

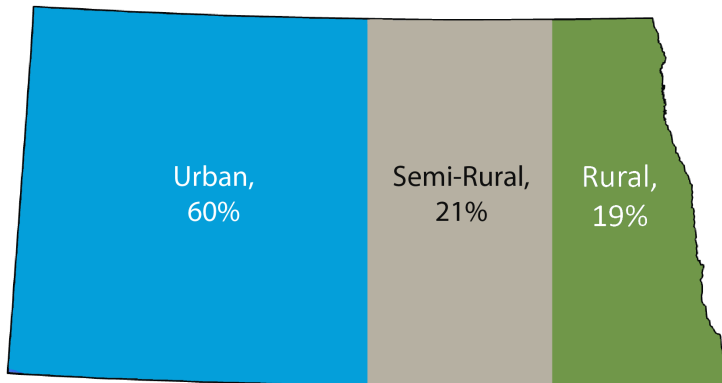


High Rates of Decay and Need for Dental Treatment Among Rural Kindergartners in North Dakota

Measuring Oral Health in North Dakota

The North Dakota Department of Health Oral Health Program works with public and Bureau of Indian Education schools throughout the state to assess pediatric oral health. During the 2018-2019 school year, 1,998 kindergartners enrolled in the 43 participating schools received a dental screening. Roughly 50% of students who were screened were from urban counties. Rural is defined as a non-metro, completely rural county that does not contain a town with at least 2,500 population. Semi-rural is a non-metro county that contains a town or city with a population of at least 2,500. Urban includes counties in metro areas with populations greater than 250,000.

Kindergartners Screened by Geography



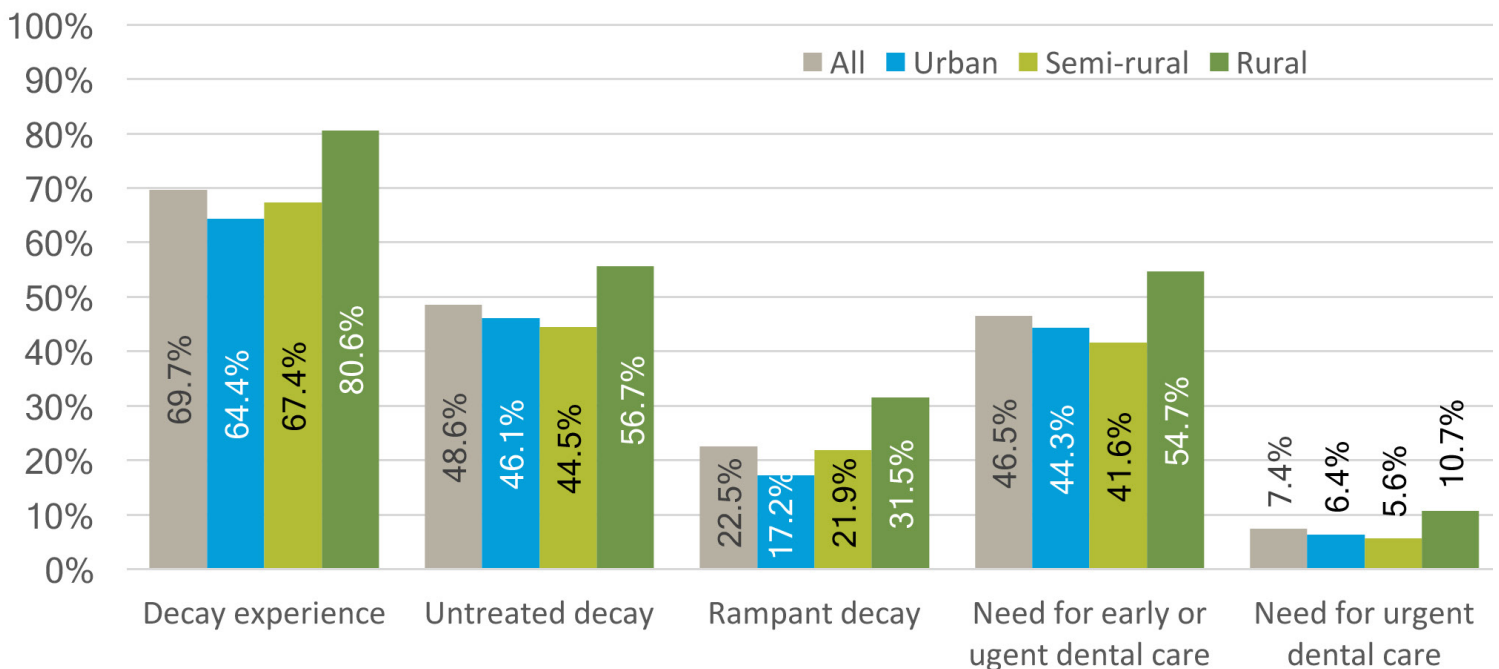
Kindergartners' Decay Experience

When compared to kindergartners from semi-rural and urban counties, those in rural areas had a significantly ($p < 0.05$) higher prevalence of:

higher prevalence of:

- Decay experience
- Untreated decay
- Rampant decay
- Need for early or urgent dental treatment

Oral Health Among North Dakota Kindergartners by Geography, 2018-2019 School Year



Decay Experience

Approximately 69.7% of North Dakota's kindergartners experienced decay; however, 80.6% of those in rural counties reported decay. Children in semi-rural and urban counties had a significantly lower prevalence of decay experience than children in rural counties ($p < 0.05$).

Untreated Decay

Approximately 48.6% of all children screened had untreated decay. However, 56.7% of children from rural counties had untreated decay, which is significantly higher than children from semi-rural (44.5%) and urban (46.1%) counties ($p < 0.05$).

Rampant Decay

Among all kindergartners screened, 22.5% presented with rampant decay. However, when comparing across counties, kindergartners living in urban counties had significantly lower prevalence of rampant decay when compared to rural counties ($p < 0.05$).

Need for Early or Urgent Dental Care

Approximately 46.5% of all children screened needed early or urgent dental care. The rate of children in rural counties needing early or urgent dental care (54.7%) was significantly higher than children in semi-rural and urban areas ($p < 0.05$).

Need of Urgent Dental Care

Roughly 7% of all kindergartners screened needed urgent dental care. A higher percentage of rural students (10.7%) needed urgent care than kindergartners from either semi-rural (5.6%) or urban (6.4%) counties, but the difference was not significant.

Conclusions

A majority of kindergarten students in North Dakota reported decay experience (69.7%). Similarly, nearly half (48.6%) presented with untreated decay. The rate of untreated decay was likely related to the roughly half (46.5%) who were identified as needing early or urgent dental care. There is a clear need for oral health education among new parents and in pre-kindergarten programming. However, there is an even more significant need for outreach among rural households.

Interventions that can improve pediatric oral health in rural and urban communities include:

- Fluoride varnish application in primary care settings for all children as young as 6 months.
- Medical and dental integration in family medical centers ensuring oral health screens, fluoride varnish application, and dental referrals for pediatric patients.
- Oral health education for new and expecting parents to include pediatric dental referral resources.
- Partnerships with every Head Start program and Women, Infant, and Children (WIC) programs to provide oral health education and dental referral resources.
- School-based dental sealant programs.
- Use of public health hygienists, especially in rural community settings.
- Increase the number of pediatric dentists or the number of general dentists that see pediatric patients.
- Increased number of dentists accepting Medicaid.

Data

Data were provided by the North Dakota Department of Health Oral Health Program, from their Basic Screening Survey (BSS) of North Dakota kindergartners; approved by the North Dakota Department of Health IRB and funded by the Centers for Disease Control and Prevention Cooperative Agreement DP1810. Statistical significance at $p < 0.05$, when not stated otherwise.



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For More Information

Visit the North Dakota Oral Health Program webpage at oral.health.nd.gov

Visit the Center for Rural health webpage at ruralhealth.und.edu/what-we-do/oral-health

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