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# Rural Oral Health Access Disparities in New York State

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## ABSTRACT

**Disparities in access to dental care for those whose primary/only dental insurance is Medicaid is a known issue. The infamous case of 12-year-old Deamonte Driver from Maryland brought this great need for access to private dental care through Medicaid to the fore. Yet, to this date, there has been no resource to address this great need.**

**Dentists accepting Medicaid fall into two categories: those who practice in federally qualified health centers (FQHC), and those who practice privately. FQHCs are known anecdotally to have long waitlists, delaying access to needed care (as in the case of Driver). This is compounded by the inability to identify private dentists who will accept Medicaid. To solve this problem in New York State, we made an interactive map where users of the My Healthy Smiles Mobile Application, created by the New York State Dental Foundation, will be able to find private dentists accepting Medicaid in their locale.**

**Using two publicly available datasets, we generated a new database of private dentists accepting Medicaid in New York State using R, a software environment for statistical computing and analysis. We**

**also analyzed the rate of private dentists/100,000 of the county population to rank the counties with the highest need. This resource has been useful from its generation to help connect patients with providers and to help lobbyists communicate the need that exists to politicians and policymakers interested in improving oral health disparities in New York State.**

Access to dental care in New York State is not equal across all demographics. New York adopted the Affordable Care Act (ACA) Expansion of Medicaid in 2010.<sup>[1]</sup> The purpose of the dental benefit of Medicaid is to provide access to dental care to people who would not otherwise be able to afford it. Medicaid is offered to persons whose annual income is below the 138% federal poverty level (about \$20,000 in 2024).

Insurance plays a major role in access to dental care in the United States. Private dentists accepting Medicaid are a valuable resource for those seeking timely dental care and in some cases, specialty services. In fact, New Yorkers since 2023, have the option of accessing specialty oral health-care, like oral surgery treatments, endodontic care, crown lengthening and restorative care like implants and dental crowns.<sup>[2]</sup> Our work seeks to make finding dentists for these and other services just a few taps of the finger away.

Organizations seeking to coordinate dental care, like the New York State Dental Foundation, have found it very difficult because of the volume of need that exists, particu-

larly in upstate New York. Identifying the areas of greatest need allows for better planning by all stakeholders.

The challenges associated with Medicaid among African Americans have been documented.<sup>[3]</sup> One such challenge in the city demography that was studied was the inability to find dentists accepting their dental insurance. In 2011, when this paper was published, research subjects reported having to travel long distances to reach dentists accepting their form of insurance (ibid. 2011). This added to the cost of access to care and for some even presented a barrier. Given that the bill for the ACA took effect in 2014, Medicaid services could have seen significant changes since that report. Our data, however, show that traveling long distances is the norm in rural areas and that access challenges span across racial and ethnic lines.

The closure of health centers accepting this kind of insurance continues to be a problem because the low reimbursement rates by Medicaid are exceeded by the cost of operating.<sup>[4]</sup> FQHCs bear the brunt of the responsibility in caring for the underserved in both urban and rural areas but are plagued with their own challenges. Private dental offices might be a possible solution to help with the burden of care; the first task is to locate them.

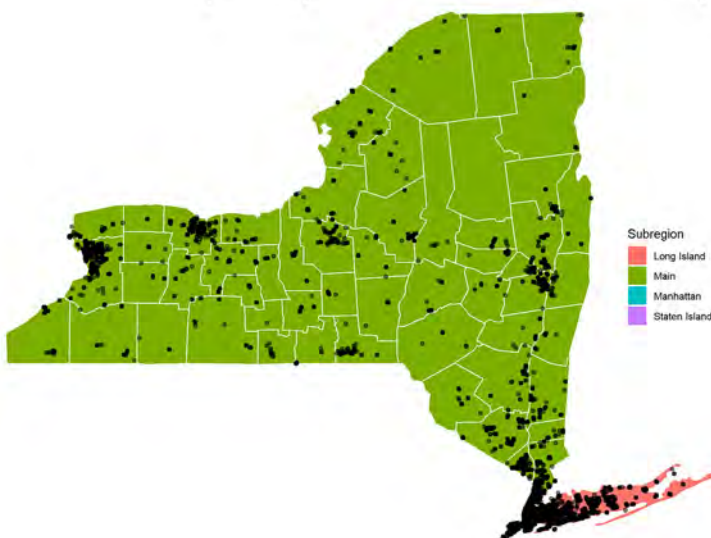
### Significance

Many people postpone dental care because they are uninsured, underinsured or are unable to find a dentist who will take their insurance. Deamonte Driver died from a brain infection arising from an abscessed tooth.<sup>[5]</sup> Driver, who was covered by Medicaid, was unable to find a dentist who would accept his insurance to do the extraction. Our soon-to-be-launched interactive map will connect patients seeking treatment with private dentists who accept Medicaid and, it is hoped, prevent anything like this from happening in New York State.

### Methods

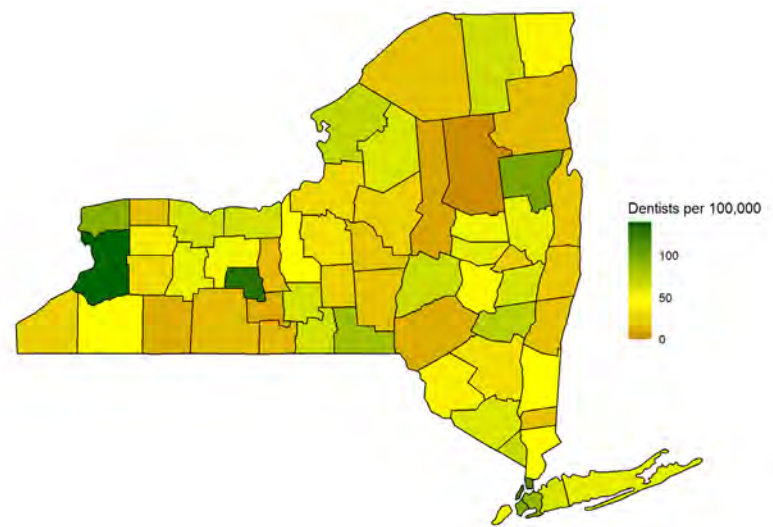
We generated a new dataset of private dentists in New York State who accept Medicaid using two publicly available datasets: the Medicaid Enrolled Provider Dataset<sup>[6]</sup> and the Human Resources and Services Administration (HRSA).<sup>[7]</sup> For the Medicaid data, after filtering for New York State, we selected “Dentists” as the “Profession or Service.” For dentists who practice in federally qualified health care (FQHC) centers (HRSA dataset), we filtered for New York State and added the following columns: Telephone Number; Address; City; ZIP; Longitude; Latitude. The Medicaid Provider list

Medicaid Acceptance by NY Dentists/Providers (not FQHCs)



**Figure 1.** Snapshot of Interactive Map of New York State showing Distribution of Private Dentists Accepting Medicaid. Each dot represents private dentist accepting Medicaid, but there might be multiple dentists accepting Medicaid at private facility. In such cases, dots overlap. Map displays total number of dentists in our new dataset:14,694 (this number may have repeats if dentist works at multiple private facilities).

Number of Non-FQHC Dentists per 100,000 Residents



**Figure 2.** Map of population distribution of private dentists accepting Medicaid/100,000 population. Highest distribution of dentists is in green, transitioning to lesser distributions, which are increasingly orange.

had 16,106 entries, with Medicaid providers having numerous entries by virtue of working in numerous facilities. Of these entries, 1,412, or 9%, were identified as FQHC entries and were excluded from the dataset. Our new dataset consisted of the difference between these two datasets.

We wanted to filter out the FQHCs, but there were no common columns across the two datasets. We therefore had to use the telephone number and address with the county information to cross-reference the two datasets in R.<sup>[8]</sup> Matching on telephone number accounted for the majority of matches and then additionally matching with the first line of the address with county increased the number of matches by approximately 50%. These results give a high degree of confidence; however, they possess any inherent weaknesses from their parent datasets. All attempts to ascertain the exact number of private dentists accepting

Medicaid, like corroborating our data with possible data from any other state agency, proved futile. We then used this data to generate the Interactive Map of Private Dentists accepting Medicaid that will be published on the My Healthy Smiles NY app when relaunched this year.

We were interested in how this related to the population of the counties and so we determined the number of private dentists accepting Medicaid/100,000 of county population using the 2024 New York county population data.<sup>[9]</sup> We then created a Map of the Distribution of Dentists by 100,000 of the county population and generated tables showing the counties with the greatest need and the highest supply of private dentists accepting Medicaid (Figures 1,2; Tables 1,2).

### Discussion

Your private dentist accepting Medicaid is perhaps one of the best kept secrets in town. Many people, including those in the dental community, have resigned themselves to thinking that most private dentists do not accept Medicaid. We set out to find just how many private dentists do accept Medicaid in New York in 2024. In 2023, 92% of rural counties in New York State were designated as health professional shortage areas (HPSA).<sup>[10]</sup> We see this in the maps we generated (Figure 2). Also, the top 10 counties with the fewest dentists/100,000 county population were the most rural counties (Table 1). The top two counties with the smallest number of dentists were in the Adirondack Mountain Region. This means that people who live in these regions who are poor and relying on Medicaid are forced to rely on the FQHC for services.

Contrarily, the top two counties with the largest number of dentists per 100,000 of the county population were located in and around the second largest city in the state—Buffalo (Figure 2) (Table 2). The importance of having a dental home cannot be understated. For instance, routine care is often how early signs of oral and pharyngeal cancer are caught and chronic diseases that can contribute to systemic illnesses like periodontal disease and caries are managed. Numerous vulnerable populations exist in remote areas of New York, including pregnant women, children, the chronically ill, disabled and the aged. Routine care is just as important for them as it is for the able-bodied, if not more so. If able-bodied individuals find it difficult to travel considerable distances for dental care, imagine how much more difficult it is for those who are limited physically.<sup>[3]</sup> More work therefore needs to be done to ensure that the benefits of Medicaid are more equitably accessed between rural and urban areas.

One way of accomplishing this is by providing more avenues for licensure of dentists from other states and other

**TABLE 1**

Counties with Fewest Dentists/100,000 Population

County	Dentist/100,000
Hamilton	0
Herkimer	10
Schuyler	11
Allegany	13
Delaware	13
Chemung	17
Seneca	18
Steuben	18
Essex	19
Orleans	20

**TABLE 2**

Counties with Most Dentists/100,000 Population

County	Dentist/100000
Erie	139
Yates	131
New York	119
Bronx	114
Warren	99
Niagara	93
Kings	92
Queens	87
Broome	81
Greene	73

countries to practice in New York.<sup>[10]</sup> It has been shown that increasing the ethnic and racial diversity of the dental workforce increases the likelihood that underrepresented groups are able to serve in these areas, as they are more likely to do so.<sup>[11]</sup> Increasing the number and distribution of dental schools across the state that accept international dentists might be a viable option as well. It is noteworthy that the areas in the state where dental schools are located, like Rochester, Buffalo and New York City, are the areas with the highest number of dentists accepting Medicaid (Figure 1). Indeed, the University of Rochester Eastman Dental Institute and the University at Buffalo are known for their high acceptance rates of internationally trained dentists.


Another way in which dentists have been addressing this is by employing teledentistry. Its use has been on the rise since the 2020 pandemic. The process employs oral cameras and telecommunication devices to connect remote clinics with providers, who are often located in more urban


Numerous vulnerable populations exist in remote areas of New York, including pregnant women, children, the chronically ill, disabled and the aged.

areas. This has been useful in limiting long trips for consultations and allows for clinicians and patients to focus on procedures for in-person visits. This approach has even been adopted by FQHCs and is covered by Medicaid for triage, consultation, diagnosis, referral, follow-up and health education.<sup>[12]</sup>


Taking dental care to these underserved neighborhoods using mobile dentistry is a viable option that is covered by Medicaid. There are currently a limited number of mobile dental care providers in New York State. This represents an area of relatively untapped potential. It also may be less expensive than establishing a brick-and-mortar establishment, which usually requires that the providers live in the area or nearby. This highlights one factor that affects the establishment of private dental offices—how desirable a location is to live in. People tend to gravitate to areas where there are greater amenities and, therefore, supplying these amenities to remote areas might serve to attract dentists to the area. One limitation to mo-

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bile dentistry is that this type of service is usually stand-alone and does not lend itself to follow-up procedures when necessary. Nevertheless, it might serve as a springboard for establishing a dental facility.

This study does not address the general limitations of health insurance in New York State. As seen in the introduction, reimbursement rates affect the bottom line of businesses and, thus, lead to closures. For this reason, many private dental facilities, although they may be accepting Medicaid, might not be accepting new patients. In the best interest of their practice, they may have to favor other insurance types with higher reimbursement rates. Therefore, the presence of a dot on the map in an area might not translate as access in real time (Figure 1).<sup>[13]</sup> The study does not consider racial and ethnic disparities or socioeconomic status. As a quantitative study, we hope our results have provided the basis for exploring geographical challenges to accessing dental care.

## Conclusion

Most private dentists accepting Medicaid are located in urban areas of New York State. Ours is the first visual representation of the demographic oral health disparities focused on the provision of dental care to the underserved by the private dentist population. It is our hope to prevent anything like what happened in the state of Maryland from ever happening in New York. This interactive map, when launched, will aid in accomplishing that objective when kept up-to-date year after year. ✍

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