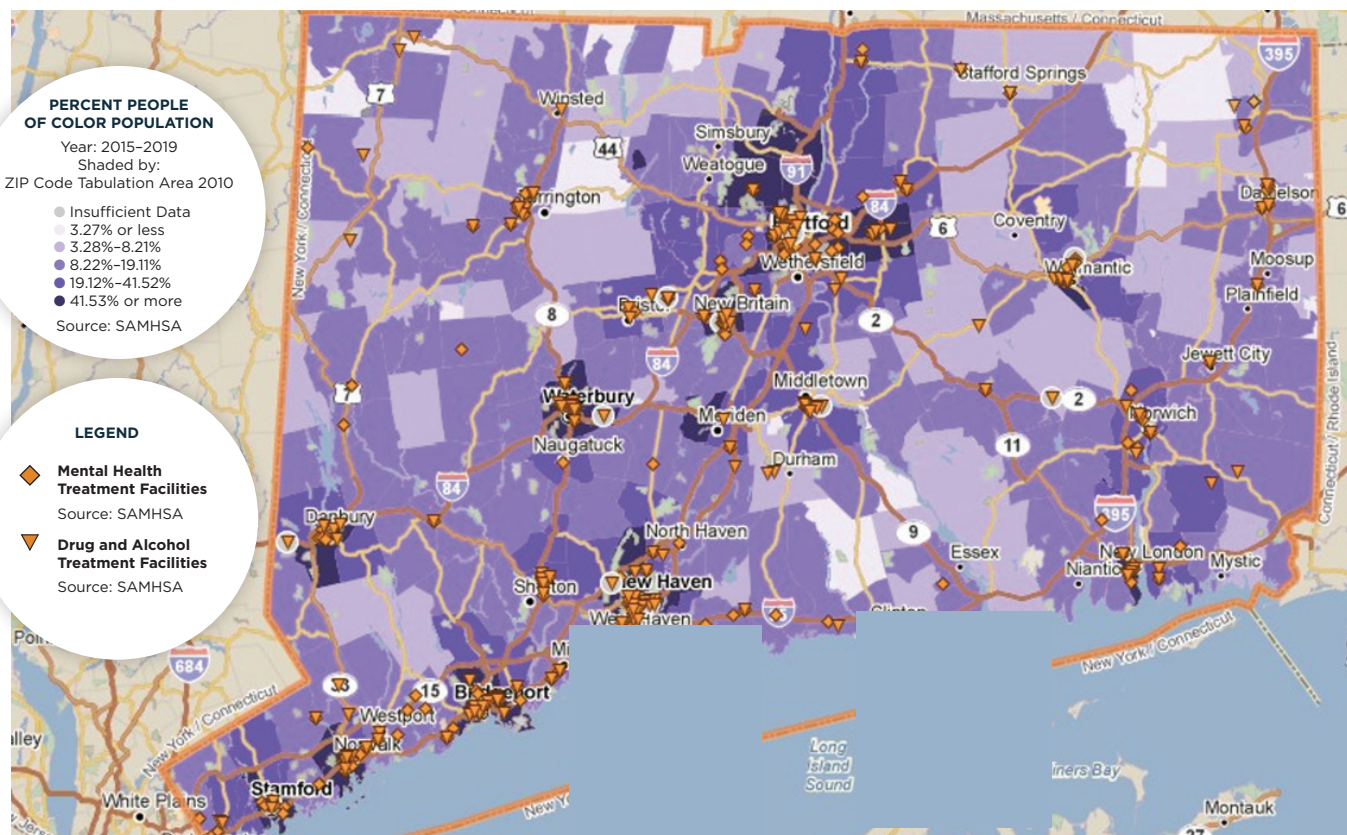
This report presents initial findings regarding potential racial/ethnic differences in the geographic distribution of and access to Medicaid-eligible behavioral health services and facilities in Connecticut.

## METHODS

We used spatial data to evaluate the geographic distribution of CT's Medicaid-eligible telebehavioral health services, in relation to the population density of residents of color (% Hispanic and % non-Hispanic Black). Spatial data is available in two formats: (1) point data—a literal point on a map, with

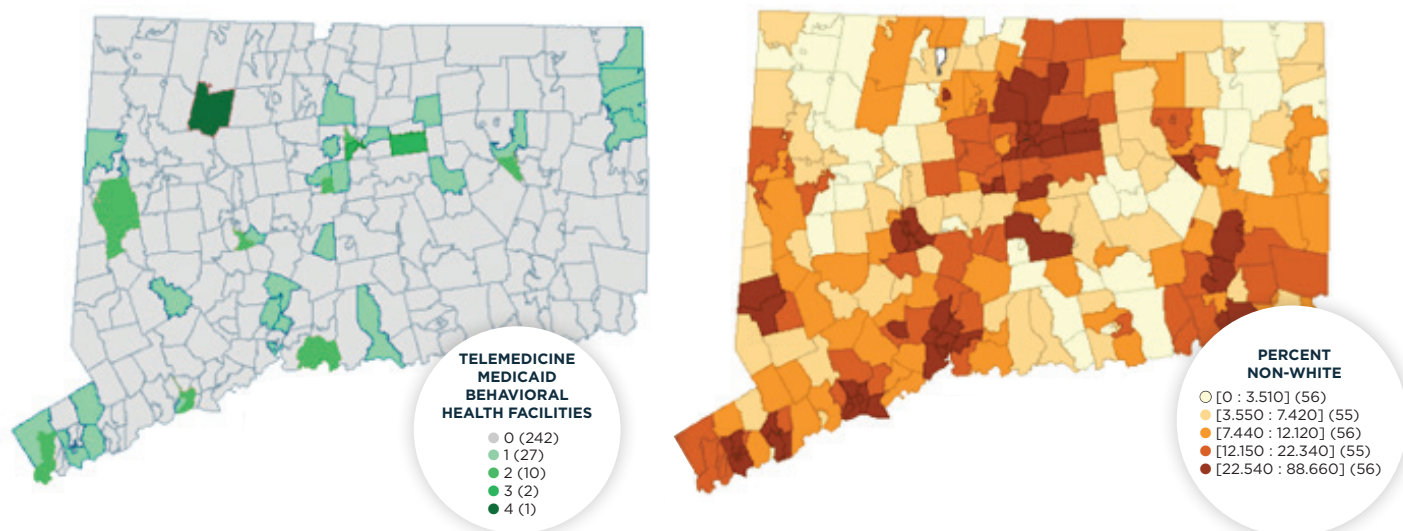
either an address or latitude & longitude exact location of behavioral health facility; and (2) regional aggregate data—aggregated at a common level like ZIP code or census tract. We combined both formats of spatial data into one dataset aggregated at the ZIP code level. To identify the number of facilities in CT providing behavioral health services to Medicaid beneficiaries, we downloaded two sets of data from PolicyMap (Mental health and Drug and alcohol treatment facilities), which were combined with data documenting unique behavioral health treatment facilities (i.e., Mental health and Drug and alcohol treatment facilities providing services at the same address were not double-counted). We marked facilities providing services to Medicaid recipients (identified using 'payment' codes present in PolicyMap facilities data), and then confirmed their delivery of telebehavioral health services by contacting each facility directly. The details of these data processing and verification methods are provided in Figure 1.

**MAP 1.** Map of the original Policymap behavioral health facilities: Mental Health Treatment Facilities & Drug and Alcohol Treatment Facilities, against percent non-Hispanic White residents

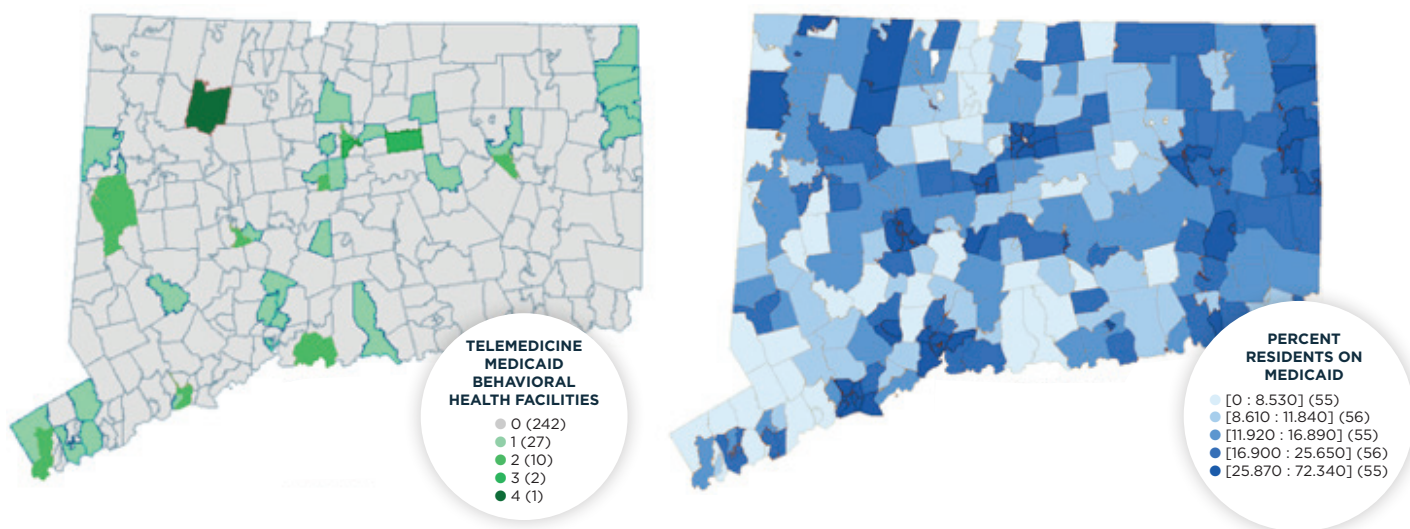




**MAP 2.** Side-by-side Geoda map of the behavioral health Medicaid telemedicine facilities, against percent non-Hispanic White residents



**MAP 3.** Side-by-side Geoda map of the behavioral health Medicaid telemedicine facilities, against percent residents on Medicaid



These data were used to test whether the number of behavioral health facilities providing telehealth for Medicaid beneficiaries per ZIP code, is related to the number of both non-White and non-Hispanic Black Medicaid beneficiaries residing in them. We used maps to both visualize the geographic distribution and to provide spatial lagged versions of outcomes. We then expanded the zero-inflated Poisson model to analyze spatial data, by including the spatial lag version of the outcome generated in GeoDa using the queen contiguity weight matrix.<sup>14</sup> Spatial zero-inflated Poisson models were tested to determine whether the percentage of non-Hispanic White residents predicted a higher non-zero count

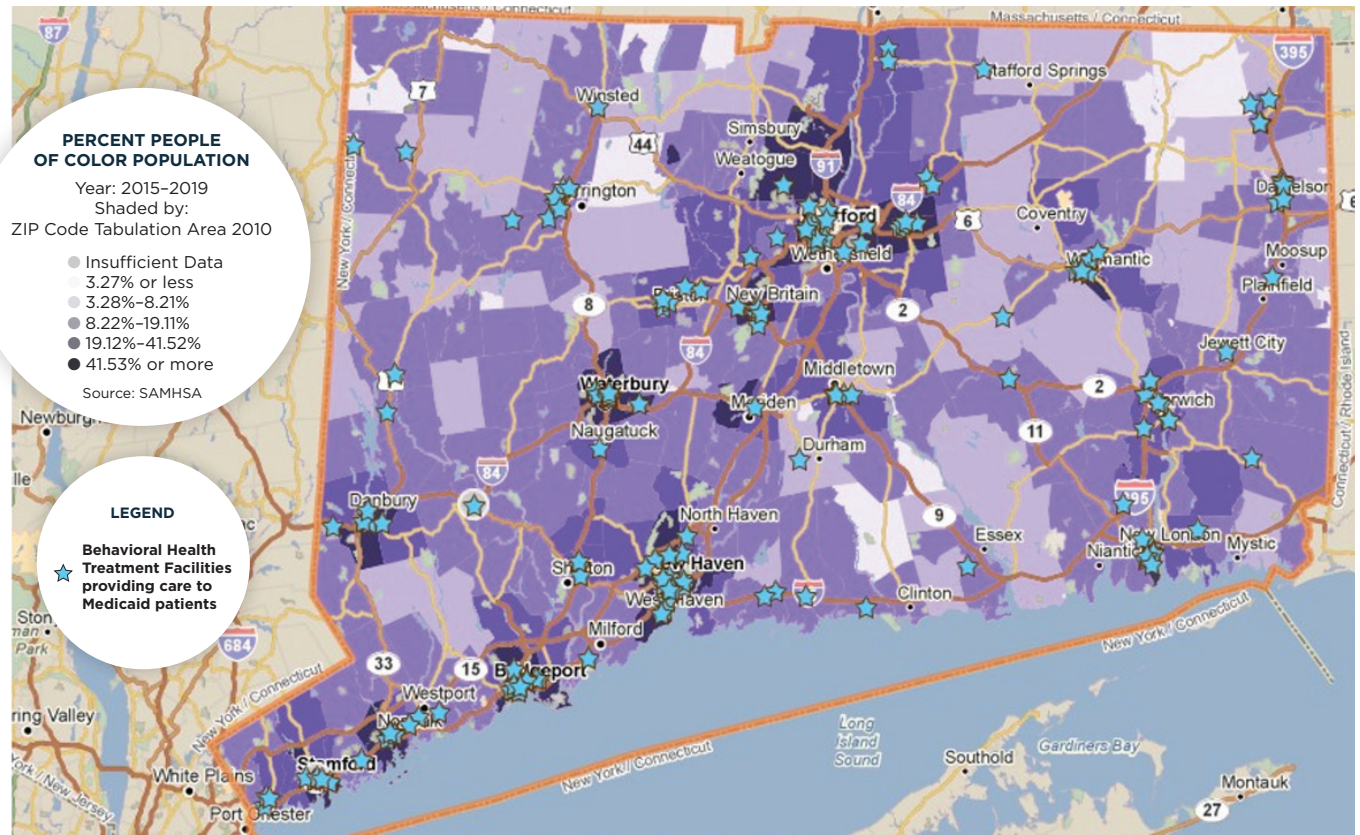
of facilities and/or beneficiaries. We repeated the test with %Hispanic and %non-Hispanic Black along with % on Medicaid as predictors (results shown in Figures 3.i–3.iii). PolicyMap<sup>15</sup> and GeoDa were used to cross-check and visualize these data into maps.

## RESULTS

There are 282 facilities offering behavioral health services in CT to Medicaid beneficiaries, of which 65% (184) provide telehealth services (see Figure 1). The distribution of behavioral health facilities offering telehealth for Medicaid beneficiaries in CT is shown in Maps 1-4 (see Appendices). According to these maps, 100



**MAP 4.** Policymap map of the behavioral health facilities providing care to Medicaid patients, against percent non-Hispanic White ZIP residents



of CT's 282 ZIP codes have Medicaid-eligible behavioral health treatment facilities, and only 40 of these ZIP codes have treatment facilities with telehealth health capabilities. The results from the zero-inflated Poisson Model are shown in Table 3. Statistical significance tests reveal that ZIP codes with more Medicaid beneficiaries, irrespective of their race or ethnicity, contain a higher percentage of Medicaid-eligible behavioral health treatment facilities with telehealth capabilities.

## CONCLUSIONS & IMPLICATIONS FOR FUTURE RESEARCH & TELEHEALTH POLICY

The distribution of behavioral health facilities offering telehealth services to CT's Medicaid beneficiaries does not appear to have a

systematic (homogenous across the state ZIP codes) relation to the share of non-Hispanic Black or Hispanic residents present. However, preliminary findings from a sub-analysis of the study data suggest that ZIP codes with higher percentages of non-Hispanic White residents, may have more locations of Medicaid-eligible behavioral health facilities with telehealth capabilities (see Table 2 and Map 5). Figures 2-4 add nuance to these pure statistical findings for the range of predictors observed in these data. Broader models like spatial structural equation modeling (sSEM) analyses are needed to test more precise associations, like whether ZIP codes with more minority residents have more Medicaid residents, and as a consequence these ZIP codes have more (or fewer) facilities equipped with telebehavioral health capabilities for Medicaid beneficiaries. For a more precise view of the communities served by these facilities, future analyses would benefit from separating out federally qualified health centers (FQHCs)



from other health facilities, as FQHCs are established and positioned to directly serve lower income and underserved communities.<sup>16</sup>

The results of this study suggest that limited geographic access to Medicaid-eligible behavioral health treatment facilities is not the primary driver of racial disparities in services uptake among CT's beneficiaries of color. Such findings suggest that legislation solely focused on reducing geographic barriers to behavioral health treatment resources may have fairly limited impacts on advancing behavioral health equity in CT. The demonstrated disparities in access to in-person behavioral health services pre-pandemic suggests that minority populations face additional obstacles in healthcare utilization.<sup>13</sup> It is important to note that geographic access does not always result in more services uptake. Processes of care delivery, competing patient demands, and unmet socioeconomic needs also play a role in decisions to seek behavioral health treatment. Moreover, we also need to consider that typical definitions of access to care (i.e., definitions other than 'living in the same region with a healthcare facility') are not sufficient or precise enough to capture multidimensional factors (i.e., time, trust, patient-provider relationships) shaping how

or why individual's command appropriate health resources. Thus, an important next step will be to determine which of these social determinants are driving decisions to use behavioral health treatment among CT's Medicaid beneficiaries of color. Moreover, investigating potential access to geographically proximal facilities provides a cursory look at factors associated with telebehavioral services uptake. Despite these recommendations, telehealth is an essential tool in the toolkit for reducing socioeconomic (e.g., transportation) barriers to healthcare and dismantling an inequitable healthcare system. At the time of this publication and since the public hearing held on February 23, 2021, we were unable to locate any further legislative steps taken to advance H.B. No. 6472. However, on May 10, 2021, Governor Lamont signed a separate house bill—H.B. No. 5596—modifying current telehealth coverage laws until June 30, 2023.<sup>18</sup> While these modifications will provide continued flexibility in healthcare delivery and access, they are still temporary. The permanent expansion of telehealth benefits for Medicaid beneficiaries, as proposed in H.B. No. 6472, should be a strong consideration for CT's legislative body as they chart a way towards behavioral health equity for CT's medically underserved.

## ACKNOWLEDGEMENTS

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# APPENDICES

**TABLE 1.** Descriptive of the variables reported on

Variable	N (ZIPs)	Mean	Std. Dev.	Min	Max
%Non-Hispanic White	278	15.55%	16.77	0	88.66%
%Hispanic	282	10.20%	12.59	0	62.59%
%Non-Hispanic Black	277	6.09%	10.67	0	76.46%
Telemedicine Facilities	282	0.20	0.56	0	4
Non-Medicaid Facilities	282	0.11	0.46	0	4
Total Facilities	282	0.97	2.11	0	18
%on Medicaid	277	18.22%	13.34%	0	72.34

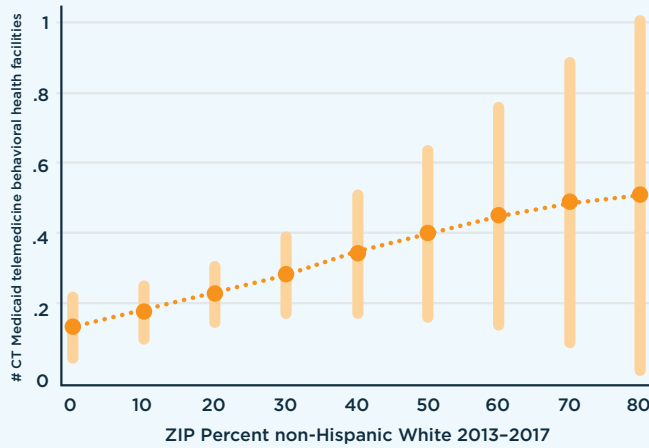
**TABLE 2.** Values across several descriptives for 2 CT neighboring zip codes: 06119 and 06120

ZIP	%nH White	%nH Black	%Hispanic	% on Medicaid	Telemed. Facilities	Non Medicaid Facilities	Total Facilities
06119	22.1	6.2	12.6	14.6	0	0	0
06120	78.3	51.7	43.0	66.1	0	0	6

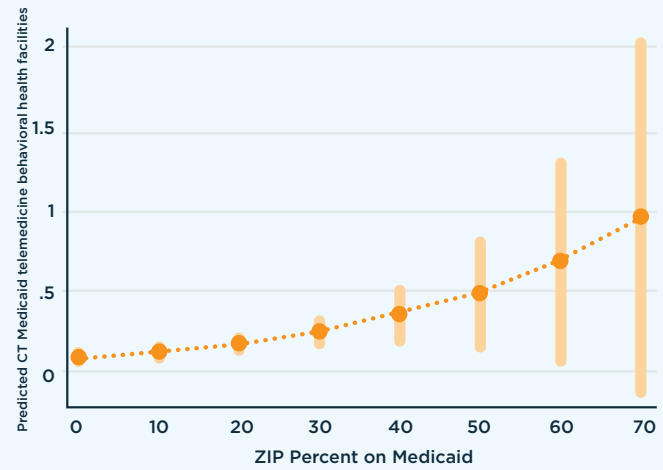
**TABLE 3.** Effects from zero-inflated dual Poisson models with spatial autoregressive lagged co-predictors (see Figures 2-4)

Effect	Type	Estimate	p
%nH White -> #Telemedicine Medicaid	Effect on count	-0.04	.650
%nH White -> #Telemedicine Medicaid	Effect on non-zero	0.57	.020
%Medicaid -> #Telemedicine Medicaid	Effect on count	0.37	.004
%Medicaid-> #Telemedicine Medicaid	Effect on non-zero	-0.15	.581
%nH White -> #nonMedicaid	Effect on count	0.16	.492
%nH White -> #nonMedicaid	Effect on non-zero	0.43	.092
%Medicaid-> #nonMedicaid	Effect on count	-0.44	.129
%Medicaid-> #nonMedicaid	Effect on non-zero	0.41	.324
%nH White -> #Telemedicine Medicaid	Effect on count	-0.04	.650

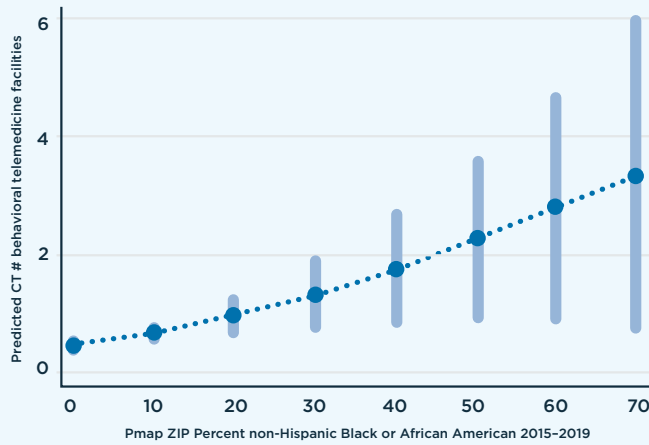
**FIGURE 2.i.** Predicted number of CT behavioral telemedicine facilities with 95% CIs by percent non-Hispanic White residents



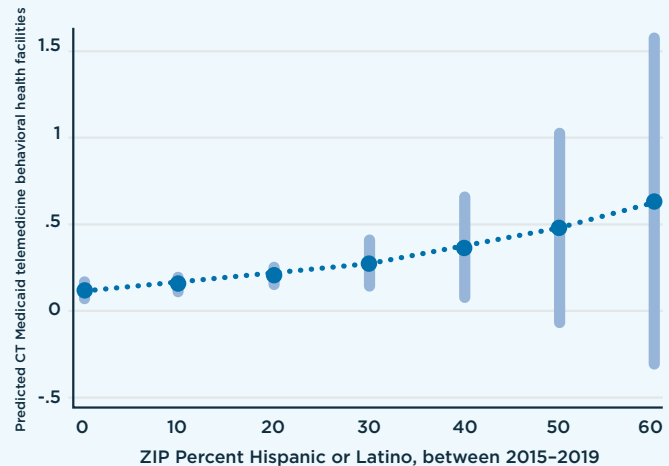
**FIGURE 2.ii.** Predicted number of CT behavioral telemedicine facilities with 95% CIs by percent residents on Medicaid



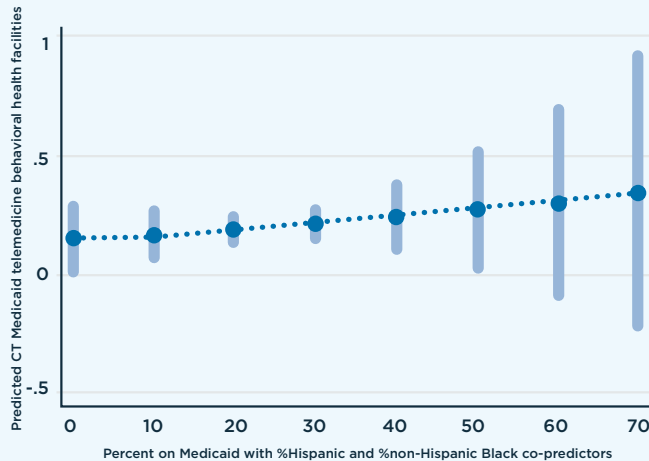
**FIGURE 3.i.** Predicted number of CT behavioral telemedicine facilities with 95% CIs by percent non-Hispanic Black residents (model 2)



**FIGURE 3.ii.** Predicted number of CT Medicaid behavioral telemedicine facilities with 95% CIs by percent Hispanic residents (model 2)

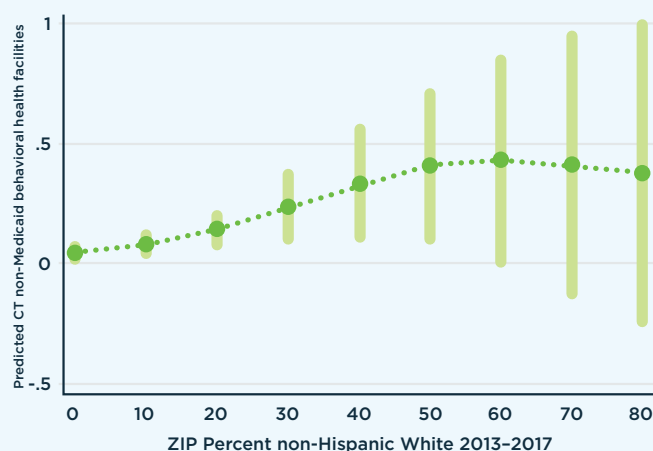


**FIGURE 3.iii.** Predicted number of CT behavioral telemedicine facilities with 95% CIs by percent residents on Medicaid (model 2)

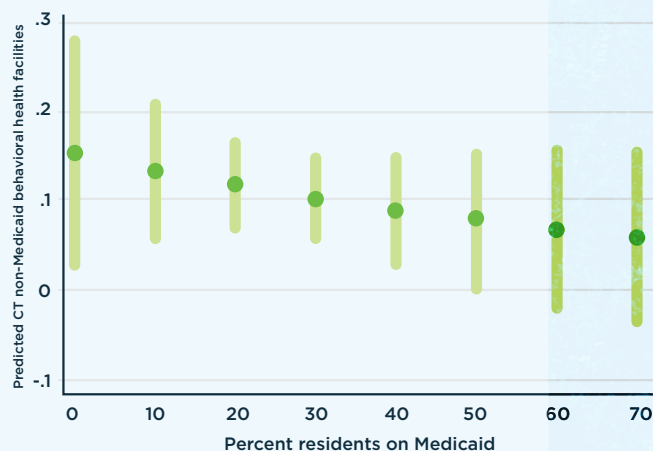




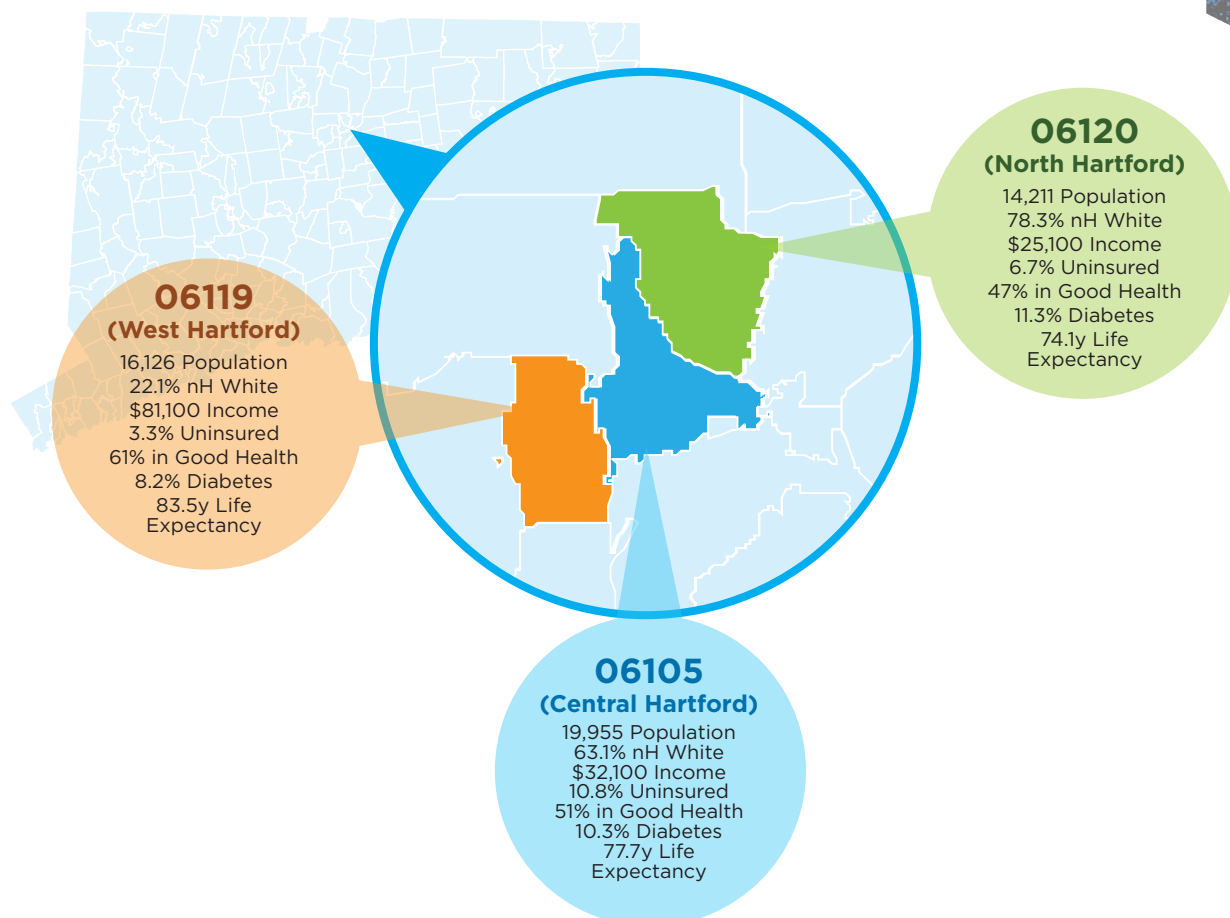
**FIGURE 4.i.** Predicted number of CT non-Medicaid facilities with 95% CIs by percent non-Hispanic White



**FIGURE 4.ii.** Predicted number of CT non-Medicaid facilities with 95% CIs by percent residents on Medicaid



**MAP 5.** Extract of GeoDa map contrasting 2 CT neighboring ZIP codes 06119 and 06120 across several descriptives





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