

# Dental Utilization Among Publicly Insured Pediatric Oncology Patients

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## ABSTRACT

**Objectives:** Children with complex medical needs face difficulties in accessing dental care. The aim of this study was to investigate access and utilization of dental services among publicly insured children with a cancer diagnosis in North Carolina.

**Experimental Methods:** Cancer patients ages 0 to 21 were identified using ICD-10 diagnosis codes and CPT procedure codes in NC Medicaid claims data between 2016 and 2019. Dental claims were used to estimate two metrics: the percentage of patients who received any dental service (i.e., “access rate”) and among those, the percentage of patients who received preventive dental services (i.e., “prevention ratio”). These estimates among cancer patients were compared to those among the entire NC Medicaid population, as well as between age groups, regions of NC, and federal fiscal years.

**Results:** There were 5,635 NC Medicaid enrollees ages 0-21 who were identified as cancer patients between 2016-2019. Access rates and prevention ratios remained relatively stable during the study period, ranging between 52-54% and 89-90%, respectively. Cancer patients’ access rates were similar to the overall population (i.e., 51-52%) whereas their prevention were slightly lower than the overall population (i.e., 94%). Considerable variation in both dental access and prevention was found between age groups (e.g., utilization peaked among 6-9-year-olds) and state regions.

**Conclusions:** Dental utilization among Medicaid-enrolled cancer patients in NC is similar to the overall population. While a considerable proportion of oncologic patients receive preventive dental services, there appears to be room for improvement, overall and particularly among children under the age of 6.

## BACKGROUND

- Cancer is the **second leading cause of death** in children ages 1-14<sup>1</sup>.
- Children with special health care needs are **more likely to have unmet dental needs**<sup>2</sup>.
- Oral health is an integral part of **interdisciplinary care**<sup>3</sup>.
- Immunosuppressive treatment has many short and long-term complications including **mucositis, caries, salivary gland dysfunction and secondary malignancies**<sup>3</sup>.
- AAPD recommends all patients undergoing immunosuppressive therapy should have an **oral examination prior to initiation of treatment**<sup>3</sup>.
- Patient’s **oral health should be re-evaluated every 6 months** (or in shorter intervals)<sup>3</sup>.

## METHODS

Pediatric cancer patients ages 0 to 21 were identified using ICD-10 diagnosis codes and CPT codes for chemotherapy, radiation and surgical procedures in NC Medicaid Claims data between 2016 and 2019

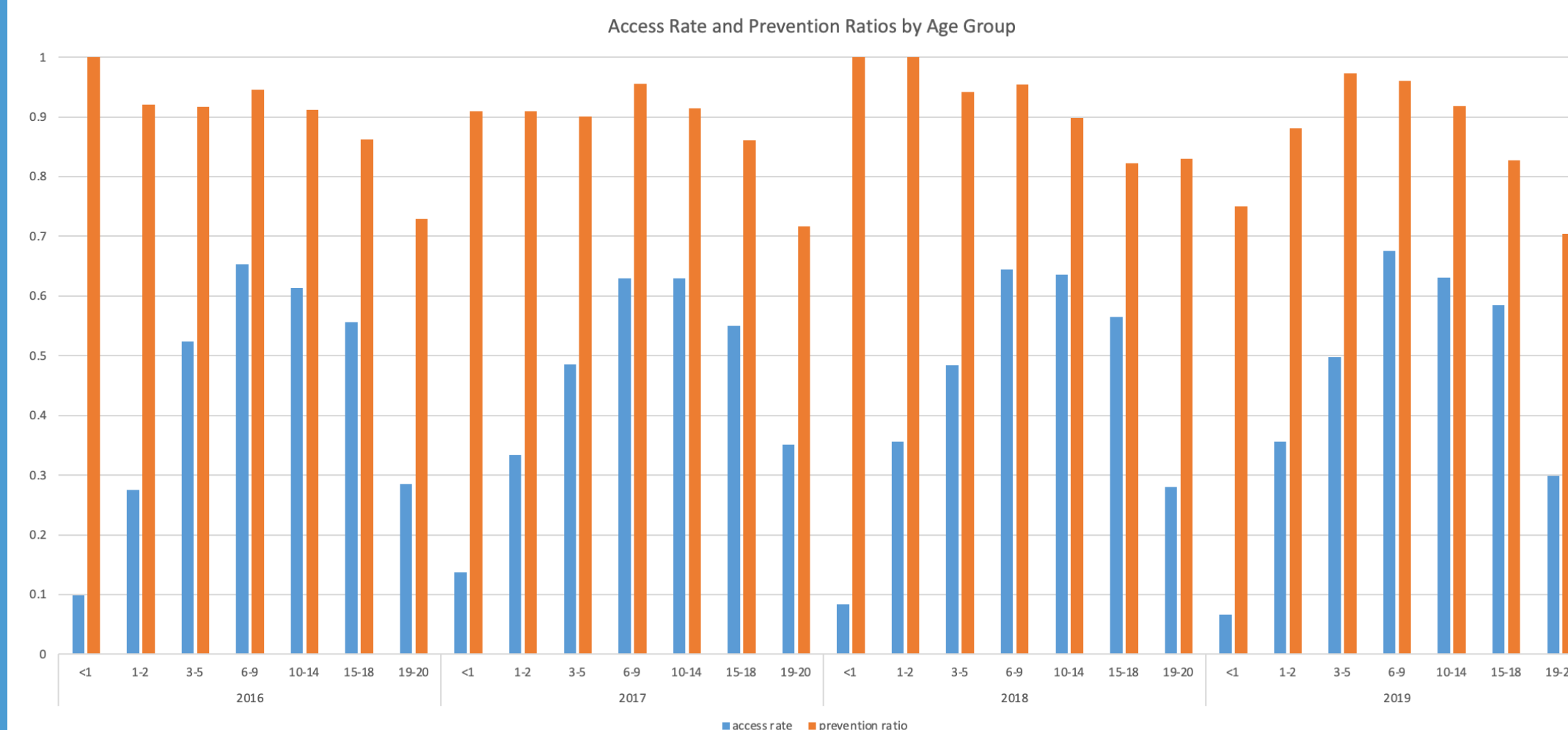
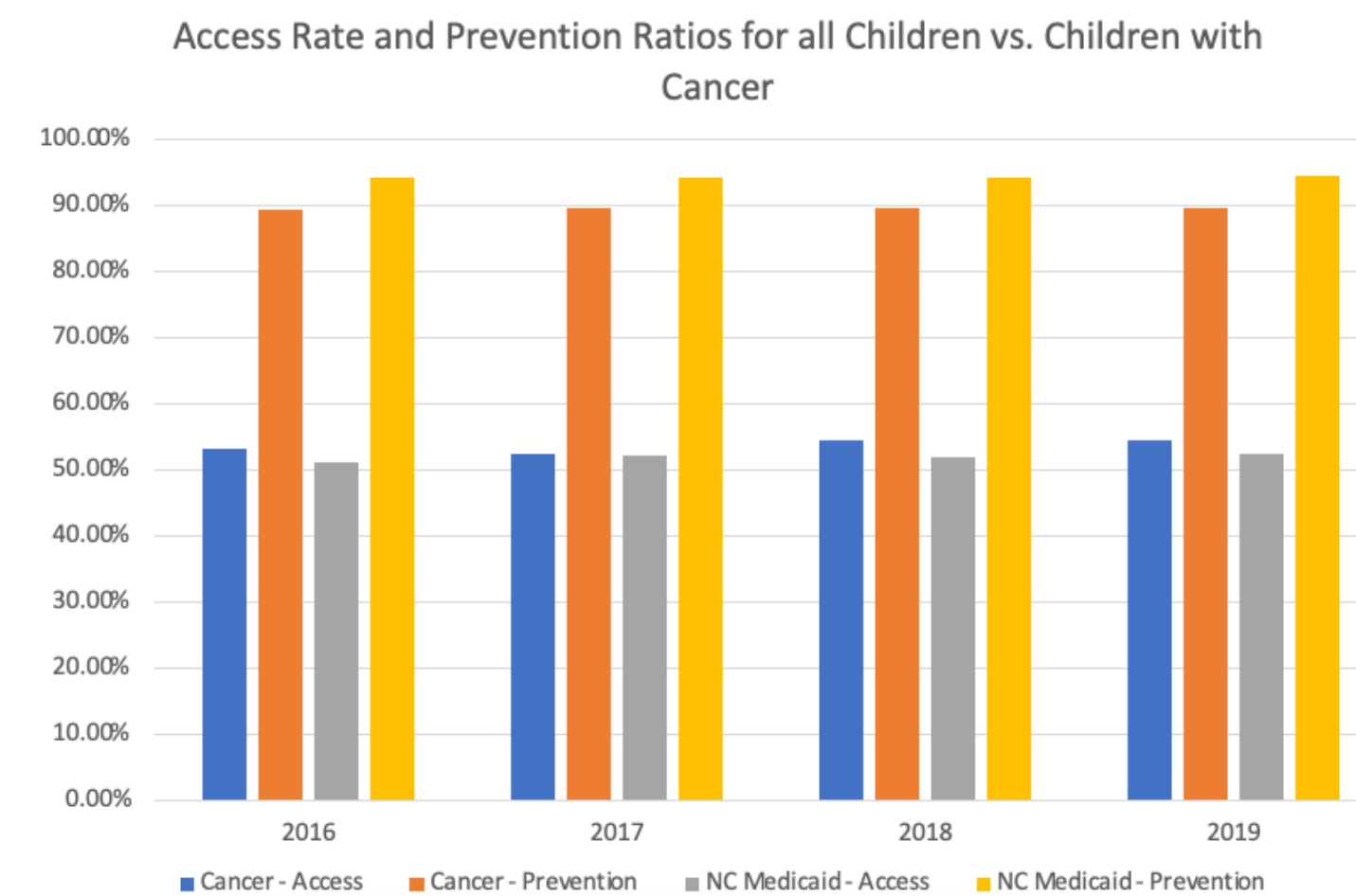
Dental claims were used to estimate two metrics as defined by Chalmers et al. 2017 <sup>4</sup>

- 1) **Access rate:** percentage of patients who received any dental service
- 2) **Prevention ratio:** percentage of patients who received preventive services

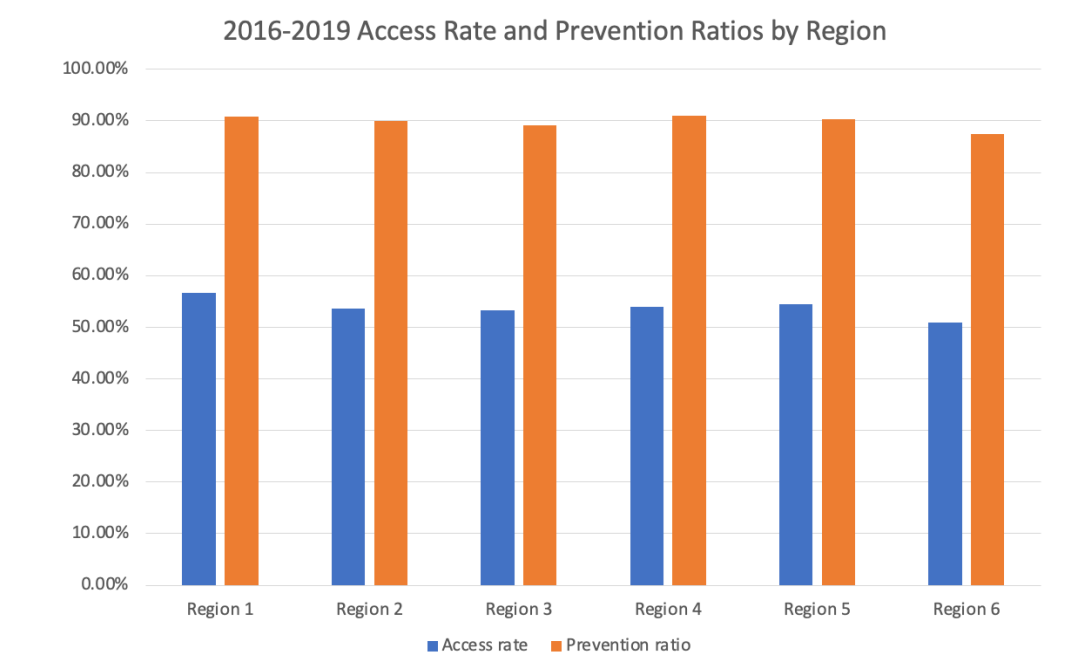
The estimates were then **stratified by age groups, managed care regions, and federal fiscal years** and compared with **entire pediatric NC Medicaid population.**

## RESULTS

- 5,635 cancer patients were identified between 2016 and 2019
- Acute lymphocytic leukemia was the most common diagnosis in the study population
- **Access rates and prevention ratios** remained **relatively stable during the study period**
- **Access rates** for cancer patients **were similar to all children, whereas prevention ratios are slightly lower**



- Utilization peaked in age group 6-9.
- 3-5 age group is **less likely** to see a dentist if they have a cancer diagnosis.
- <1 age group is **more likely** to see a dentist if they have a cancer diagnosis.
- Access rate and prevention ratios remained similar between regions



## CONCLUSIONS

- Overall, cancer patients have similar utilization compared to NC Medicaid beneficiaries with some differences noted among age groups.
- Medicaid is successful; however, this is a vulnerable population that requires us to go above and beyond.

## REFERENCES

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