

Social Determinants of Health (SDOH) in Oral Health Care: A Step Towards Health Equity for Older Adults





Introduction

The United States Census estimates that the older adult population in the U.S. will reach 24% of the population by 2060, almost 100 million adults age 65 and older. For health centers, older adults are the fastest-growing patient group over the past decade, experiencing a 120% growth from 2010 to 2020. During the past 50 years, most older adults have not shared in our Nation's oral health improvements because of access to care challenges and lack of dental benefits; health inequities that disproportionately impact morbidity and mortality rates among groups facing multiple barriers. These older adults are at higher risk for oral disease due to multiple chronic diseases, medications that cause reduced saliva and dry mouth, and receding gums that expose the softer root to bacteria and acids that can cause cavities and gum disease.

Health center's comprehensive services aim to provide equitable dental care for older adults, which are essential to promote healthy aging among patient populations who struggle with decreased function and increased disease. This effort is part of a larger goal to build an adequate health system infrastructure that meets the oral health needs of all Americans and integrates oral health effectively into overall health.

Identifying and addressing social determinants (also known as social drivers) of health (SDOH) is a key part of a health center's approach to providing comprehensive care in their communities. Non-medical factors such as housing, income, transportation, behavioral health, and intimate partner violence can directly contribute to disparities in access and utilization of health care for the whole body, including a person's mouth. As part of an interprofessional team, dental providers and staff have an opportunity to participate in SDOH screening and documentation to reduce barriers between older patients and oral health services.

While there are many SDOH assessment tools available to health centers, this publication will refer to questions from the nationally standardized <u>Protocol for Responding to & Assessing Patients' Assets, Risks & Experiences (PRAPARE)</u> that can be incorporated into a dental team's intake process. Once needs are identified, offered strategies related to education, resource development, and referrals can improve collaborative efforts across departments and with community partners to reduce oral health inequities for aging patients.

SDOH Factor: Housing

In the U.S., there is an enormous unmet need for affordable housing for older adults. Safe and stable housing is an essential component of older adults to lead healthy and productive lives and is a significant social determinant of health. Over 25% of community-dwelling older adults live alone, with this number steadily increasing with advanced age. When an older adult's income is primarily utilized for housing, there is frequently insufficient money to purchase medication, supplies and food to maintain health. This can lead to unmanaged or poorly managed chronic conditions that exacerbate most oral problems, including gum disease, cavities, infections, and ulcers. Limited resources may also force older adults to live in unsafe situations, give up their independence, and/or live with a caregiver. Lack of opportunities to live in a safe environment can affect physical and mental health and exacerbate chronic conditions.

Dental teams can incorporate <u>PRAPARE</u> questions related to housing stability into their patient intake. These questions provide insight to the older patients' current housing experience which can inform the dental teams' patient engagement strategies. Two questions from PRAPARE related to housing are:

- What is your housing situation today?
- · Are you worried about losing your housing?

- Develop a script to help the dental team communicate resources and options to older patients. The health center dental team can collaborate with other departments within their organization (i.e., behavioral health, social services, and care coordination) or outside organizations to develop a script. Scripting can help increase comfort levels of the healthcare team and create consistency across team members.
- Develop a list of up-to-date housing resources in the community relevant to older adults to distribute to patients. Dental team members should also be aware of resources available within the health center that can be offered to older patients.
- Collaborate with community organizations such as local homeless shelters and housing support organizations to learn about available local resources. Health centers can learn how to connect their older patients to these outside organizations.
- Provide training to dental teams related to housing impacts on older adults' oral health. Community organizations that provide housing support can provide training to the dental team. These trainings increase staff's understanding of SDOH and improve patients' experience during the dental visit.

SDOH Factor: Income

While higher income older adults are steadily increasing their dental services usage, most older adults have decreased their utilization of dental services due to financial concerns. Income is the most significant factor that prevents older adults from seeking preventive and/or restorative oral health care. Over 70% of older adults lack dental insurance and do not have the financial means to access oral health care resulting in poorer oral health outcomes. Many older adults are unaware that dental benefits are typically not covered by Medicare, and Medicaid dental benefits may vary from state to state. With limited income, many older adults struggle to afford or access healthy foods. This food insecurity can result in a diet high in sugar and low in nutritional value that can further increase rates of chronic conditions, including oral diseases. If older adults are not able to afford dental care, they may experience further dietary restrictions which contribute to poor oral health. In addition, financially stressed older adults may use destructive behaviors to cope with their circumstances, such as using alcohol and smoking, directly affecting oral health and disease.

The following **PRAPARE** questions can help the dental team determine the patient's income status, insurance status, and other factors that may impact their oral health utilization.

- At any point in the past 2 years, has seasonal or migrant farm work been your or your family's main source of income?
- · What is your current work situation?
- What is your main insurance?

These PRAPARE questions not only provide the dental team with information about the patient's income and insurance, but it also includes factors that may influence the individual's consistency of income which is an important consideration for those no longer working or will soon retire.

- Develop a script for the dental team to discuss the responses from the PRAPARE questions. These scripts can help the dental team determine if the patient would like assistance related to income and costs of services.
- Collaborate with other health center departments to develop a list of patient resources relevant to older adults. These resources can include in-house services, community-based organizations, and federal programs like Medicaid and the Supplemental Nutrition Assistance Program (SNAP) Application for Seniors.
- Review the dental program sliding fee scale. Dental teams should be prepared to offer guidance on how to enroll patients eligible for the sliding fee scale.

SDOH Factor: Transportation

The ability of older adults, low-income residents, minority communities, and persons with disabilities to effectively access community transportation systems affects all quality-of-life issues, including medical and dental care.^{13,14} Reliable transportation provides older adults greater access to healthier foods, jobs, social activities, decreased social isolation, and other necessary activities that impact their well being. Households in low-income areas typically own fewer vehicles, have longer commutes, and have higher transportation costs.^{13,15,16} These transportation problems can result in late arrivals and delayed or missed dental appointments.¹⁶⁻¹⁸ As the cost of transportation increases, older adults who already struggle financially are more likely to miss appointments or not schedule regular dental care and are forced to utilize the emergency room for pain and infection management.¹⁴

Health centers can incorporate the following **PRAPARE** question about transportation in the dental patient intake.

• Has lack of transportation kept you from medical (or dental) appointments, meetings, work, or from getting things needed for daily living?

By asking this question during the patient intake, the dental team may be better able to recognize the impact of transportation on whether an older adult patient is late or misses their dental visit. The dental team can then provide resources and support to help their older patients overcome transportation challenges.

- Seek collaborations inside and outside the organization to offer transportation support and more efficient care coordination. Partnering efforts can include transportation agencies in the community, particularly those focused on transporting older adults or offering transportation vouchers to patients. Offering same day visits for patients with various health care needs may be a helpful strategy to mitigate transportation issues because the patient is able to get their care completed in one day and prevent future transportation challenges.
- Investigate teledentistry as a viable option to manage dental care. For patients in rural areas or that have transportation barriers, teledentistry is a way to help connect older patients to their dental team. It is also commonly used to triage oral health concerns. It is important that health center dental programs review their dental state practice acts and Centers for Medicare & Medicaid Services (CMS) guidelines to determine if teledentistry is allowable and billable in their state.

SDOH Factor: Behavioral Health

In 2020, an estimated 52.9 million older adults lived with a mental health condition that impacted their daily lives. 19-21 A bidirectional relationship between the mouth and mental health conditions has been shown which is affected by various factors, including environmental stressors, medications, altered host immune response, and gum inflammation. 22-24 An older adult with gum and teeth problems may avoid social interactions, exacerbating anxiety and depression. Some of the most common mental health conditions that can harm an older person's oral health include anxiety and panic attacks, depression, obsessive-compulsive disorder, self-harm, schizophrenia, and psychosis. 22,23,25 Prescription drugs for managing mental health issues frequently cause dry mouth and taste disturbances. With less saliva in the mouth, older adults are more susceptible to all oral diseases, including dental cavities and gum disease. Studies have also shown a strong association between tooth loss and cognitive impairment and dementia. 26

Health center dental programs can integrate two **PRAPARE** questions related to behavioral health into their patient intake.

- How often do you see or talk to people that you care about and feel close to? (Talking to friends on the phone, visiting friends or family, going to church or club meetings)
- Stress is when someone feels tense, nervous, anxious, or can't sleep at night because their mind is troubled. How stressed are you?

These questions are helpful to dental teams because they provide understanding of the patient's behavioral health status.

- Conduct behavioral health screenings in the dental clinic. Most commonly, dental team members complete a Patient Health Questionnaire (PHQ-2 or PHQ-9) with their patients. If the patient screens positive, the dental team can refer to their behavioral health department for care.
- Seek collaborations with behavioral health organizations. If the health center does
 not offer on-site behavioral health services, the dental team must collaborate with
 community organizations that offer behavioral health care. The dental department
 should create a formal referral system for all relevant services, including those
 offering dementia care for older adults and their caregivers.
- Train dental team members about behavioral health. Training increases confidence
 in talking to older patients about behavioral health. Developing scripts can help
 improve confidence and consistency when speaking to older adults about behavioral
 health.

SDOH Factor: IPV

Intimate Partner Violence (IPV) is a significant health problem in the U.S. but frequently goes unnoticed in older adults in public health settings, including dentistry.²⁷ IPV occurs when an individual uses power and control to inflict physical, sexual, emotional, or financial injury on someone with whom they have an ongoing relationship.²⁸⁻³⁰ IPV in older adults may manifest as financial exploitation, neglect, or abandonment.³¹ IPV can result in traumatic injuries to the nose, eye orbits, and mouth regions, with the maxillary and mandibular anterior teeth most affected.³²⁻³⁴ Most dentists report not screening for IPV, not knowing where to refer patients experiencing IPV, or not believing that IPV screening should be part of their professional role.^{35,36}

Clinical Signs of IPV include:

- Intra and extra oral bruises, bite marks, burns, lacerations, abrasions, head injuries, and skeletal injuries
- · Fractured teeth, frenum, and torn gums

PRAPARE has two questions related to relationships and intimate partner violence (IPV).

- Do you feel physically and emotionally safe where you currently live?
- In the past year, have you been afraid of your partner or ex-partner?

By asking these questions, the dental team can identify if the older patient may be experiencing physical, emotional, or sexual violence. As a result, they can provide the patient with support and assistance.

- Develop a script to help support the dental team members in discussing sensitive topics such as IPV with the older patient. Many dental team members report that their comfort level in these types of conversations increase with regular, ongoing training.
- Identify resources available to support older patients experiencing IPV. Resources
 within the organization may include the behavioral health department. The dental
 team can also develop a list of community resources relevant for older adults to
 support their patients experiencing IPV. The dental team should feel comfortable
 contacting outside entities (such as local domestic violence programs) to provide
 support and guidance to their older patients.

Conclusion

As the U.S. population continues to age, it is critical that dental team members are knowledgeable about social determinants of health, can recognize their health impacts on older adults, and can refer them to services. Using a standardized assessment tool to evaluate SDOH during a dental appointment helps the dental team understand the factors that their older patients may be experiencing and that inhibit their ability to access oral health services. With increased partnerships, recognition, and training on SDOH, dental team members can create a better oral health care experience and take steps to help improve their patients' oral health and overall well-being.

SDOH Resources

Housing:

- National Healthcare for the Homeless Council
- National Center for Health in Public Housing
- Father Joe's Villages: Homelessness and Dental Health Care
- NNOHA and National Healthcare for the Homeless Council: Oral Health for Patients Experiencing Homelessness

Income:

- HRSA Sliding Fee Discount Program Requirements
- NNOHA Sliding Fee Scale and Nominal Fees
- Justice in Aging: Oral Health

Transportation:

- National Aging and Disability Transportation Center: Unique Issues Related to Older Adults and Transportation
- NNOHA Teledentistry User's Guide
- Mid-Atlantic Telehealth Resource Center Telehealth Video Series

Behavioral Health:

- National Council for Mental Wellbeing: Oral Health, Mental Health & Substance Use Toolkit
- Promising Practice: Behavioral Health and Oral Health Integration
- Oral Health and Behavioral Health in Patients Experiencing Homelessness
- Centers for Medicare & Medicaid Services: Cognitive Assessment & Care Plan Services

Intimate Partner Violence (IPV):

- <u>Health Partners on IPV + Exploitation: Addressing IPV and Exploitation in Health Centers Infographic</u>
- NNOHA Webinar: Supporting Patients Experiencing IPV: Opportunities for Oral Health Providers
- IPV, Homelessness, and Behavioral Health: Toolkit for Health Centers



National Center for Equitable Care for Elders ece.hsdm.harvard.edu ece@hsdm.harvard.ed



National Network for Oral Health Access www.nnoha.org info@nnoha.org

References

- 1. Vespa, J., Medina, L., & Armstrong, D. M. (2020, February). *Demographic turning points for the United States: Population Projections for 2020 to 2060*. U.S. Census Bureau. https://www.census.gov/content/dam/Census/library/publications/2020/demo/p25-1144.pdf
- 2. National Association of Community Health Centers. (2022). 2022 community health center chartbook Figure 1-12. National Association of Community Health Centers. Retrieved from https://www.nachc.org/wp-content/uploads/2022/03/Chartbook-Final-2022-Version-2.pdf
- 3. Vujicic, M., Buchmueller, T., & Klein, R. (2016). Dental care presents the highest level of financial barriers, compared to other types of health care services. *Health Affairs*, 35(12), 2176–2182. https://doi.org/10.1377/hlthaff.2016.0800
- 4. Office of the Surgeon General, U.S. Department of Health and Human Services. (2019, October 11). *Oral Health in America: Surgeon general summary*. Centers for Disease Control and Prevention. https://www.cdc.gov/oralhealth/publications/federal-agency-reports/sgr2000 05.htm?CDC AA refVal=https%3A%2F%2Fwww.cdc.gov%2Foralhealth%2Fpublications%2Fsgr2000 05.htm
- 5. Division of Oral Health, National Center for Chronic Disease Prevention and Health Promotion. (2021, February 5). Disparities in oral health. Centers for Disease Control and Prevention. https://www.cdc.gov/oralhealth/oral_health_disparities/index.htm
- 6. Palatta, A., Tiwari, T., & Stewart, J. (2020, September 3). What is the value of social determinants of health in dental education?. National Academy of Medicine. https://nam.edu/what-is-the-value-of-social-determinants-of-health-in-dental-education/
- 7. Office of Disease Prevention and Health Promotion. (n.d.). Housing instability. Housing Instability Healthy People 2030. https://health.gov/healthypeople/priority-areas/social-determinants-health/literature-summaries/housing-instability#/~:text=and%20Community%20Context. Literature%20Summary of%20household%20income%20on%20housing
- instability#:~:text=and%20Community%20Context-,Literature%20Summary,of%20household%20income%20on%20housing.
- 8. Administration for Community Living. (2021). Profile of older Americans. Administration for Community Living. https://acl.gov/aging-and-disability-in-america/data-and-research/profile-older-americans
- 9. Kushel, M. B., Gupta, R., Gee, L., & Haas, J. S. (2006). Housing instability and food insecurity as barriers to health care among low-income Americans. *Journal of General Internal Medicine*, 21(1), 71–77. https://doi.org/10.1111/j.1525-1497.2005.00278.x
- 10. Frederick, T. J., Chwalek, M., Hughes, J., Karabanow, J., & Kidd, S. (2014). How stable is stable? defining and measuring housing stability. *Journal of Community Psychology*, 42(8), 964–979. https://doi.org/10.1002/jcop.21665
- 11. Macek MD, Atchison KA, Wells W, Haynes D, Parker RM, Chen H. Did you know Medicare does not usually include a dental benefit? Findings from a multisite investigation of oral health literacy. J Public Health Dent. 2017 Mar;77(2):95-98. doi: 10.1111/jphd.12199. Epub 2017 Jan 12. PMID: 28079917; PMCID: PMC5557019.
- 12. Wiener, R. C., Sambamoorthi, U., Shen, C., Alwhaibi, M., & Findley, P. (2018). Food Security and Unmet Dental Care Needs in Adults in the United States. *Journal of dental hygiene: JDH*, 92(3), 14–22.
- 13. Christopher, E., & Raynault, E. (2013). *How does transportation affect public health?*. Federal Highway Administration. https://highways.dot.gov/public-roads/mayjune-2013/how-does-transportation-affect-public-health
- 14. McKernan, S. C., Reynolds, J. C., Ingleshwar, A., Pooley, M., Kuthy, R. A., & Damiano, P. C. (2017). Transportation barriers and use of dental services among Medicaid-insured adults. *JDR Clinical & Translational Research*, 3(1), 101–108. https://doi.org/10.1177/2380084417714795

- 15. Kiuchi, S., Aida, J., Kusama, T., Yamamoto, T., Hoshi, M., Yamamoto, T., Kondo, K., & Osaka, K. (2019). Does public transportation reduce inequalities in access to dental care among older adults? Japan Gerontological Evaluation Study. Community Dentistry and Oral Epidemiology, 48(2), 109–118. https://doi.org/10.1111/cdoe.12508
- 16. Bell, J., Cohen, L., Polan, S., Kolian, T., Litman, T., Handy, S., Ross, C. L., Swanstrom, T., Wallace, R., Pothukuchi, K., Srikantharajah, J., & Mikkelsen, L. (n.d.). *Healthy, Equitable Transportation Policy*. Prevention Institute. https://www.preventioninstitute.org/sites/default/files/publications/Healthy%20Equitable%20Transportation%20Policy%20Recomme ndations%20and%20Research.pdf
- 17. Cochran, A. L., McDonald, N. C., Prunkl, L., Vinella-Brusher, E., Wang, J., Oluyede, L., & Wolfe, M. (2022). Transportation barriers to care among frequent health care users during the covid pandemic. *BMC Public Health*, 22(1). https://doi.org/10.1186/s12889-022-14149-x
- 18. Syed, S. T., Gerber, B. S., & Sharp, L. K. (2013). Traveling towards disease: Transportation Barriers to Health Care Access. *Journal of Community Health*, 38(5), 976–993. https://doi.org/10.1007/s10900-013-9681-1
- 19. Kapila, Y. L. (2021). Oral Health's inextricable connection to systemic health: Special populations bring to bear multimodal relationships and factors connecting periodontal disease to systemic diseases and conditions. *Periodontology* 2000, 87(1), 11–16. https://doi.org/10.1111/prd.12398
- 20. WebMD Editorial Contributors. (2021, March 29). How does your mental health affect your oral health?. WebMD. https://www.webmd.com/oral-health/what-to-know-about-oral-health-and-mental-health
- 21. National Institute of Mental Health. (2023, March). *Mental illness*. National Institute of Mental Health. https://www.nimh.nih.gov/health/statistics/mental-illness
- 22. National Center for Chronic Disease Prevention and Health Promotion, Division of Population Health. (2023, April 25). *About mental health*. Centers for Disease Control and Prevention. https://www.cdc.gov/mentalhealth/learn/index.htm
- 23. Oral Health Foundation. (n.d.). *Mental illness and oral health*. Oral Health Foundation. https://www.dentalhealth.org/mental-illness-and-oral-health
- 24. American Dental Association. (n.d.). *Oral Systemic Health*. American Dental Association. https://www.ada.org/resources/research/science-and-research-institute/oral-health-topics/oral-systemic-health
- 25. Federal Interagency Forum on Aging-Related Statistics. (2020). 2020 Older Americans Key Indicators of Well-Being. Aging Stats. https://agingstats.gov/docs/LatestReport/OA20 508 10142020.pdf
- 26. Qi, X., Zhu, Z., Plassman, B. L., & Wu, B. (2021). Dose-response meta-analysis on tooth loss with the risk of cognitive impairment and dementia. *Journal of the American Medical Directors Association*, 22(10), 2039–2045. https://doi.org/10.1016/j.jamda.2021.05.009
- 27. Roush, K., & Kurth, A. (2016). CE: Original Research: Intimate Partner Violence: The Knowledge, Attitudes, Beliefs, and Behaviors of Rural Health Care Providers. *AJN, American Journal of Nursing*, 116(6), 24–34. https://doi.org/10.1097/01.naj.0000484221.99681.85
- 28. Edwards, K. M. (2014). Intimate partner violence and the rural-urban-suburban divide. *Trauma, Violence, & Abuse, 16*(3), 359–373. https://doi.org/10.1177/1524838014557289
- 29. Sardinha, L., Maheu-Giroux, M., Stöckl, H., Meyer, S. R., & García-Moreno, C. (2022). Global, regional, and national prevalence estimates of physical or sexual, or both, intimate partner violence against women in 2018. *The Lancet*, 399(10327), 803–813. https://doi.org/10.1016/s0140-6736(21)02664-7
- 30. United Nations. (n.d.). What is domestic abuse?. United Nations. https://www.un.org/en/coronavirus/What-Is-Domestic-Abuse
- 31. Rosen, T., Makaroun, L. K., Conwell, Y., & Betz, M. (2019). Violence in older adults: Scope, impact, challenges, and strategies for prevention. *Health Affairs*, 38(10), 1630–1637. https://doi.org/10.1377/hlthaff.2019.00577
- 32. Lam, R. (2016). Epidemiology and outcomes of Traumatic Dental Injuries: A review of the literature. *Australian Dental Journal*, 61, 4–20. https://doi.org/10.1111/adj.12395
- 33. Garbin, C. A., Guimarães e Queiroz, A. P., Rovida, T. A., & Garbin, A. J. (2012). Occurrence of traumatic dental injury in cases of domestic violence. *Brazilian Dental Journal*, 23(1), 72–76. https://doi.org/10.1590/s0103-64402012000100013
- 34.Love, C., Gerbert, B., Caspers, N., Bronstone, A., Perry, D., & Bird, W. (2001). Dentists' attitudes and behaviors regarding domestic violence. The need for an effective response. *The Journal of the American Dental Association*, 132(1), 85–93. https://doi.org/10.14219/jada.archive.2001.0032
- 35. Arkins, B., Begley, C., & Higgins, A. (2016). Measures for screening for intimate partner violence: A systematic review. *Journal of Psychiatric and Mental Health Nursing*, 23(3–4), 217–235. https://doi.org/10.1111/jpm.12289
- 36. de Jesus Santos Nascimento, C. T., de Oliveira, M. N., Vidigal, M. T., Inocêncio, G. S., de Andrade Vieira, W., Franco, A., Ferreira, M. C., & Paranhos, L. R. (2022). Domestic violence against women detected and managed in Dental Practice: A systematic review. *Journal of Family Violence*, 38(1), 149–160. https://doi.org/10.1007/s10896-021-00351-9

This publication is supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) as part of an award totaling \$550,000 with 0 percentage financed with non-governmental sources and an award totaling \$549,386 with 0 percentage financed with non-governmental sources. The contents are those of the authors and do not necessarily represent the official views of, nor an endorsement by, HRSA, HHS, or the U.S. Government. For more information, please visit HRSA.gov.