AADR®
American Association for Dental Research

September 18th, 2020

Thomas J. Engels,
Administrator,
Health Resources and Services Administration,
5600 Fishers Lane,
Rockville, MD 20857

Re: Health Resources and Services Administration Request for Information on the Health Professional Shortage Area Scoring Criteria.

Via email: RFIComments@hrsa.gov

The American Association for Dental Research (AADR), which represents 3,400 individual and 107 institutional members working throughout dental, oral and craniofacial research, appreciates the opportunity to share our thoughts on changes to the scoring criteria for Health Professional Shortage Areas (HPSAs). The comments detailed are specific to the assessment of HPSAs based on the dental health discipline. AADR engaged its Board of Directors and Science Information Committee to develop these comments.

Currently, dental HPSA scores incorporate an assessment of four factors: (1) population-to-provider ratio; (2) poverty rate; (3) travel distance/time to the nearest accessible source of care; and (4) availability of fluoridated water. The AADR offers comments that focus on factors that are known to impact the prevalence of dental diseases in communities: the availability of fluoridated water and consumption of sugar-sweetened beverages. Indeed, we encourage that the consumption of sugar-sweetened beverages be considered as a fifth factor to be incorporated into the HPSA score.

Availability of Fluoridated Water

In the current scoring criteria, the presence of fluoridated water rate is one criterion used to compute the dental HPSA. A single point is awarded if an area's rate is in the worst quartile for the nation, region, or state. AADR supports the maintenance of this factor at its current point scale.

Data continues to show that water fluoridation decreases tooth decay in both the primary and permanent teeth of children and increases the number of children free of decay in primary and permanent teeth[1,2]. An independent review by the Community Preventive Services Task Force (CPSTF), also found that starting water fluoridation decreased caries in children ages 4-17 by 30-50% and that stopping water fluoridation increased caries by 18%[3]. Additionally, data supports that community water fluoridation may reduce oral health disparities. Children living in areas without water fluoridation had significantly higher odds of severe caries than children living in areas with water fluoridation after adjustment for age, sex, ethnicity and residual location[4]. Therefore, as the fluoridation of water supplies serves as an effective public health measure for the prevention of dental decay, AADR supports the continued incorporation of the presence of fluoridated water in the HPSA score.

+1.703.548.0066
+1.703.548.1883
1619 Duke Street
Alexandria, VA 22314-3406, USA
www.aadr.org

Consumption of Sugar-Sweetened Beverages

The causative role of sugars in the development of dental caries is well-established by biological and epidemiologic data, including systematic review. Evidence from multiple studies have shown an association between consumption of free sugars, including those supplied by sugar-sweetened beverages (SSBs), and dental caries in both children and adults. A comprehensive systematic review of 55 studies on the association between free sugars and the development of dental caries showed less caries experience with lower intake of free sugars and greater caries experience with higher free sugar intake[5]. Indeed, dental caries experience was higher when the intake of free sugars was greater than 10% of total energy intake based upon five cohort studies[6]. Similarly, dental caries rates were lower when the intake of free sugars was at a level equivalent to approximately 5% of total energy intake based upon data from population-based ecological studies[6].

The significance of the role of SSBs is underscored by the incorporation of the consumption of SSBs in the Behavioral Risk Factor Surveillance System and the National Health and Nutrition Examination Survey. Therefore, AADR supports that a measure of the consumption of sugar-sweetened beverages be incorporated into the dental health scoring criteria, using a point scale similar to that of water fluoridation. For example, one point could be added if the state is in the highest quartile for the consumption of SSBs thereby accounting for the increased disease that increases the need for health care professionals.

Additionally, AADR supports the incorporation of age ranges, including youth and elderly ratios, as well as a measure of rurality in the computation of the dental HPSA. AADR appreciates the opportunity to provide input on this important indicator system that is used to identify areas, populations and facilities that are experiencing a shortage of health care professionals. We stand ready to work with HRSA to further define the incorporation of the consumption of sugar-sweetened beverages as a factor impacting dental health. If you have any further questions, please contact Dr. Makyba Charles-Ayinde, Director of Science Policy, at mcayinde@iadr.org.

Sincerely,

Christopher H. Fox, DMD, DMSc
Chief Executive Officer

Mark C. Herzberg, DDS, PhD
President

---

[1]Horst JA, Tanzer JM, Milgrom PM. 2018. Fluorides and Other Preventative Strategies for Tooth Decay. Dental Clinics of North America 62(2): 207-234.

[2]Rugg-Gunn AJ, Spencer AJ, Whelton HP, Jones C, Beal JF, Castle P, Cooney PV, Johnson J, Kelly MP, Lennon MA et al. 2016. Critique of The Review of 'Water Fluoridation for The Prevention of Dental Caries' Published By The Cochrane Collaboration In 2015. Br Dent J. 220(7):335-340.

[3]Truman BI, Gooch BF, Sulemana I, Gift HC, Horowitz AM, Evans CA, Jr., Griffin SO, Carande-Kulis VG. 2002. Reviews of Evidence On Interventions To Prevent Dental Caries, Oral And Pharyngeal Cancers, And Sports-Related Craniofacial Injuries. American Journal of Preventive Medicine. 23(1):21-54.

[4]Schluter PJ, Hobbs M, Atkins H, et al. 2020. Association Between Community Water Fluoridation and Severe Dental Caries Experience in 4-Year-Old New Zealand Children. JAMA Pediatrics. doi:10.1001/jamapediatrics.2020.2201.
[5]Moynihan PJ, Kelly SAM. 2014. Effect on caries of restricting sugars intake: systematic review to inform WHO guidelines. J Dent Res. 93(1):8-18.
[6]Moynihan PJ, Makino Y, Peterson PE, Ogawa H. 2018. Implications of WHO Guideline on Sugars for Dental Health Professionals. Community Dentistry and Oral Epidemiology. 46: 1-7.