

## **Importance of Oral Health for People Experiencing Homelessness**

Sydnee Blackburn, Niya Joshua, Natalie Chau, Aryanna Dickerson, Aysha Frazier, Chiderah

Iheagwara, Muriel Locke, Jon Sommer, Cynthia Lopez-Escobar

School of Nursing, Old Dominion University

NURS 363: Nursing Research

Professor Jonathan Romero

April 3, 2024

## **Introduction**

“Health” is an incredibly broad and multifaceted term. What many may not consider is the effects that one body system has on the next. For example, overall health is greatly influenced by oral health. Dental hygiene is an area of substantial struggle for the unhoused population. Deficits in knowledge in addition to a lack of resources and supplies are key contributors to this issue. Creation of an education system as well as assisting the unhoused population in gaining access to supplies are primary ways in which positive change can be accomplished.

## **Thesis**

In the Hampton Roads area homeless population, what is the effectiveness of providing access to oral hygiene products and education compared to not having access to products and relying on preexisting knowledge of health education in reducing oral pain, increasing physical health, avoiding health complications and establishing a maintainable oral hygiene routine.

## **Body**

### **Patient / Problem**

- 1) The population of concern is the adult homeless population with poor oral health and/ or limited oral health knowledge.
  - a) Dental care is ranked as one of the leading unmet needs among the homeless population (Freitas, 2018). (SB)
  - b) According to the Southeastern Virginia Homeless Coalition (2022), 70.4 % of the homeless in the area are Black or African American. Of the 626 veterans experiencing homelessness, 64% are Black or African American and 27% are White.

- c) According to (Dolce, 2018), In the United States (U.S.), limited access to oral health care widens health disparities between the general population and underserved groups. Homeless communities face ongoing challenges with oral diseases like gum disease and tooth decay. (AD)
- 2) Dental status is a major area of concern, particularly for the homeless population. There are numerous manifestations of poor dental hygiene on both oral and overall health. The homeless population has a higher prevalence of untreated dental trauma, tooth loss, dental caries, and periodontal disease than the housed population. They have limited access to oral healthcare services, resulting in unaddressed dental disease and no preventative treatments ( O'Dowling, 2023). A study of 350 homeless adults aged 50 and older in Oakland, California in which trained researchers conducted structured interviews using validated questions, found that tooth loss and dental pain were the highest dental difficulties reported. 57.4% of participants were missing at least half of their teeth. 54.6% reported oral pain in the past 6 months; 28.9% reported that oral pain prevented them from eating and 20.9% reported that pain prevented sleeping. Almost half (40.3%) had not seen a dentist in over 5 years, and over half (54.3%) reported being unable to obtain needed dental care (Freitas, 2018). (SB)
  - a) A study of 1675 patients, aged >20 years who were hospitalized for surgery, examination, or other medical treatment were investigated whether toothbrushing timing affected cardiovascular disease. Individuals with periodontal pockets deeper than 8 mm are indicative of advanced periodontal disease and might already be experiencing cardiovascular issues. (Isomura, 2023). (AD)
- 3) There is an educational deficit on oral health that perpetuates the difficulties the unhoused population deals with regarding oral health.

- a) Poor health literacy hinders the achievement of good oral health according to Valdez (2021). A person's background and culture should be taken into account when educating about oral health.
  - b) According to Baskaradoss (2018), patients with limited oral health literacy have poorer periodontal health. A person's understanding of their oral health directly impairs the way they take care of themselves. (AF)
  - c) According to Csikar (2019), levels of oral health literacy is a barrier for participants who had difficulty understanding letters sent to them. This impacted their prioritization of their oral health, contributing to poor access.(CI)
  - d) Data shows that in previous years many homeless people did not know where to get the dental care they needed, and even those that were government-funded the update of care for homeless people was poor. Goode, J., Hoang, H., & Crocombe, L.A. (2018) (ML)
- 4) Oral health has a significant effect on the overall quality of life and self esteem of an individual.
- a) The quality of life of homeless people was positively related to their economic situation, depression and health status. It was shown that sex, age and education had no influence on the assessment of the quality of life of people experiencing the crisis of homelessness. The economic situation is the main factor affecting the quality of life within the psychological and social domain. Health status is the main factor affecting the quality of life within the somatic and environmental domain. Konrady, J., & Talarska, D. (2024). (NJ)
  - b) Pertaining to overall quality of life, older adults with poor oral health have a

decreased quality of life according to Cruz-Hervert et al. (2019). Older adults with poor oral health, who live in a community dwelling, also have poorer physical and psychosocial function. (AF)

- c) Regardless of the sex, students over 16 years old with high self-esteem brush their teeth more often, probably having better oral health. These results confirm the modulation of self-esteem in oral health showing the relationship between psychosocial factors and oral health care. Pazos, C. T. C.(2019). (NJ)
- d) Many psychosocial factors affect the homeless population's willingness to seek oral treatment. Higher levels of dental anxiety, dental phobias and lack of compassion and respect from providers are found within the homeless population. Goode, J., Hoang, H., & Crocombe, L.A. (2018) (ML)

## **Interventions**

- 1) Education is a vital component to the improvement of oral health in homeless individuals. It is important to provide and maintain a connection with the homeless by providing oral health advice and information about available dental services (Goode, 2018).
  - a) Development of homeless-dedicated dental services - to lower the rates of homeless population issues with oral health services geared specifically toward that population can decrease the instances of poor oral health. These services will work in conjunction with homeless support agencies. Goode, J., Hoang, H., & Crocombe, L.A. (2018) (ML)
  - b) Not knowing where to find dental care is a barrier many unhoused people face. Providing this information will aid in accessing this care (Goode, 2018).

- 2) Providing oral hygiene products to shelters and centers for the unhoused is vital in aiding the homeless in improving their oral health.
  - a) This review found that several substantial barriers prevent homeless people from accessing dental care. These include cost, fear of the dentist or dental treatment, not knowing where to find dental care, feeling embarrassed about their teeth, dental care being a low priority, previous unpleasant experiences at the dentist and having to be registered to receive government benefits. Cost was the most commonly reported barrier to receiving dental care and when it was removed as a barrier, the likelihood of seeking care improved (Goode, 2018).
  - b) According to Dolce (2018), homeless individuals frequently lack dental insurance or awareness of where to access dental services, if required. Homeless individuals also face significant barriers in obtaining dental coverage, and are typically restricted to emergency dental care only, which can make it more challenging for them to receive preventative care and necessary treatment. (CI)

### **Comparison**

- 1) Without the provision of new knowledge, homeless individuals must rely on their previous knowledge to guide their practices.
  - a) According to Mueller (2022), oral hygiene knowledge is strongly based on childhood experience shaped by education, experience, and parental influence. Many people with poor oral hygiene also have dental anxiety and a negative outlook on oral hygiene.
  - b) Unpleasant past experiences and fear of the dentist or dental treatment are barriers that were found in an adult homeless population (Goode, 2018)

- c) Education on dental hygiene and oral health needs to be in conjunction with provision of adequate supplies. Otherwise, the education is not applicable.
- d) Without getting new information, homeless people have to use what they already know to deal with their situation. They often have trouble finding healthy food and keeping their teeth clean, which makes dental issues worse. Plus, many don't know much about how to take care of their health, including their teeth. Even though they really need dental care, it's tough for them to get it because they don't know where to go or they can't afford it. Despite their pronounced dental needs, barriers to accessing oral health services persist, driven by factors such as insufficient information, stigma, anxiety, and cost concerns. Addressing these disparities demands tailored interventions, such as outreach programs and flexible treatment approaches, to bridge the gap in oral health knowledge and care provision (Chandrasekara, 2021). Studies like this one with dental students going out to increase oral health knowledge, can help figure out how to do this better, so everyone can get the healthcare they deserve. Also, the people in the oral health study learned a lot and made plans to take better care of their teeth but still without access to new knowledge or interventions, their practices remain guided by their limited existing knowledge, potentially hindering their ability to address oral health issues effectively. Thus, the study highlights the importance of disseminating knowledge and providing accessible interventions to underserved populations, including the homeless, to improve their oral health outcomes.

**According to the article the purpose of the intervention was to see if dental students could educate the homeless population about oral health. They first**

**started by getting background knowledge of the participation to see how much they already knew to compare how much knowledge they would gain after the intervention. (Chandrasekara, 2021) (CL)**

- 2) Oral hygiene products can be difficult to attain due to insufficient means or lack of access. Access to dental hygiene products and resources is a major factor contributing to dental health issues among individuals experiencing homelessness (Father Joe's Villages, 2022). Due to this, many homeless individuals require external assistance in order to acquire these tools. A study on oral health and oral health- related quality of life in a homeless population in Ireland found that 28% of the homeless population never brush their teeth and none of them were receiving preventative treatment. (O'Dowling, 2023).

### **Outcomes**

- 1) Increased education and access to resources leads to an improvement
  - a) According to an article, "This study demonstrates that an oral health promotion intervention led by dental students is feasible and increases the (short-term) knowledge of homeless people (Chandrasekara, 2021)." (NC)
  - b) People experiencing homelessness have poor oral health and limited access to dental services. This study aimed to see if peer education and access to resources could yield improved plaque management among people experiencing homelessness. The results showed that the levels of plaque by month one and two, and in month two, there were positive changes in confidence in toothbrushing Paisi, (20/19). (NJ)
  - c) According to Seirawan (2021) "Community and private clinics should be supported in providing better access to oral health care for PEH and educated



about the role of this access on employability, acceptability, rehabilitation and reintegration of PEH in our society” because with this it allows for the homeless community to help get access to resources for their oral health. (CL)

2) Through intervention and practice, improvement in dental health as well as overall physical health occurs.

a) According to Paisi (2020), having their dental health restored can be a positive step towards a healthier lifestyle and a foundation for a more secure recovery.

When people begin to achieve some stability in their lives and plan for the future (for example, job seeking), there can be an opportunity for interventions that promote improved engagement with services and better self-care. (NC)

b) According to Kurtzman, G. (2022), extensive data has shown that the oral biofilm that causes periodontal disease can be linked to multiple medical conditions. By improving an individual's oral health, it can reduce the spread of the bacteria in the mouth spreading, causing other medical conditions. (NJ)

c) According to Mills (2023), To improve patient well-being in dental care, preventative health screening, more open communication, greater patient education, integrated health care software, and interprofessional collaboration should be utilized. This will allow better continuity of care and shift the focus of treatment to the whole person instead of a symptom. Whilst there are barriers that need to be resolved and cost feasibility requires more exploration, the potential benefit to patients is apparent. (CL)

3) Establishment of a maintainable oral hygiene routine.

- a) According to Hall (2021), Individuals experiencing homelessness are at a higher risk for poor dental health. Supportive housing has shown some evidence in enhancing dental services and providing oral health education. The incidence of dental visits was lower for persons with physical disability. (AD)
- b) According to a research study by Novak, B. (2023), the use of a mobile and community dental service clinic for people experiencing homelessness resulted in many being able to receive the care they need. They were able to come back to the mobile clinic for follow up visits as well. The establishment of this program allowed people experiencing homelessness to seek the care they needed without worrying about the cost. By continuing to receive check ups from the clinic, they are able to create an oral hygiene routine that works for them with the help of professionals in the field. (NJ)

### **Conclusion**

Oral health is an integral aspect of overall health. The unhoused population exhibited a positive correlation between proper education and access to resources with an improvement in health. Ensuring participants had the knowledge to follow up with the PIN ministry if they needed any additional resources would allow them to maintain their improved oral hygiene. Therefore implementing oral hygiene practices in homeless shelters should become a mandatory task.

### **References**

Baskaradoss, J.K. Relationship between oral health literacy and oral health status. *BMC Oral Health* 18, 172 (2018). <https://doi.org/10.1186/s12903-018-0640-1>

Chandrasekara, B., Carnley, A., & Csikar, J. (2021). Can dental students increase oral health knowledge of the homeless population?. *Faculty Dental Journal*, 12(3), 149-153. <https://doi.org/10.1308/rcsfdj.2021.35>

Cruz-Hervert, P., Granados-García, V., Ortiz-Barrios, L.B. *et al.* The impact of poor oral health on the oral health-related quality of life (OHRQoL) in older adults: the oral health status through a latent class analysis. *BMC Oral Health* 19, 141 (2019). <https://doi.org/10.1186/s12903-019-0840-3>

Dolce, Parker, J. L., Bhalla, P., & Anderson, C. (2018). A Cooperative Education Model for Promoting Oral Health and Primary Care Integration within a Health Care for the Homeless Program. *Journal of Health Care for the Poor and Underserved*, 29(2), 591–600. <https://doi.org/10.1353/hpu.2018.0043> (AD)

Father Joe's Villages. (2022, April 4). *Homelessness and dental health care*. <https://my.neighbor.org/homelessness-and-dental-health-care/>

Freitas DJ, Kaplan LM, Tieu L, Ponath C, Guzman D, Kushel M. Oral health and access to dental care among older homeless adults: results from the HOPE HOME study. *J Public Health Dent*. 2019 Dec;79(1):3-9. doi: 10.1111/jphd.12288. Epub 2018 Sep 17. PMID: 30295922; PMCID: PMC6420347.

Goode Jacqueline, Hoang Ha, Crocombe Leonard (2018) Homeless adults' access to dental services and strategies to improve their oral health: a systematic literature review. *Australian Journal of Primary Health* 24, 287-298. <https://doi.org/10.1071/PY17178>.

Hall, Dai, W. F., & Lim, S. (2021). Association between primary health care and dental service

use among supportive housing tenants with behavioral health conditions. *Community Dentistry and Oral Epidemiology*, 49(1), 70–77. <https://doi.org/10.1111/cdoe.12579>  
(AD)

Isomura, E. T., Suna, S., Kurakami, H., Hikoso, S., Uchihashi, T., Yokota, Y., Sakata, Y., & Tanaka, S. (2023). Not brushing teeth at night may increase the risk of cardiovascular disease. *Scientific reports*, 13(1), 10467. <https://doi.org/10.1038/s41598-023-37738-1>  
(AD)

Konrady, J., & Talarska, D. (2024). Factors determining the quality of life of homeless people staying in support centers for people in the crisis of homelessness. Pilot study. *BMC public health*, 24(1), 347. <https://doi.org/10.1186/s12889-024-17839-w>

Kurtzman, Gregori M. DDSa; Horowitz, Robert A. DDSb,c; Johnson, Richard MDd; Prestiano, Ryan A. MDe; Klein, Benjamin I.f. The systemic oral health connection: Biofilms. *Medicine* 101(46):p e30517, November 18, 2022. | DOI: 10.1097/MD.00000000000030517

Mills A, Berlin-Broner Y, Levin L. Improving Patient Well-Being as a Broader Perspective in Dentistry. *Int Dent J*. 2023 Dec;73(6):785-792. doi: 10.1016/j.identj.2023.05.005. Epub 2023 Jun 19. PMID: 37344242; PMCID: PMC10658438. (CL)

Mueller, Maxi, et al. “Relationship Between Dental Experiences, Oral Hygiene Education and Self-Reported Oral Hygiene Behaviour.” *PloS One*, vol. 17, no. 2, 2022, pp. e0264306–e0264306, doi:10.1371/journal.pone.0264306.

Novak, B., Matajs, M., Sangalli, A. E., Pruts, H., Korpasova, A., Leptos, N., Stanko, P., Tinak, M., & Kosticova, M. (2023). Evaluation of Mobile and Community Dental Service Use among People Experiencing Homelessness. *International journal of environmental*

*research and public health*, 20(1), 845. <https://doi.org/10.3390/ijerph20010845>

- O'Dowling Keane, S., Quilligan, G., & Harding, M. (2023). Oral health and oral health-related quality of life in a homeless population in Ireland: a pilot study. *Journal of the Irish Dental Association*.  
<https://jida.scholasticahq.com/article/68192-oral-health-and-oral-health-related-quality-of-life-in-a-homeless-population-in-ireland-a-pilot-study>
- Paisi, M., Witton, R., Burrows, M., Allen, Z., Plessas, A., Withers, L., McDonald, L., & Kay, E. (2019). Management of plaque in people experiencing homelessness using 'peer education': a pilot study. *British dental journal*, 226(11), 860–866.  
<https://doi.org/10.1038/s41415-019-0361-0>
- Paisi, M., Witton, R., Withers, L., Plessas, A., Burrows, M., Morrison, S., McDonald, L., & Kay, E. (2020). Strategies to improve oral health behaviors and dental access for people experiencing homelessness: A qualitative study. *British Dental Journal*, 1-5.  
<https://doi.org/10.1038/s41415-020-1926-7>
- Pazos, C. T. C., Austregésilo, S. C., & Goes, P. S. A. (2019). Self-esteem and oral health behavior in adolescents. Autoestima e comportamentos de saúde bucal em adolescentes. *Ciencia & saude coletiva*, 24(11), 4083–4092.
- Seirawan, Hazem, et al. “Findings in Oral Health: Attitudes and Quality of Life Among Patients Experiencing Homelessness.” *Journal of the California Dental Association*, vol. 49, no. 5, 2021, pp. 345–52, doi:10.1080/19424396.2021.12222713. (CL)
- Southeastern Virginia Homeless Coalition. Racial Disparities Report. July 2022.  
[https://www.hamptonroadsendshomelessness.org/uploads/5/2/5/7/52579065/2022\\_svhc\\_racial\\_disparity\\_report\\_2022.pdf](https://www.hamptonroadsendshomelessness.org/uploads/5/2/5/7/52579065/2022_svhc_racial_disparity_report_2022.pdf)

Suresh, N., Kutty, V. R., Kumar, K. N., Sarma, P. S., Vijayan, A. A., Aljuaid, M., Shahid, D., & Thankappan, K. R. (2023). Effectiveness of an oral health education intervention among 6-12-year-old children: A cluster randomized controlled trial. *Community dental health*, 40(2), 79–84. [https://doi.org/10.1922/CDH\\_00164Suresh06](https://doi.org/10.1922/CDH_00164Suresh06)

Valdez R, Spinler K, Kofahl C, Seedorf U, Heydecke G, Reissmann DR, Lieske B, Dingoyan D, Aarabi G. Oral Health Literacy in Migrant and Ethnic Minority Populations: A Systematic Review. *J Immigr Minor Health*. 2022 Aug;24(4):1061-1080. doi: 10.1007/s10903-021-01266-9. Epub 2021 Aug 27. PMID: 34448993; PMCID: PMC9256555.

***Aryanna Dickerson***

## **Introduction**

This research paper will delve into the intricate landscape of oral health, illuminating its profound significance for individual well-being and broader societal health. From its essential role in facilitating basic functions such as eating and speaking to its intricate connections with systemic health, oral health emerges as a critical yet often overlooked aspect of public health. Poor oral health has been linked to a range of chronic diseases, including cardiovascular

issues, diabetes, and even cognitive decline. Despite significance in poor oral health, disparities in access to dental care persist, particularly among vulnerable populations such as low-income individuals, children, and the homeless. Yet, despite its undeniable significance, oral health remains a marginalized aspect of public health discourse, often overshadowed by other pressing health concerns. This paper endeavors to illuminate the critical importance of oral health, examining its multifaceted impact on individual health outcomes and its broader implications for societal well-being. By delving into the complexities of oral health disparities, access to care, and the socio-economic determinants shaping oral health outcomes. Understanding the importance of oral health and addressing barriers to care are essential steps in promoting health equity and improving overall health outcomes for all individuals that are unhoused.

### **Thesis Statement**

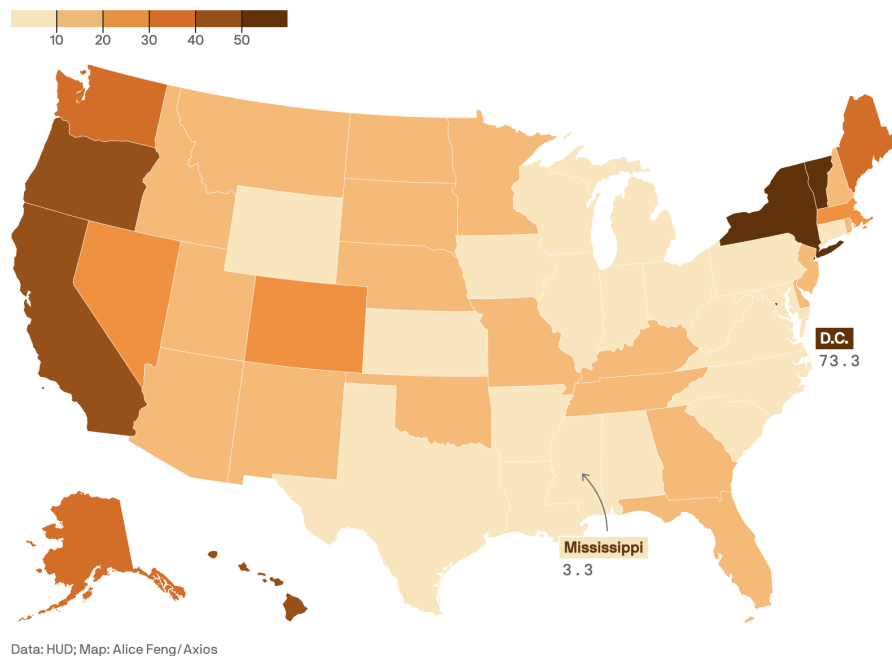
Granting access to oral hygiene products and education for homeless adults with poor oral health or limited knowledge in the Hampton Roads area can greatly reduce oral pain, improve physical health, prevent complications or diseases, and foster sustainable oral hygiene practices.

### **Body**

Dental health poses a significant concern, especially within the homeless community, with various manifestations of inadequate oral hygiene impacting both oral and overall health. Limited access to oral healthcare services exacerbates these issues, leading to unmanaged dental conditions, risk for other diseases and a lack of preventative treatments (Isomura, 2023). The focus of attention lies on adults experiencing homelessness who suffer from inadequate oral health and/or possess limited knowledge about oral hygiene. Dental well-being emerges as a critical issue, especially among the homeless demographic, with various repercussions of subpar dental hygiene impacting both oral and overall health. The state of oral health significantly influences an individual's overall quality of life and self-esteem (Dolce, 2018).

## Estimated homelessness rate, January 2023

Number of people experiencing homelessness per 10,000 residents



Nearly 1,000 more Virginians were experiencing homelessness at the start of last year versus before the pandemic.

Fitzpatrick, A., Feng, A., & Peifer, K. (2024, April 3). Homelessness is on the rise in Virginia.

AXIOS Richmond.

<https://www.axios.com/local/richmond/2024/01/08/homelessness-virginia-statistics-data-how-many>

### **Problem**

Accessing dental care and maintaining oral hygiene routines is tough for homeless individuals and families due to financial constraints, low health literacy, and transportation issues. Many homeless people lack dental coverage and struggle to find dental care when needed. Dental coverage for homeless adults is particularly difficult to obtain as not all states require Medicare/Medicaid to cover adult dental care. Homeless children often lose Medicaid coverage due to lack of a permanent address. Additionally, high rates of chronic illnesses, mental health



issues, and substance abuse among the homeless compound their oral health challenges.

### **Intervention**

A cooperative education model was developed to educate students about oral health and primary care integration. It aimed to support performance goals set by the HCHP community of practice. These goals included increasing homeless patients receiving oral exams at primary care sites and providing oral health information to families at outreach sites. These goals align with Healthy People 2020 objectives to reduce oral disease rates. Students' responsibilities include conducting oral health risk assessments, coordinating referrals, and organizing patient events. They receive a \$15 hourly wage for their work. The cooperative education program does not involve academic courses or tuition fees. After completion, students receive a passing grade noted on their transcript.

### **Outcome**

Initially, there was a slight decrease in examinations during the first three months, attributed to extensive training and planning for the new position. Students contributed by conducting oral health risk assessments and screenings while patients awaited medical appointments. When necessary, students scheduled comprehensive oral examinations, often on the same day.

Clinicians then completed the examinations and provided timely referrals for unmet oral health needs. Two months into the program, oral health promotion activities expanded to family-team sites. During this period, over 160 individuals and 20 families at outreach locations received basic oral health education, starting from zero. These early outcomes have led to the continued support and funding of the cooperative education model for oral health and primary care integration by the HCHP through its annual operating budget.

Dolce, Parker, J. L., Bhalla, P., & Anderson, C. (2018). A Cooperative Education Model for

Promoting Oral Health and Primary Care Integration within a Health Care for the Homeless Program. *Journal of Health Care for the Poor and Underserved*, 29(2), 591–600. <https://doi.org/10.1353/hpu.2018.0043> (AD)

### **Problem**

In this research, we examined whether the timing of toothbrushing impacts the risk of cardiovascular disease.

### **Outcome**

The findings are constrained to cardiovascular diseases and may not apply broadly to healthy populations. Nevertheless, we recommend that brushing teeth before bedtime is crucial for reducing the risk of cardiovascular disease.

### **Intervention**

We recruited 1675 patients aged  $\geq 20$  years who were admitted to the hospital for surgery, examination, or medical treatment. Based on their tooth brushing habits, participants were categorized into four groups; brushing teeth after waking up and at night, brushing teeth at night but not upon waking up, brushing teeth after waking up but not at night, and not brushing teeth at all. Kaplan–Meier analysis of subgroups categorized by smoking status demonstrated that smokers had a significantly poorer prognosis for cardiovascular events compared to smokers in other groups, while non-smokers exhibited significantly worse outcomes leading to hospitalization.

Isomura, E. T., Suna, S., Kurakami, H., Hikoso, S., Uchihashi, T., Yokota, Y., Sakata, Y., &

Tanaka, S. (2023). Not brushing teeth at night may increase the risk of cardiovascular disease. *Scientific reports*, 13(1), 10467. <https://doi.org/10.1038/s41598-023-37738-1>

(AD)

## **Conclusions**

In conclusion, addressing the oral health needs of the homeless population in the Hampton Roads area is not just a matter of dental care; it is a critical component of promoting overall well-being and social equity. By providing access to oral hygiene products, education, and preventive services, we can alleviate pain, improve physical health, and prevent further complications. However, sustained efforts are required to overcome systemic barriers and ensure that every individual, regardless of their housing status, can maintain optimal oral health and dignity. Through collaborative initiatives and community engagement, we can strive towards a future where the unhoused community in Hampton Roads has equal access to quality oral healthcare, affirming the fundamental right to health for all.